# Pioneer

AUDIO & AV **2017**

## CAR ENTERTAINMENT
Dealer Reference Guide

**Vol. 1**

## ENTERTAINMENT

Pioneer's original apps (such as those for Pioneer ARC* and AppRadio™**) installed in iPhone® and Android™ phones offer a new style of in-car entertainment. Listeners can get more into the stream of their favorite music with MIXTRAX® to create non-stop mixes with DJ effects and light pulsing to music beats. Pick and play your favorites among millions of streaming selections and open your senses to expanding worlds of musical sensation.

*For audio receivers
**For AV receivers

## CONNECTIVITY

Taking advantage of smartphone support, Pioneer in-car entertainment connections combine the capabilities of AppRadio Mode for easy viewing and touchscreen operation of favorite apps in iPhone and Android phones; Apple CarPlay™ and Android Auto™ entertainment control via voice command. With support for Spotify®, you can control the Spotify® app on your smartphone via your car receiver's interface.

Pioneer's in-car AV entertainment gear continues to dominate with easy, precise control plus more connectivity for peerless sound and vision with the utmost convenience.

## QUALITY

Specially designed Pioneer AV and audio receivers, and selected audio parts incorporate exclusive sound field technology that helps make sound more stirring. Enhanced audio functions let listeners finely tune sound fields with supremely precise control. Moreover, brilliant reproduction of sound from FLAC files surpasses playback of CD tracks in terms of audio quality.

## CONVENIENCE

The Pioneer ARC app lets you control of the audio receiver using a smartphone's touchscreen. Even detailed settings for audio, etc. are easy with this intuitive interface. Larger displays and specially designed construction of new audio receivers make more information easily visible from the driver's seat. A sophisticated user interface featuring new clear-type resistive touchscreen enhances intuitive control, utility and visibility.

# KEY FEATURES STEP-UP COMPARISON CHART

| Model | DIN Size | Display | Preout | Playback | Video Format | Audio Format | AUX Input (Mini-Jack) | USB Interface | SD/SDHC Memory Card Slot | HDMI Input | Direct Control for iPod/iPhone*1 | Direct Control for Certain Android Phones*1*2 | AppRadio Mode*1 | Apple CarPlay Compatible*3 | Android Auto Compatible*4 | Spotify® | Built-in MirrorLink™*4 | Bluetooth®*5 | MIXTRAX | Dual Zone Audio/Video | Auto EQ Auto Time Alignment | USB Quick Charge for Android (CDP)*6 | Advanced Sound Retriever | Back-Up Camera Ready | Page Number |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AVH-X8850BT | 2-DIN | 7.0" LED-WVGA | 3 (4 V) | DVD/CD | H.264*7 FLV*7 WMV*7 DivX*-*8 MPEG-1*4/-2*4/-4 | WAV*7 MP3 WMA AAC FLAC*7 | Rear | Rear x 2 | ● | ● (Rear) | USB Bluetooth | Bluetooth | iPhone Android*2 | ● | ● | | | HFP A2DP AVRCP SSP SPP | ● | ● | CD-MC20 | | ● | ND-BC8 ND-BC20PA (Dual Camera Inputs) | 07 |
| AVH-X5850BT | 2-DIN | 7.0" LED-WVGA | 3 (4 V) | DVD/CD | H.264*7 DivX*8 MPEG-1*4/-2*4/-4 | WAV*7 MP3 WMA AAC FLAC*7 | Rear | Rear | | | USB Bluetooth | USB Bluetooth | iPhone Android*2 (AppRadio Mode USB) | | | iPhone Android*2 | | HFP A2DP AVRCP SSP SPP | ●*9 | | CD-MC20 | ● | ● | ND-BC8 ND-BC20PA | 08 |
| AVH-X4850DVD | 2-DIN | 7.0" LED-WVGA | 3 (4 V) | DVD/CD | H.264*7 DivX*8 MPEG-1*4/-2*4/-4 | WAV*7 MP3 WMA AAC FLAC*7 | Rear | Rear | | | USB | USB | iPhone Android*2 (AppRadio Mode USB) | | | iPhone | | | ●*9 | | CD-MC20 | ● | ● | ND-BC8 ND-BC20PA | 09 |
| AVH-X2850BT | 2-DIN | 6.2" LED-WVGA | 3 (4 V) | DVD/CD | H.264*7 DivX*8 MPEG-1*4/-2*4/-4 | WAV*7 MP3 WMA AAC FLAC*7 | Rear | Rear | | | USB Bluetooth | USB Bluetooth | iPhone Android*2 (AppRadio Mode USB) | | | iPhone Android*2 | | HFP A2DP AVRCP SSP SPP | ●*9 | | CD-MC20 | ● | ● | ND-BC8 ND-BC20PA | 08 |
| AVH-X1850DVD | 2-DIN | 6.2" LED-WVGA | 3 (4 V) | DVD/CD | H.264*7 DivX*8 MPEG-1*4/-2*4/-4 | WAV*7 MP3 WMA AAC FLAC*7 | Rear | Rear | | | USB | USB | iPhone Android*2 (AppRadio Mode USB) | | | iPhone | | | ●*9 | | CD-MC20 | ● | ● | ND-BC8 ND-BC20PA | 09 |
| AVH-295BT | 2-DIN | 6.2" LED-WVGA | 2 (2 V) | DVD/CD | DivX MPEG-1/-2/-4 | WAV MP3 WMA AAC | Rear | Rear | | | USB | | | | | | | HFP A2DP AVRCP SSP | | | | | | ND-BC8 ND-BC20PA | 11 |
| AVH-195DVD | 2-DIN | 6.2" LED-WVGA | 2 (2 V) | DVD/CD | DivX MPEG-1/-2/-4 | WAV MP3 WMA AAC | Rear | Rear | | | USB | | | | | | | | | | | | | ND-BC8 ND-BC20PA | 12 |
| AVH-X7850BT | 1-DIN | 7.0" LED-WVGA | 3 (4 V) | DVD/CD | H.264*7 DivX*8 MPEG-1*4/-2*4/-4 | WAV*7 MP3 WMA AAC FLAC*7 | Rear | Rear | | | USB Bluetooth | USB Bluetooth | iPhone Android*2 (AppRadio Mode USB) | | | iPhone Android*2 | | HFP A2DP AVRCP SSP SPP | ●*9 | | CD-MC20 | ● | ● | ND-BC8 ND-BC20PA | 10 |
| AVH-X6850DVD | 1-DIN | 7.0" LED-WVGA | 3 (4 V) | DVD/CD | H.264*7 DivX*8 MPEG-1*4/-2*4/-4 | WAV*7 MP3 WMA AAC FLAC*7 | Rear | Rear | | | USB | USB | iPhone Android*2 (AppRadio Mode USB) | | | iPhone | | | ●*9 | | CD-MC20 | ● | ● | ND-BC8 ND-BC20PA | 10 |
| AVH-4850BT | 1-DIN | 7.0" LED-WVGA | 3 (2 V) | DVD/CD | DivX MPEG-1/-2/-4 | WAV*7 MP3 WMA AAC | Front | Front | | | | | | | | | | HFP A2DP AVRCP SSP | | | | | | ND-BC8 ND-BC20PA | 11 |
| AVH-3850DVD | 1-DIN | 7.0" LED-WVGA | 3 (2 V) | DVD/CD | DivX MPEG-1/-2/-4 | WAV*7 MP3 WMA AAC | Front | Front | | | | | | | | | | | | | | | | ND-BC8 ND-BC20PA | 12 |
| AVH-XL5750BT | 2-DIN | 7.0" LED-WVGA | 3 (4 V) | DVD/CD | H.264*7 DivX MPEG-1*4/-2*4/-4 | WAV*7 MP3 WMA AAC | Rear | Rear | | | USB Bluetooth | USB Bluetooth | iPhone Android*2 (AppRadio Mode USB) | | | | ● | HFP A2DP AVRCP SSP SPP | ●*9 | | CD-MC20 | | ● | ND-BC8 ND-BC20PA | 13 |
| AVH-XL4750DVD | 2-DIN | 7.0" LED-WVGA | 3 (4 V) | DVD/CD | H.264*7 DivX MPEG-1*4/-2*4/-4 | WAV*7 MP3 WMA AAC | Rear | Rear | | | USB | USB | iPhone Android*2 (AppRadio Mode USB) | | | | ● | | ●*9 | | CD-MC20 | | ● | ND-BC8 ND-BC20PA | 13 |
| MVH-AV285BT | 2-DIN | 6.2" LED-WVGA | 2 (2 V) | | DivX MPEG-4 | WAV MP3 WMA AAC | Rear | Rear | | | USB | | | | | | | HFP A2DP AVRCP SSP | | | | | | ND-BC8 ND-BC20PA | 11 |
| MVH-AV185 | 2-DIN | 6.2" LED-WVGA | 2 (2 V) | | DivX MPEG-4 | WAV MP3 WMA AAC | Rear | Rear | | | USB | | | | | | | | | | | | | ND-BC8 ND-BC20PA | 12 |
| DVH-885AVBT | 1-DIN | 3.5" | 2 (4 V) | DVD/CD | DivX MPEG-1/-2/-4 | MP3 WMA AAC | Front | Front | | | USB*10 | Bluetooth | | | | | | HFP A2DP AVRCP SSP SPP | | | | | | ND-BC8 ND-BC20PA | 20 |
| DVH-785AV | 1-DIN | 3.0" | 2 (2 V) | DVD/CD | DivX MPEG-1/-2/-4 | MP3 WMA | Front | Front | | | | | | | | | | | | | | | | ND-BC8 ND-BC20PA | 20 |
| DVH-345UB | 1-DIN | | 2 (2 V) | DVD/CD | DivX MPEG-1/-2/-4 | WAV*7 MP3 WMA AAC | Front | Front | | | | | | | | | | | | | | | ● | | 21 |

*1. Optional cable required. Please refer to page 100 for compatibility.
*2. Not all Android phones are compatible.
*3. CD-IU52 required (sold separately).
*4. CD-MU200 required (sold separately).
*5. HFP = Hands-Free Profile, A2DP = Advanced Audio Distribution Profile, AVRCP = Audio/Video Remote Control Profile, SSP = Secure Simple Profile, SPP = Serial Port Profile. Please refer to instruction manual for other information about profile compatibility.
*6. Provides up to 1.5 amperes to give an Android smartphone a quick charge.
*7. Only for USB Devices or SD Memory Card.
*8. Only for DVD or CD.
*9. Compatible with MIXTRAX EZ. Not compatible with full-featured Non-Stop Mix Play using MIXTRAX software that analyzes track information (BPM, bar, beat/vocal position, mood).
*10. Only for audio files.

*See page 98 for in-depth information on features.*

# CONNECTIVITY

## AppRadio Mode

**AppRadio MODE**

| AVH-X8850BT | AVH-X5850BT | AVH-X4850DVD | AVH-X2850BT | AVH-X1850DVD | AVH-X7850BT | AVH-X6850DVD | AVH-XL5750BT | AVH-XL4750DVD |

AppRadio Mode* allows compatible applications on an iPhone 6 Plus, iPhone 6, iPhone 5s, iPhone 5c, iPhone 5 or Android phone** to be viewed and controlled directly from the receiver's touchscreen display.

*\* App Radio Mode: Compatible with AVH-X8850BT. See page 97 for accessories, and 100 for iPod/iPhone and Android compatibility.*
  *AppRadio Mode USB (not for iPod touch): Compatible with AVH-X5850BT, AVH-X4850DVD,*
  *AVH-X2850BT, AVH-X1850DVD, AVH-X7850BT, AVH-X6850DVD, AVH-XL5750BT and AVH-XL4750DVD.*
*\*\* Not all Android phones are compatible.*

### AppRadioLIVE

The AppRadioLIVE App gives you access to all the elements of your digital lifestyle in one place via AppRadio Mode.

**AppRadioLIVE**

## Apple CarPlay

| AVH-X8850BT |

Apple CarPlay is the safer, smarter and more fun way to use your iPhone in the car. It launches automatically by just plugging in.

Works with **Apple CarPlay**

## Android Auto™

| AVH-X8850BT |

Android Auto extends the Android platform into the car in a way that's purpose-built for driving.

**androidauto**

## Bluetooth®

| AVH-X8850BT | AVH-X5850BT | AVH-X2850BT | AVH-295BT | AVH-X7850BT | AVH-4850BT |
| AVH-XL5750BT | MVH-AV285BT | DVH-885AVBT | | | |

Bluetooth Wireless Technology makes audio playback and phone call operation comfortable and safe while driving.

**Bluetooth®**

## Spotify®

| AVH-X5850BT | AVH-X4850DVD* | AVH-X2850BT | AVH-X1850DVD* | AVH-X7850BT | AVH-X6850DVD* |

Spotify® gives you all the music you'll ever need. Find the songs you love instantly, or let Spotify® play you something great. With support for Spotify®, just connect your compatible smartphone to Pioneer Receiver to fill your ride with everything from classic tracks to the latest hits.

*\* Compatible with iPhone only.*
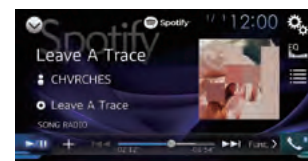
**Spotify®**

# AUDIO

## Support FLAC Codec*

| AVH-X8850BT | AVH-X5850BT | AVH-X4850DVD | AVH-X2850BT | AVH-X1850DVD | AVH-X7850BT | AVH-X6850DVD |

New Pioneer AV receiver upgrades in-car audio with amazingly brilliant reproduction of sound by FLAC files surpass CD tracks in terms of playback audio quality.
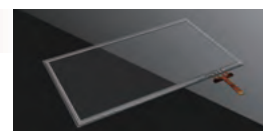
*\* For the files stored in USB thumb drive.*

# OTHERS

## Clear Type Resistive Touch Panel

| All Receivers |  (Except AVH-XL5750BT, AVH-XL4750DVD, AVH-4850BT, AVH-3850DVD, DVH-885AVBT, DVH-785AV and DVH-345UB)

The new Pioneer AV receivers' display panel are designed as beautifully crisp and it brings you enhanced visibility.

*Pioneer*

# AVH-X8850BT  NEW

**In-Dash Double-DIN Flagship DVD Multimedia AV Receiver with 7" WVGA Touchscreen Display, MIXTRAX, Dual USB, and SD Card Slot**

Remote Control Included

Bluetooth Mic

**Rear Panel**

- Dual USB Ports
- HDMI Terminal
- Microphone IN
- Video OUT
- Rear View Camera IN
- Radio Antenna IN
- AUX IN
- Wired Remote IN
- Audio Preouts (Subwoofer)
- RGB IN
- Rear Audio OUT

**Touch Panel Screen** · **7.0W** · **VGA** · **LED** · **MULTIPLE COLOR** · **MULTI-LANGUAGE DISPLAY**

**DVD VIDEO** · **DVD-R/RW CD-R/RW** · **flac** · **MP3** · **WMA** · **AAC** · **DIVX**

**DOLBY DIGITAL** · **AUX** · **SD** · **HDMI** · **Dual Zone** · **3 RCA pre-outs**

**Hi-VOLT** · **24bit DA Converter** · **Auto EQ** · **TV Tuner Ready** · **WIRED REMOTE INPUT** · **RDS**

**SUPER TUNER III D** · **MOSFET 50W x 4** · **Siri Eyes Free**

**DETACHABLE FACE SECURITY** · **Back UP Camera Ready**

Works with **Apple CarPlay**

**androidauto**

Made for **iPod** **iPhone**

**MIXTRAX** · **AppRadio MODE** · **Bluetooth** · **Dual USB**

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# Key Selling Points

**Point 1 / Pages 14-16** — **Enhanced and advanced smartphone connectivity for today's smartphone-driven lifestyle including compatibility with Apple CarPlay, Android Auto™ and AppRadio Mode.**  **AppRadio MODE**

**Point 2 / Page 17** — **Experience non-stop music playback based on music data analysis that delivers a seamless mix created by a virtual DJ.**  **MIXTRAX**

**Point 3 / Page 19** — **An all new smartphone-inspired user interface provides an easy-to-use and intuitive experience.**

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## Main Features (Blue text: upgraded features from AVH-XL5750BT)

- MIXTRAX
- 7" WVGA Clear Type Resistive Touch Panel Display with LED Backlight
- Multi-Language Display* (Menu/ID3 Tag)
- Color Customization (5-Display Colors and 112-Key Colors)
- Direct Control for iPod®/iPhone (USB/Bluetooth)
- Direct Control for Certain Android Phones (Bluetooth)
- AppRadio Mode for iPod/iPhone & Certain Android Phones
- Apple CarPlay Compatible
- Android Auto Compatible
- Built-in Bluetooth® Wireless Technology (Hands-Free Calling/Wireless Audio)
- Siri Eyes Free

- Dual USB Ports (Rear: High Current 1 A Handling Capability)
- SD/SDHC Memory Card Slot
- AUX Input (Audio/Video)
- HDMI Input
- RGB Input
- DVD/CD Player with DVD Video Playback
- H.264/FLV/WMV/MPEG-4/MP3/WMA/iTunes® AAC/WAV/FLAC** Playback from SD Memory Card/USB Device
- DivX®/MPEG-1, -2, -4/MP3/WMA/iTunes AAC Playback from DVD/CD
- Dual Zone Audio/Video
- Advanced Sound Retriever
- SR Air
- MOSFET 50 W x 4

- Hi-Volt RCA Preouts x 3 (4 V)
- 13-Band Graphic EQ
- Auto EQ & Auto Time Alignment (CD-MC20 Required)
- Pioneer TV Tuner Ready
- JPEG Slide Show
- Back-Up Camera Ready
- Detachable Face Security™
- Wired Remote Input
- Power Off Mode
- Display Off Mode
- RDS

* See page 19 for more details.
** For the files stored in USB thumb drive.

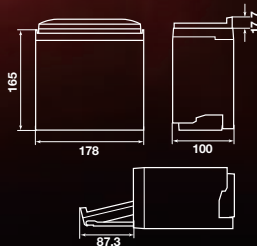See page 97 for accessories.

## iPod/iPhone Compatibility

| Made for |
| --- |
| iPhone 6 Plus, iPhone 6 (AppRadio Mode Compatible) |
| iPhone 5s, iPhone 5c, iPhone 5 (AppRadio Mode Compatible) |
| iPhone 4s (AppRadio Mode Compatible) |
| iPhone 4 (AppRadio Mode Compatible) |
| iPhone 3GS |
| iPod touch® (2nd, 3rd, 4th, and 5th* generation) |
| iPod classic® |
| iPod nano® (3rd, 4th, 5th, 6th, and 7th generation) |

*Notes: Receiver may not operate other iPod or iPhone models. Compatibility with unit and operations may vary depending on the software version. See page 100 for more details.*
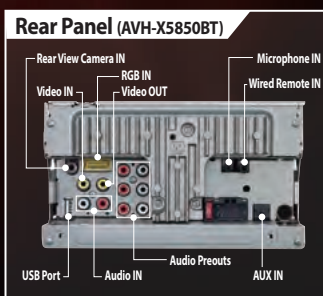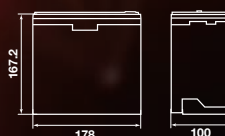
* AppRadio Mode Compatible.

# AVH-X5850BT

**In-Dash Double-DIN DVD Multimedia AV Receiver with 7" WVGA Touchscreen Display, MIXTRAX, Built-in Bluetooth®, and Direct Control for iPod/iPhone and Certain Android Phones**

# AVH-X2850BT

**In-Dash Double-DIN DVD Multimedia AV Receiver with 6.2" WVGA Touchscreen Display, MIXTRAX, Built-in Bluetooth, and Direct Control for iPod/iPhone and Certain Android Phones**

167.2
178    100

165
178    100
17.7
87.3

**Rear Panel (AVH-X5850BT)**

Rear View Camera IN
RGB IN
Video IN
Video OUT
Microphone IN
Wired Remote IN

USB Port
Audio IN
Audio Preouts
AUX IN

**Remote Control Included**

Touch Panel Screen    7.0W/6.2W*1    VGA    LED    MULTIPLE COLOR    MULTI-LANGUAGE DISPLAY    DVD    DVD±R/RW CD±R/RW    flac

MP3    WMA    AAC    DIVX    DOLBY DIGITAL    APP MODE    USB    RCA pre-outs    Hi-VOLT    24bit DA Converter    Bluetooth    Spotify    Smartphone Compatible

Auto EQ    TV Tuner Ready    WIRED REMOTE INPUT    RDS    SUPER TUNER III D    MOSFET 50Wx4    Siri Eyes Free    Back UP Camera    AppRadio MODE

**Made for**
iPod    iPhone

**Made for**
iPod    iPhone

MIXTRAX

AppRadio MODE

*1. 6.2-inch display: AVH-X2850BT.*

# Key Selling Points

**Point 1**
**Pages 14-15**

**Experience the exclusive in smartphone connectivity with AppRadio Mode USB by simple cable connection.**

AppRadio MODE    Smartphone Compatible

**Made for**
iPod    iPhone

**Point 2**
**Page 17**

**Non-Stop Mix Play makes it quick and easy to enjoy simple, seamless music sequencing. Display Visualizer provides for cool visuals that suitably enhance the mood in your car cabin.**
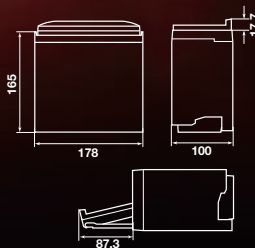
MIXTRAX

**Point 3**
**Page 18**

**Enjoy superior in-car AV performance with 13-Band Graphic EQ, FLAC codec playback* and other high quality functions.**

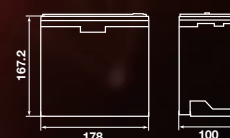*\* For the files stored in USB thumb drive.*

flac

# AVH-X4850DVD

In-Dash Double-DIN DVD Multimedia AV Receiver with 7" WVGA Touchscreen Display, MIXTRAX, and Direct Control for iPod/iPhone and Certain Android Phones
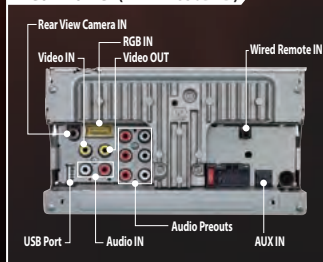
# AVH-X1850DVD

In-Dash Double-DIN DVD Multimedia AV Receiver with 6.2" WVGA Touchscreen Display, MIXTRAX, and Direct Control for iPod/iPhone and Certain Android Phones

167.2
178    100

165
178    100
17.7
87.3

**Rear Panel** (AVH-X4850DVD)

Rear View Camera IN
RGB IN
Video IN
Video OUT
Wired Remote IN
USB Port
Audio IN
Audio Preouts
AUX IN

**Remote Control Included**

Touch Panel Screen  7.0W/6.2W*1  VGA  LED  MULTIPLE COLOR  MULTI-LANGUAGE DISPLAY  DVD  DVD-R/RW CD-R/RW  flac

MP3  WMA  AAC  DIVX  DOLBY DIGITAL  APP MODE  USB  RCA pre-outs  Hi-VOLT  24bit DA Converter  MIXTRAX  AppRadio MODE  Spotify®  Smartphone Compatible  Made for iPod iPhone

Auto EQ  TV Tuner Ready  WIRED REMOTE INPUT  RDS  SUPER TUNER III D  MOSFET 50w x4  Back UP Camera Ready

*1. 6.2-inch display: AVH-X1850DVD.

## Common Main Features (Blue text: upgraded features from AVH-295BT)

• MIXTRAX (MIXTRAX EZ for Quick Non-Stop MIX Play)
• Multi-Language Display* (Menu/ID3 Tag)
• Color Customization (5-Display Colors and 112-Key Colors)
• AppRadio Mode USB for iPod/iPhone & Certain Android Phones
• App Mode
• USB Port (Rear: High Current 1A Handling Capability)
• USB Quick Charge for Android (CDP)
• AUX Input (Audio/Video)
• RGB Input
• DVD/CD Player with DVD Video Playback
• MPEG-4/MP3/WMA/iTunes AAC/WAV Playback from USB Device
• H.264/FLAC** Playback from USB Device
• DivX®/MPEG-1, -2, -4/MP3/WMA/iTunes AAC Playback from CD/DVD
• Advanced Sound Retriever
• MOSFET 50 W x 4

• Hi-Volt RCA Preouts x 3 (4 V)
• 13-Band Graphic EQ
• Auto EQ & Auto Time Alignment (CD-MC20 Required)
• 3-Way Network Mode (High/Mid/Low)
• Pioneer TV Tuner Ready
• JPEG Slide Show
• Back-Up Camera Ready
• Wired Remote Input
• Power Off Mode
• Display Off Mode
• Steering Wheel Control Function Expansion
• RDS

### iPod/iPhone Compatibility

| Made for |
| --- |
| iPhone 6 Plus, iPhone 6 (AppRadio Mode USB Compatible) |
| iPhone 5s, iPhone 5c, iPhone 5 (AppRadio Mode USB Compatible) |
| iPhone 4s |
| iPhone 4 |
| iPhone 3GS |
| iPod touch (2nd, 3rd, 4th, and 5th generation) |
| iPod classic |
| iPod nano (3rd, 4th, 5th, 6th, and 7th generation) |

*Notes: Receiver may not operate other iPod or iPhone models. Compatibility with unit and operations may vary depending on the software version.*
*See page 100 for more details.*

### AVH-X5850BT Main Features
*(Blue text: upgraded features from AVH-X4850DVD)*

• 7" WVGA Clear Type Resistive Touch Panel Display with LED Backlight
• Direct Control for iPod/iPhone (USB/Bluetooth)
• Direct Control for Certain Android Phones (USB/Bluetooth)
• Spotify® (iPhone/Android)
• Built-in Bluetooth® Wireless Technology (Hands-Free Calling/Wireless Audio)
• Siri Eyes Free
• SR Air

### AVH-X4850DVD Main Features
*(Blue text: upgraded features from AVH-X2850BT)*

• 7" WVGA Clear Type Resistive Touch Panel Display with LED Backlight
• Direct Control for iPod/iPhone (USB)
• Direct Control for Certain Android Phones (USB)
• Spotify® (iPhone)

### AVH-X2850BT Main Features
*(Blue text: upgraded features from AVH-X1850DVD)*

• 6.2" WVGA Clear Type Resistive Touch Panel Display with LED Backlight
• Direct Control for iPod/iPhone (USB/Bluetooth)
• Direct Control for Certain Android Phones (USB/Bluetooth)
• Spotify® (iPhone/Android)
• Built-in Bluetooth Wireless Technology (Hands-Free Calling/Wireless Audio)
• Siri Eyes Free
• SR Air

### AVH-X1850DVD Main Features
*(Blue text: upgraded features from AVH-295BT)*

• 6.2" WVGA Clear Type Resistive Touch Panel Display with LED Backlight
• Direct Control for iPod/iPhone (USB)
• Direct Control for Certain Android Phones (USB)
• Spotify® (iPhone)

* See page 19 for more details.
** For the files stored in USB thumb drive.
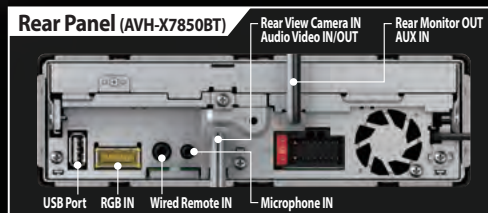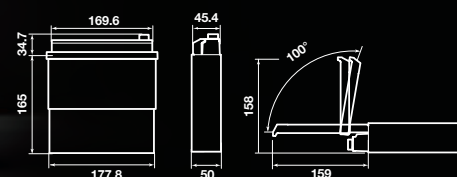
See page 97 for accessories.

# AVH-X7850BT

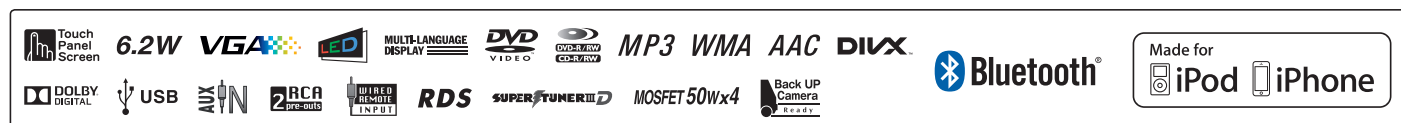**In-Dash 1-DIN DVD Multimedia AV Receiver with 7" WVGA Touchscreen Display, MIXTRAX, Built-in Bluetooth®, and Direct Control for iPod/iPhone and Certain Android Phones**

# AVH-X6850DVD

**In-Dash 1-DIN DVD Multimedia AV Receiver with 7" WVGA Touchscreen Display, MIXTRAX, and Direct Control for iPod/iPhone and Certain Android Phones**

Remote Control Included

**Rear Panel** (AVH-X7850BT)

169.6 | 45.4 | 34.7 | 165 | 158 | 100° | 177.8 | 50 | 159

Rear View Camera IN Audio Video IN/OUT — Rear Monitor OUT AUX IN

USB Port | RGB IN | Wired Remote IN | Microphone IN

Touch Panel Screen | 7.0W | VGA | LED | MULTIPLE COLOR | MULTI-LANGUAGE DISPLAY | DVD VIDEO | DVD-R/RW CD-R/RW | flac | MIXTRAX

MP3 | WMA | AAC | DIVX | DOLBY DIGITAL | APP MODE | USB | RCA pre-outs | Hi-VOLT | 24bit DA Converter | Bluetooth® | Spotify® | Smartphone Compatible | Made for iPod iPhone

Auto EQ | TV Tuner Ready | WIRED REMOTE INPUT | RDS | SUPER TUNER III D | MOSFET 50W x 4 | Siri Eyes Free | DETACHABLE FACE SECURITY | Back UP Camera Ready | AppRadio MODE

Note: "Bluetooth Wireless Technology" and "Siri Eyes Free" for AVH-X7850BT.

# Key Selling Points

**Point 1**
**Pages 14-15**

**Experience the exclusive in smartphone connectivity with AppRadio Mode USB by simple cable connection.**

AppRadio MODE | Smartphone Compatible | Made for iPod iPhone

**Point 2**
**Page 17**

**Non-Stop Mix Play makes it quick and easy to enjoy simple, seamless music sequencing. Display Visualizer provides for cool visuals that suitably enhance the mood in your car cabin.**

MIXTRAX

**Point 3**
**Page 18**

**Enjoy superior in-car AV performance with 13-Band Graphic EQ, FLAC codec playback* and other high quality functions.** * For the files stored in USB thumb drive.

flac

## Common Main Features (Blue text: upgraded features from AVH-4850BT)

- MIXTRAX (MIXTRAX EZ for Quick Non-Stop MIX Play)
- 7" WVGA Clear Type Resistive Touch Panel Display with LED Backlight
- Multi-Language Display* (Menu/ID3 Tag)
- Color Customization (5-Display Colors and 112-Key Colors)
- AppRadio Mode USB for iPod/iPhone & Certain Android Phones
- App Mode
- USB Port (Rear: High Current 1 A Handling Capability)
- USB Quick Charge for Android (CDP)
- AUX Input (Audio/Video)
- RGB Input
- DVD/CD Player with DVD Video Playback
- MP3/WMA/iTunes AAC/WAV Playback from USB Device
- H.264/MPEG-4/FLAC** Playback from USB Device
- DivX®/MPEG-1, -2, -4/MP3/WMA/iTunes AAC Playback from CD/DVD

- Advanced Sound Retriever
- MOSFET 50 W x 4
- Hi-Volt RCA Preouts x 3 (4 V)
- 13-Band Graphic EQ
- Auto EQ & Auto Time Alignment (CD-MC20 Required)
- 3-Way Network Mode (High/Mid/Low)
- Pioneer TV Tuner Ready
- JPEG Slide Show

### AVH-X7850BT Main Features
(Blue text: upgraded features from AVH-X6850DVD)

- Direct Control for iPod/iPhone (USB/Bluetooth)
- Direct Control for Certain Android Phones (USB/Bluetooth)
- Spotify® (iPhone/Android)
- Built-in Bluetooth Wireless Technology (Hands-Free Calling/Wireless Audio)
- Siri Eyes Free
- SR Air

- Back-Up Camera Ready
- Rotary Volume Control
- Detachable Face Security™
- Wired Remote Input
- Power Off Mode
- Display Off Mode
- Steering Wheel Control Function Expansion
- RDS

### AVH-X6850DVD Main Features
(Blue text: upgraded features from AVH-4850BT)

- Direct Control for iPod/iPhone (USB)
- Direct Control for Certain Android Phones (USB)
- Spotify® (iPhone)

* See page 19 for more details.
** For the files stored in USB thumb drive.

See page 97 for accessories.

## iPod/iPhone Compatibility

| Made for |
|---|
| iPhone 6 Plus, iPhone 6 (AppRadio Mode USB Compatible) |
| iPhone 5s, iPhone 5c, iPhone 5 (AppRadio Mode USB Compatible) |
| iPhone 4s |
| iPhone 4 |
| iPhone 3GS |
| iPod touch (2nd, 3rd, 4th, and 5th generation) |
| iPod classic |
| iPod nano (3rd, 4th, 5th, 6th, and 7th generation) |

**Notes:** Receiver may not operate other iPod or iPhone models. Compatibility with unit and operations may vary depending on the software version. See page 100 for more details.

## AVH-4850BT

**In-Dash 1-DIN DVD Multimedia AV Receiver with 7" WVGA Touchscreen Display, Built-in Bluetooth®, and Front USB Port**

**Remote Control Included**

### Main Features (Blue text: upgraded features from AVH-3850DVD)

- 7" WVGA Touch Panel Display with LED Backlight
- Multi-Language Display (Menu/ID3 Tag) (English/Spanish/Portuguese/Russian)
- Built-in Bluetooth Wireless Technology (Hands-Free Calling/Wireless Audio)
- USB Port (Front)
- Front AUX Input (Audio/Video)
- DVD/CD Player with DVD Video Playback
- DivX®/MPEG-1, -2, -4/MP3/WMA/iTunes AAC/WAV Playback from USB Device
- DivX/MPEG-1, -2, -4/MP3/WMA/iTunes AAC Playback from CD/DVD
- MOSFET 50 W x 4

- RCA Preouts x 3 (2 V)
- 3-Band Graphic EQ (Bass/Mid/Treble)
- Back-Up Camera Ready
- Rotary Volume Control
- Wired Remote Input
- Display Off Mode

*See page 97 for accessories.*

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## AVH-295BT  NEW

**In-Dash Double-DIN DVD Multimedia AV Receiver with 6.2" WVGA Touchscreen Display, Built-in Bluetooth, and Direct Control for iPod/iPhone**

**Remote Control Included**

*RC/RI: Remote control unit included.*
*RD: Remote control unit is optional.*

### Main Features (Blue text: upgraded features from AVH-195DVD)

- 6.2" WVGA Clear Type Resistive Touch Panel Display with LED Backlight
- Multi-Language Display* (Menu/ID3 Tag)
- Direct Control for iPod/iPhone (USB)
- Built-in Bluetooth Wireless Technology (Hands-Free Calling/Wireless Audio)
- USB Port (Rear: High Current 1A Handling Capability)
- AUX Input (Audio/Video)
- DVD/CD Player with DVD Video Playback
- DivX/MPEG-4/MP3/WMA/iTunes AAC/WAV Playback from USB Device

- DivX/MPEG-1, -2, -4/MP3/WMA/iTunes AAC/WAV Playback from CD/DVD
- MOSFET 50 W x 4
- RCA Preouts x 2 (2 V)
- 5-Band Graphic EQ
- JPEG Slide Show
- Back-Up Camera Ready
- Wired Remote Input
- Display Off Mode
- RDS

*\* See page 19 for more details.*
*See page 97 for accessories, and 100 for iPod/iPhone Compatibility.*

Made for iPod iPhone

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## MVH-AV285BT

**In-Dash Double-DIN Digital Media AV Receiver with 6.2" WVGA Touchscreen Display, Built-in Bluetooth, and Direct Control for iPod/iPhone**

**Remote Control Included**

### Main Features (Blue text: upgraded features from MVH-AV185)

- 6.2" WVGA Clear Type Resistive Touch Panel Display with LED Backlight
- Multi-Language Display* (Menu/ID3 Tag)
- Direct Control for iPod/iPhone (USB)
- Built-in Bluetooth Wireless Technology (Hands-Free Calling/Wireless Audio)
- USB Port (Rear: High Current 1A Handling Capability)
- AUX Input (Audio/Video)
- DivX/MPEG-4/MP3/WMA/iTunes AAC/WAV Playback from USB Device

- MOSFET 50 W x 4
- RCA Preouts x 2 (2 V)
- 5-Band Graphic EQ
- JPEG Slide Show
- Back-Up Camera Ready
- Wired Remote Input
- Display Off Mode
- RDS

*\* See page 19 for more details.*
*See page 97 for accessories, and 100 for iPod/iPhone Compatibility.*

Made for iPod iPhone

11

# AV RECEIVERS

## AVH-3850DVD

In-Dash 1-DIN DVD Multimedia AV Receiver with 7" WVGA Touchscreen Display, and Front USB Port

### Main Features

**Remote Control Included**

• 7" WVGA Touch Panel Display with LED Backlight
• Multi-Language Display (Menu/ID3 Tag) (English/Spanish/Portuguese/Russian)
• USB Port (Front)
• Front AUX Input (Audio/Video)
• DVD/CD Player with DVD Video Playback
• DivX®/MPEG-1, -2, -4/MP3/WMA/iTunes AAC/WAV Playback from USB Device
• DivX/MPEG-1, -2, -4/MP3/WMA/iTunes AAC Playback from CD/DVD
• MOSFET 50 W x 4
• RCA Preouts x 3 (2 V)
• 3-Band Graphic EQ (Bass/Mid/Treble)

• Back-Up Camera Ready
• Rotary Volume Control
• Wired Remote Input
• Display Off Mode

*See page 97 for accessories.*

Touch Panel Screen | 7.0W | VGA | LED | MULTI-LANGUAGE DISPLAY | DVD VIDEO | DVD-R/RW CD-R/RW | MP3 | WMA | AAC | DIVX | DOLBY DIGITAL | USB | AUX IN | 3 RCA pre-outs | WIRED REMOTE INPUT | MOSFET 50W x4 | Back UP Camera Ready

## AVH-195DVD  NEW

In-Dash Double-DIN DVD Multimedia AV Receiver with 6.2" WVGA Touchscreen Display, and Direct Control for iPod/iPhone

### Main Features

**Remote Control Included**

*RC/RI: Remote control unit included.*
*RD: Remote control unit is optional.*

• 6.2" WVGA Clear Type Resistive Touch Panel Display with LED Backlight
• Multi-Language Display* (Menu/ID3 Tag)
• Direct Control for iPod/iPhone (USB)
• USB Port (Rear: High Current 1A Handling Capability)
• AUX Input (Audio/Video)
• DVD/CD Player with DVD Video Playback
• DivX/MPEG-4/MP3/WMA/iTunes AAC/WAV Playback from USB Device
• DivX/MPEG-1, -2, -4/MP3/WMA/iTunes AAC/WAV Playback from CD/DVD

• MOSFET 50 W x 4
• RCA Preouts x 2 (2 V)
• 5-Band Graphic EQ
• JPEG Slide Show
• Back-Up Camera Ready
• Wired Remote Input
• Display Off Mode
• RDS

*\* See page 19 for more details.*
*See page 97 for accessories, and 100 for iPod/iPhone Compatibility.*

Touch Panel Screen | 6.2W | VGA | LED | MULTI-LANGUAGE DISPLAY | DVD VIDEO | DVD-R/RW CD-R/RW | MP3 | WMA | AAC | DIVX | DOLBY DIGITAL | USB | AUX IN | 2 RCA pre-outs | WIRED REMOTE INPUT | RDS | SUPER TUNER IIID | MOSFET 50W x4 | Back UP Camera Ready

Made for **iPod** **iPhone**

## MVH-AV185

In-Dash Double-DIN Digital Media AV Receiver with 6.2" WVGA Touchscreen Display, and Direct Control for iPod/iPhone

### Main Features

**Remote Control Included**

• 6.2" WVGA Clear Type Resistive Touch Panel Display with LED Backlight
• Multi-Language Display* (Menu/ID3 Tag)
• Direct Control for iPod/iPhone (USB)
• USB Port (Rear: High Current 1A Handling Capability)
• AUX Input (Audio/Video)
• DivX/MPEG-4/MP3/WMA/iTunes AAC/WAV Playback from USB Device
• MOSFET 50 W x 4

• RCA Preouts x 2 (2 V)
• 5-Band Graphic EQ
• JPEG Slide Show
• Back-Up Camera Ready
• Wired Remote Input
• Display Off Mode
• RDS

*\* See page 19 for more details.*
*See page 97 for accessories, and 100 for iPod/iPhone Compatibility.*

Touch Panel Screen | 6.2W | VGA | LED | MULTI-LANGUAGE DISPLAY | MP3 | WMA | AAC | DIVX | DOLBY DIGITAL | USB | AUX IN | 2 RCA pre-outs | WIRED REMOTE INPUT | RDS | SUPER TUNER IIID | MOSFET 50W x4 | Back UP Camera Ready
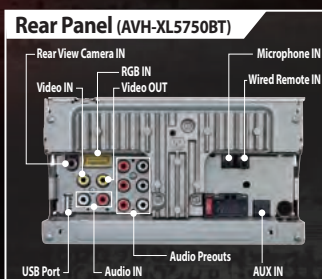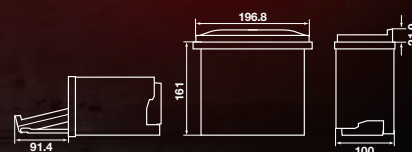
Made for **iPod** **iPhone**

# AVH-XL5750BT

**In-Dash Double-DIN DVD Multimedia AV Receiver with 7" WVGA Touchscreen Display, MIXTRAX, Built-in Bluetooth®, and Direct Control for iPod/iPhone and Certain Android Phones**
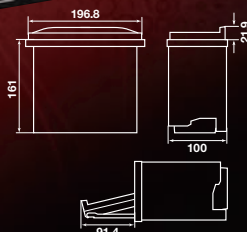
# AVH-XL4750DVD

**In-Dash Double-DIN DVD Multimedia AV Receiver with 7" WVGA Touchscreen Display, MIXTRAX, and Direct Control for iPod/iPhone and Certain Android Phones**

196.8
161
91.4
100
21.9

196.8
161
91.4
100
21.9

**Rear Panel** (AVH-XL5750BT)

Rear View Camera IN
RGB IN
Video IN
Video OUT
Microphone IN
Wired Remote IN
USB Port
Audio IN
Audio Preouts
AUX IN

**Remote Control Included**

Touch Panel Screen | 7.0W | VGA | LED | MULTIPLE COLOR | MULTI-LANGUAGE DISPLAY | DVD VIDEO | CD-R/RW | MP3 | WMA | MIXTRAX | Bluetooth® | AppRadio MODE | Smartphone Compatible | Made for iPod iPhone
AAC | DivX | DOLBY DIGITAL | APP MODE | USB | AUX IN | RCA pre-outs | Hi-VOLT | 24bit DA Converter | Auto EQ | MirrorLink
TV+ Tuner Ready | WIRED REMOTE INPUT | RDS | SUPER TUNER IIID | MOSFET 50Wx4 | Siri Eyes Free | Back UP Camera Ready

*Note: "Bluetooth Wireless Technology" and "Siri Eyes Free" for AVH-XL5750BT.*

## Key Selling Points

**Point 1**
**200 mm-wide Double-DIN front panel is designed to fit perfectly in the the the car interior's center console.**

**Point 2**
**Pages 14-15**
**Experience the exclusive in smartphone connectivity with AppRadio Mode USB by simple cable connection.**

AppRadio MODE | Smartphone Compatible | Made for iPod iPhone

**Point 3**
**Page 18**
**Enjoy superior in-car AV performance with 13-Band Graphic EQ, FLAC codec playback* and other high quality functions.**
* For the files stored in USB thumb drive.

### Common Main Features (Blue text: upgraded features from AVH-X4850DVD)

• MIXTRAX (MIXTRAX EZ for Quick Non-Stop MIX Play)
• 7" WVGA Touch Panel Display with LED Backlight
• Multi-Language Display* (Menu/ID3 Tag)
• Color Customization (5-Display Colors and 112-Key Colors)
• AppRadio Mode USB for iPod/iPhone & Certain Android Phones
• App Mode
• Built-in MirrorLink™
• USB Port (Rear: High Current 1A Handling Capability)
• AUX Input (Audio/Video)
• RGB Input
• DVD/CD Player with DVD Video Playback
• DivX®/MPEG-4/MP3/WMA/iTunes AAC/WAV Playback from USB Device
• H.264 Playback from USB Device
• DivX/MPEG-1, -2, -4/MP3/WMA/iTunes AAC Playback from CD/DVD

• Advanced Sound Retriever
• MOSFET 50 W x 4
• Hi-Volt RCA Preouts x 3 (4 V)
• 13-Band Graphic EQ
• Auto EQ & Auto Time Alignment (CD-MC20 Required)

**AVH-XL5750BT Main Features**

• Direct Control for iPod/iPhone (USB/Bluetooth)
• Direct Control for Certain Android Phones (USB/Bluetooth)
• Built-in Bluetooth Wireless Technology (Hands-Free Calling/Wireless Audio)
• Siri Eyes Free
• SR Air

• Pioneer TV Tuner Ready
• JPEG Slide Show
• Back-Up Camera Ready
• Wired Remote Input
• Display Off Mode
• RDS

**AVH-XL4750DVD Main Features**

• Direct Control for iPod/iPhone (USB)
• Direct Control for Certain Android Phones (USB)

*\* See page 19 for more details.*
*See page 97 for accessories.*

### iPod/iPhone Compatibility

| Made for |
|---|
| iPhone 6 Plus, iPhone 6 (AppRadio Mode USB Compatible) |
| iPhone 5s, iPhone 5c, iPhone 5 (AppRadio Mode USB Compatible) |
| iPhone 4s |
| iPhone 4 |
| iPhone 3GS |
| iPhone 3G |
| iPhone |
| iPod touch (1st, 2nd, 3rd, 4th, and 5th generation) |
| iPod classic |
| iPod with video |
| iPod nano (1st, 2nd, 3rd, 4th, 5th, 6th, and 7th generation) |

*Notes: Receiver may not operate other iPod or iPhone models. Compatibility with unit and operations may vary depending on the software version.*
*See page 100 for more details.*

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# CONNECTIVITY

## AppRadio Mode

AppRadio MODE

| AVH-X8850BT | AVH-X5850BT | AVH-X4850DVD | AVH-X2850BT | AVH-X1850DVD | AVH-X7850BT | AVH-X6850DVD | AVH-XL5750BT | AVH-XL4750DVD |

### ■ A Revolutionary Way to Use Apps in the Car

AppRadio Mode* revolutionizes the driver's smartphone experience by bringing compatible iPhone 6 Plus, iPhone 6, iPhone 5s, iPhone 5c, iPhone 5 or Android** apps to your dash.

* App Radio Mode: Compatible with AVH-X8850BT. See page 97 for accessories, and 100 for iPod/iPhone and Android compatibility.
  AppRadio Mode USB (not for iPod touch): Compatible with AVH-X5850BT, AVH-X4850DVD, AVH-X2850BT, AVH-X1850DVD, AVH-X7850BT, AVH-X6850DVD, AVH-XL5750BT and AVH-XL4750DVD.
** Not all Android phones are compatible.

Made for
iPod  iPhone

Smartphone Compatible

### ■ How to Use AppRadio Mode

#### AppRadio Mode (iPhone connectivity example shown)

**Step 1**

Install the AppRadio app and other 3rd party apps to your iPhone.

**Step 2**

After launching the app, connect your iPhone to the receiver using the AppRadio Mode compatible cable. Pressing the "MODE" button lets you change to the AppRadio Mode's Home display screen.

**Step 3**

Through the display of the AV receiver, you can fully control apps compatible with AppRadio Mode.

### ■ Side Control Bar

| AVH-X8850BT | AVH-X5850BT | AVH-X4850DVD | AVH-X2850BT | AVH-X1850DVD | AVH-X7850BT | AVH-X6850DVD | AVH-XL5750BT | AVH-XL4750DVD |

Press the Home button of the AVH-X8850BT twice, and the Side Control Bar goes on display for easy access to the Phone Menu and other Sources. With other AV receivers, press the DISP button to display the Side Control Bar.
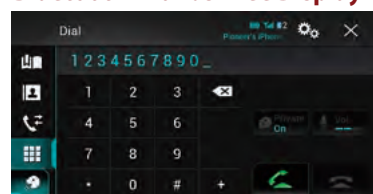
**Source List**
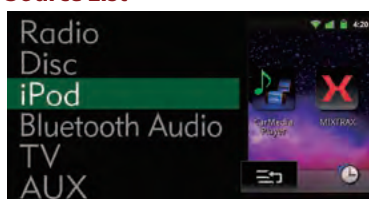
**Home Display for Android Connection**
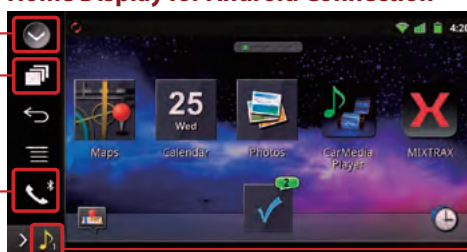
**Current AV Source or App**

**Bluetooth® Hands-Free Display**

**Launcher App**

### ■ AppRadio Mode USB

With connection simplified, worries about selecting the appropriate cable and the corresponding clutter of cables around the center console disappear.

| AVH-X5850BT | AVH-X4850DVD | AVH-X2850BT | AVH-X1850DVD | AVH-X7850BT | AVH-X6850DVD |
| AVH-XL5750BT | AVH-XL4750DVD |

**iPhone 6 Plus, iPhone 6, iPhone 5s, iPhone 5c and iPhone 5**

USB Extension Cable (1.5 m) included in AVH

Optional CD-IU52

Lightning–USB Cable

| AVH-X5850BT | AVH-X4850DVD | AVH-X2850BT | AVH-X1850DVD | AVH-X7850BT | AVH-X6850DVD |
| AVH-XL5750BT | AVH-XL4750DVD |

**Android***

USB Extension Cable (1.5 m) included in AVH

CD-MU200

USB–Micro USB Cable

* Not all Android phones are compatible.

*Easy Connection*

# CONNECTIVITY

## ■ AppRadioLIVE

**AppRadioLIVE**

AppRadioLIVE App, which is one of the apps that is compatible with AppRadio Mode, gives you access to all elements of your digital lifestyle in one place. Connect your compatible smartphone to a receiver with AppRadio Mode to listen to your favorite music, check the weather, find nearby events and more. AppRadioLIVE delivers fresh content from many popular apps without the need to search and open them individually.

### MAPS
AppRadioLIVE uses the native maps from your smartphone overlaid with INRIX® live traffic data to provide live traffic and incident information to give you an estimated time of arrival at your chosen destination.
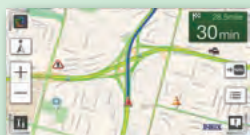
### EVENTS
Pioneer keeps you up-to-date on the latest news stories, RSS feeds and weather information with Feedly® and Open Weather Map.

### MEDIA
By putting your favorite music and media in one place, AppRadioLIVE simplifies your drive.

### CALENDAR
AppRadioLIVE keeps your life organized and makes it easier to stay in touch and have fun.
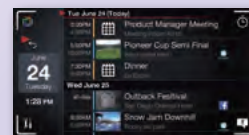
*Note: Apps compatible with AppRadioLIVE may differ according to region.*

## Spotify®

| AVH-X5850BT | AVH-X4850DVD* | AVH-X2850BT | AVH-X1850DVD* | AVH-X7850BT | AVH-X6850DVD* |

Spotify® gives you instant access to millions of songs. With support for Spotify®, you can control the Spotify® app on your smartphone via your car receiver's touchscreen.

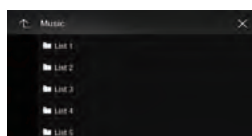*\* Compatible with iPhone only.*
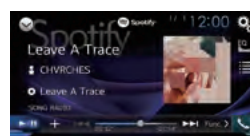
## Built-in Bluetooth®

**Bluetooth®**

| AVH-X8850BT | AVH-X5850BT | AVH-X2850BT | AVH-295BT | AVH-X7850BT | AVH-4850BT | AVH-XL5750BT | MVH-AV285BT |

### ■ AVRCP Version 1.5

| AVH-X5850BT | AVH-X2850BT | AVH-295BT | AVH-X7850BT | AVH-4850BT | MVH-AV285BT |

File Browsing can be used through AVRCP 1.5 version of Bluetooth. You can easily search songs in the browsing display.
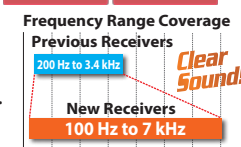
*Note: AVH-X8850BT and AVH-XL5750BT—AVRCP Version 1.4*

### ■ HFP Version 1.6

| AVH-X8850BT | AVH-X5850BT | AVH-X2850BT | AVH-X7850BT | AVH-4850BT |
| AVH-XL5750BT | MVH-AV285BT |

You can talk with much clearer voice via spread twice band width.

**Frequency Range Coverage**
Previous Receivers
200 Hz to 3.4 kHz — Clear Sound!
New Receivers
100 Hz to 7 kHz

### ■ Siri* Eyes Free Compatible

| AVH-X8850BT | AVH-X5850BT | AVH-X2850BT | AVH-X7850BT | AVH-XL5750BT |

Smart voice control lets users access various iPhone functions to select music, make calls from a contact list, etc., without taking their eyes off the road.

*\* Siri is available on iPhone 4s or later, iPad with Retina display, iPad mini, and iPod touch (5th generation) and requires Internet access. Siri may not be available in all languages or in all areas, and features may vary by area. Cellular data charges may apply. Some features may not be available for all countries or all areas.*

**Siri Eyes Free**

*Call Sophia!*

### ■ Two-Phone Full Time Connection

| AVH-X5850BT | AVH-X2850BT | AVH-X7850BT |

You can connect two mobile phones (for personal and business use, for example) with the receiver, and an incoming call from either phone can be received without requiring manual switching.

1 Private phone  2 Business phone

## Built-in MirrorLink™

**MirrorLink™**

| AVH-XL5750BT | AVH-XL4750DVD |

Use an interface cable to connect the receiver and a compatible MirrorLink™ certified smartphone. Then, you can directly control and access music, maps, and contacts stored on the smartphone via the receiver's touchscreen.

### CD-MU200
USB Interface Cable for AppRadio Mode USB, Android Use with Android Auto™ and MirrorLink™ Devices (USB-USB Cable: 1.5 m/USB-microUSB Cable: 50 cm)
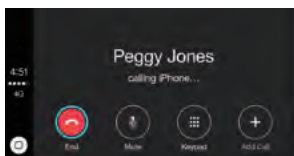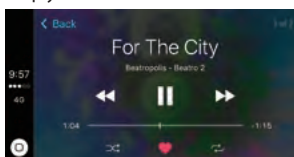
# CONNECTIVITY

## Apple CarPlay*

Works with
Apple CarPlay

AVH-X8850BT

With the directly connected phone, information like favorites, recent calls, contact list are available on the receiver's screen by just touching the icon and Siri will help you.
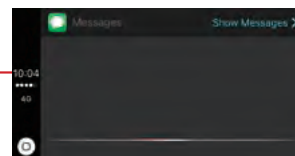
You can enjoy music from iTunes Radio or music stored on your phone such as Genius Playlist, standard Playlist or Artists.
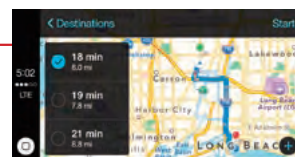
*Apple CarPlay is the safer, smarter and more fun way to use your iPhone in the car.*
*It launches automatically by just plugging in.*

*\* Apple CarPlay is available on Apple iPhone 5 or later with iOS 7.1.2 or higher, and requires Lightning to USB cable.*

Create, listen to and reply to your messages to desired contact by using Siri.
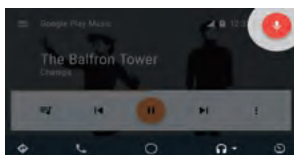
Just tell Siri where you want to go or you can find destinations with a list of previous search histories, or addresses sent to you in text messages and emails.
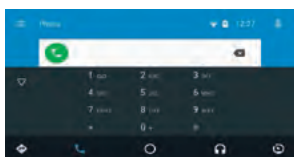
## Android Auto™*
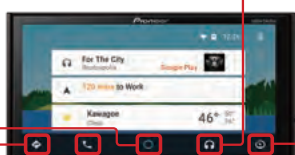
androidauto

AVH-X8850BT    Android Auto extends the Android platform into the car in a way that's purpose-built for driving.

Just say the word—best-in-class speech technology makes controlling everything with your voice fast and easy.
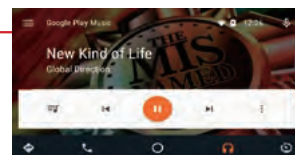
*Android Auto automatically brings you useful information, and organizes it into simple cards that appear just when they're needed.*

Your favorite tunes—to go. Access and stream your favorite music with apps like Google Play Music, Spotify® and more*.
*\* Available apps depend on regions and countries.*

Phone calls can be made easily, directly from the receiver, showing all contacts and call lists stored on the phone.
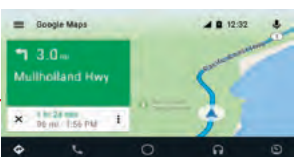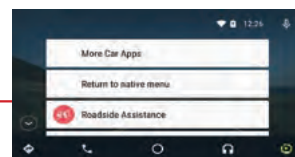
Let Google Maps lead the way. It's easy to get where you're going with free voice-guided navigation, live traffic information, lane guidance, and more.

Hit the road with your favorite apps. Android Auto makes it easy to access your favorite apps and content in the car.

*\*Android Auto is available with Android phone running Android 5.0 (Lollipop) or higher with a data plan.*
*Note: Availability of Android Auto may vary depending upon your country and phone model.*
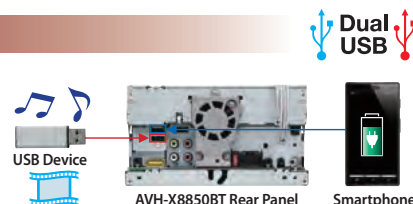
## Learning Steering Wheel Control

All Receivers

You can now assign certain functions of the receiver to control buttons on the steering wheel.

## Dual USB Ports

Dual USB

AVH-X8850BT

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

USB Device          AVH-X8850BT Rear Panel          Smartphone

## USB Quick Charge for Android (CDP)   NEW

| AVH-X5850BT | AVH-X4850DVD | AVH-X2850BT | AVH-X1850DVD |
| AVH-X7850BT | AVH-X6850DVD | | |

QUICK CHARGE

Pioneer's AV receiver has a charging downstream port (CDP) providing up to 1.5 amperes to give an Android smartphone a quick charge.

## Direct Control for Certain Android Phones (MTP Mode)

| AVH-X5850BT | AVH-X4850DVD | AVH-X2850BT | AVH-X1850DVD |
| AVH-X7850BT | AVH-X6850DVD | AVH-XL5750BT | AVH-XL4750DVD |

USB    Smartphone Compatible

Take advantage of a wired USB connection to the receiver. Sound stays clean and clear, file search and access are very quick, and song, artist, time and album displays are user-friendly.
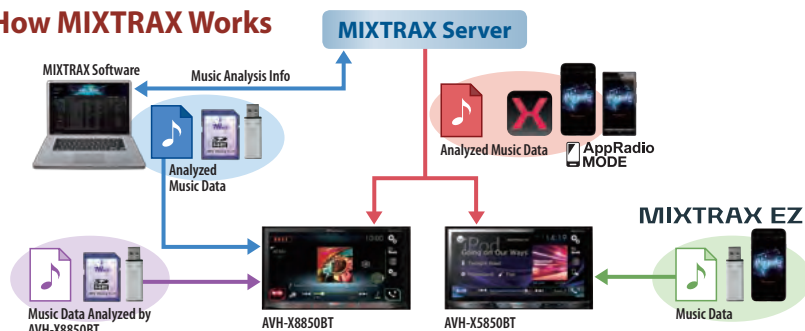
# AUDIO

## MIXTRAX

# MIXTRAX

### Innovative Pioneer technology that creates a Non-Stop MIX with a range of DJ-inspired effects.

## How MIXTRAX Works

MIXTRAX Software
Music Analysis Info
**MIXTRAX Server**

Analyzed
Music Data

Analyzed Music Data
**AppRadio MODE**

Music Data Analyzed by
AVH-X8850BT

AVH-X8850BT

AVH-X5850BT

**MIXTRAX EZ**

Music Data

### MIXTRAX, MIXTRAX App, and MIXTRAX EZ Comparison

| | Advantage | MIXTRAX Software | Compatible Source |
|---|---|---|---|
| MIXTRAX | Full-featured Non-Stop Mix Play*1 | Compatible | USB Device |
| | | | SD Memory Card |
| MIXTRAX App | Quick and Easy, Non-Stop Mix Play | *2 | iPhone, iPod touch |
| | | | Android Phone |
| MIXTRAX EZ | Quick and Easy, Non-Stop Mix Play | — | USB Device |
| | | | iPod, iPhone |

*1. Requires music analysis by MIXTRAX Software from Pioneer (free download).
*2. Creates playlists using data from the MIXTRAX cloud server.

---

### MIXTRAX

AVH-X8850BT

#### AV Receiver Analysis
The AVH-X8850BT is able to analyze the music, so you can enjoy Non-Stop MIX Play simply by connecting a USB Device or SD Memory Card containing music that has not been analyzed.

#### PC Analysis
You can analyze music on a PC, then put the analyzed music data on USB Device or SD Memory Card. The AVH-X8850BT allows you to listen it with MIXTRAX function.

### MIXTRAX App

AVH-X8850BT

You can use an iPhone, iPod touch or Android on which the MIXTRAX app is installed, to access analyzed music data on the MIXTRAX server. Then, you can enjoy music with MIXTRAX function via AppRadio Mode.
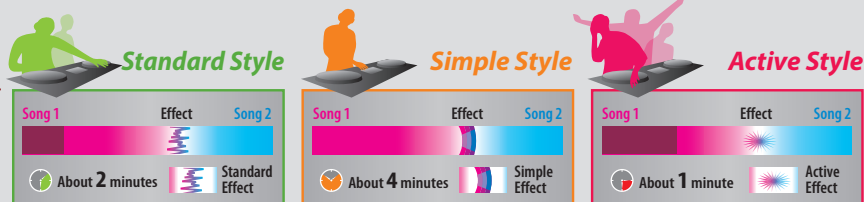
### MIXTRAX EZ

AVH-X5850BT  AVH-X4850DVD  AVH-X2850BT  AVH-X1850DVD
AVH-X7850BT  AVH-X6850DVD  AVH-XL5750BT  AVH-XL4750DVD

Experience your music as a simple quick non-stop mix. Tracks are joined by various random sound effects and you can experience the intimate euphoria of listening to music that sounds as if a club DJ is there playing it.

---

### MIXTRAX

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

**Standard Style**
Song 1  Effect  Song 2
About **2** minutes  Standard Effect

**Simple Style**
Song 1  Effect  Song 2
About **4** minutes  Simple Effect

**Active Style**
Song 1  Effect  Song 2
About **1** minute  Active Effect

#### Link Gate
Automatically create a new MIX playlist based on the Artist, Genre, Tempo, or Year of the currently playing song. Now its even easier to enjoy a Non-Stop MIX that matches your taste.
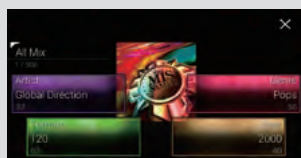
#### Display Visualizer
The Display Visualizer provides for cool ambient visuals that enhance the in-car mood. Three shining spheres change their speed and movement based on the music in your Non-Stop MIX.
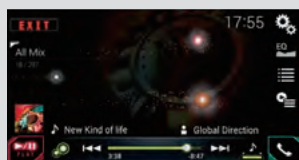
#### BPM Slider Bar
Change the beats per minute (BPM) of the currently playing music by sliding up or down along the bar.

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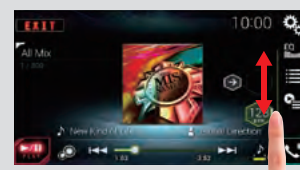
### MIXTRAX EZ

#### Short Playback Mode
You can choose a length of playback (60, 90, 120, 150, 180 sec., random, or off) to shorten track selections and speed up switching to following tracks in the mix.

**60″, 90″, 120″, 150″, 180″, Random, Off**
Song 1 *
Song 2  DJ-INSPIRED EFFECT
Song 3  DJ-INSPIRED EFFECT
Song 4  DJ-INSPIRED EFFECT

* Orange portions indicate playback of each track.

#### Selectable Sound Effect
Select the desired special sound effects using the setting menu.
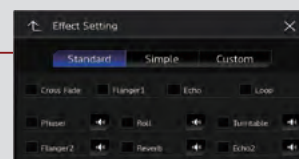
#### Display Visualizer
Enjoy club illumination-style visual effects that match set background colors.

# AUDIO

## Support FLAC Codec*

AVH-X8850BT  AVH-X5850BT  AVH-X4850DVD  AVH-X2850BT  AVH-X1850DVD  AVH-X7850BT  AVH-X6850DVD

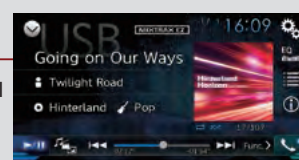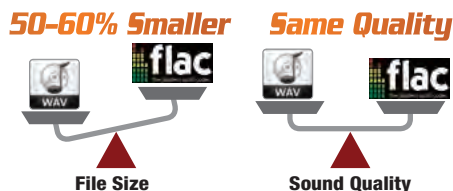New Pioneer AV receiver supports dramatically superior car audio experiences with amazingly brilliant reproduction of sound by FLAC (Free Lossless Audio Codec) files that are 50–60% smaller than WAV files, yet retain the integrity of original sound sources. Characterized by 48 kHz sampling frequency and 24-bit bitrate, the sound quality of FLAC file playback exceeds even that of CD playback.

*For the files stored in USB thumb drive.*

**50–60% Smaller**

**Same Quality**

File Size

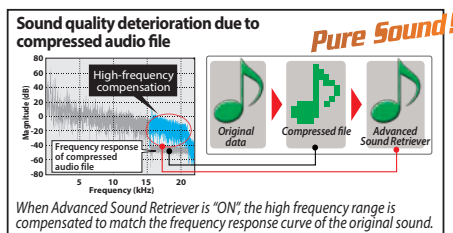Sound Quality

## Advanced Sound Retriever

AVH-X8850BT  AVH-X5850BT  AVH-X4850DVD  AVH-X2850BT  AVH-X1850DVD  AVH-X7850BT  AVH-X6850DVD
AVH-XL5750BT  AVH-XL4750DVD

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

**SR Air***

SR Air also improves the sound of Bluetooth® wireless audio streams.

*Compatible with AVH-X8850BT, AVH-X5850BT, AVH-X2850BT, AVH-X7850BT and AVH-XL5750BT.*

**Sound quality deterioration due to compressed audio file**

**Pure Sound!**

High-frequency compensation

Frequency response of compressed audio file

Magnitude (dB)
80 60 40 20 0 -20 -40 -60 -80
Frequency (kHz)
5 10 15 20

Original data  →  Compressed file  →  Advanced Sound Retriever

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

## 13-Band Graphic EQ

AVH-X8850BT  AVH-X5850BT  AVH-X4850DVD  AVH-X2850BT  AVH-X1850DVD
AVH-X7850BT  AVH-X6850DVD  AVH-XL5750BT  AVH-XL4750DVD

With the unique Advanced Touch Slide Operation, you simply drag your finger across the screen to change the EQ curve and audio characteristics.
13-band EQ adjustment allows you to fine-tune sound quality just as you like it.

Graphic EQ

## Auto EQ*

AVH-X8850BT  AVH-X5850BT  AVH-X4850DVD  AVH-X2850BT  AVH-X1850DVD
AVH-X7850BT  AVH-X6850DVD  AVH-XL5750BT  AVH-XL4750DVD

It can be difficult to reproduce music accurately in a vehicle due to factory speaker locations and interior materials. These limitations can lead to sound phase distortion, as well as sound reflection against glass and absorption by the dashboard and seats.
Auto EQ uses a microphone to monitor and analyze the vehicle acoustics, then automatically fine-tunes all frequencies and also applies digital parametric equalization to the front and rear speakers—producing a smoother sounding musical experience.
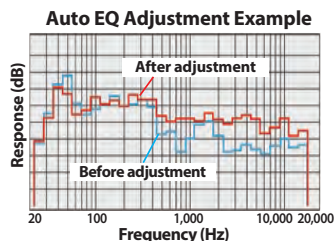
**Auto EQ Adjustment Example**

Response (dB)

After adjustment

Before adjustment

Frequency (Hz)
20  100  1,000  10,000 20,000

**After adjustment:**
*Smooth response with subtle nuances reproduced clearly.*

**Before adjustment:**
*Rough frequency response curve; unclear overall sound.*

**CD-MC20**

Microphone for Auto EQ and Auto Time Alignment Frequency Band Fine-Tuning

*CD-MC20 required*

## High-Grade Audio Parts

AVH-X5850BT  AVH-X4850DVD  AVH-X2850BT
AVH-X1850DVD  AVH-X7850BT  AVH-X6850DVD

Pioneer's new audio capacitors for AV receivers clearly detail and localize sound characteristics and clean up extraneous noise, for more lasting listening pleasure.

**Superior Sound Clarity, Precision & Detail!**

## Specialized Audio Parts

Specialized Audio Parts

AVH-X8850BT

The AVH-X8850BT features specialized audio components such as a DSP and high-tolerance acoustic capacitors in order to reinforce Pioneer's dedication to high quality audio.
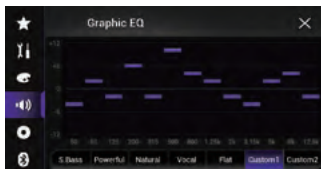
DSP

Acoustic Capacitor

## Touch Slide Crossover Setting

AVH-X8850BT  AVH-X5850BT  AVH-X4850DVD  AVH-X2850BT  AVH-X1850DVD
AVH-X7850BT  AVH-X6850DVD  AVH-XL5750BT  AVH-XL4750DVD

It's intuitively easy to operate and set system tuning by dragging and tapping your finger.

Cutoff
Subwoofer

## Auto Time Alignment*

AVH-X8850BT  AVH-X5850BT  AVH-X4850DVD  AVH-X2850BT  AVH-X1850DVD
AVH-X7850BT  AVH-X6850DVD  AVH-XL5750BT  AVH-XL4750DVD

Time Alignment automatically estimates the delay from each speaker to driver's position and adjusts speaker output timing, so that sound from all speakers reaches the driver's ears in perfect sync.

**Auto TA ON**

Close

Far
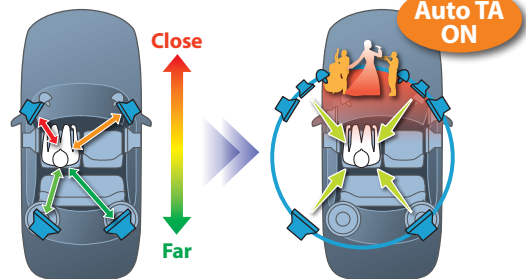
The different distances from each speaker to the driver cause the delay of sound.

Auto TA makes all speakers sound as if they are virtually equidistant from the driver.

# USER INTERFACE & OTHERS

## Advanced User Interface

`AVH-X8850BT` `AVH-X5850BT` `AVH-X4850DVD` `AVH-X2850BT` `AVH-X1850DVD` `AVH-X7850BT` `AVH-X6850DVD` `AVH-XL5750BT` `AVH-XL4750DVD`

More advanced than ever before, the Multimedia AV receiver features a responsive, powerful and intuitive touchscreen user interface that is easy to use and highly customizable.

### ■ Seamless Access

**Home Menu Display**

Just tap the icon on the Home Menu for quick access to the currently playing source, Bluetooth® or AppRadio Mode.

*AVH-X5850BT Display*

### ■ Quick and Easy Operation

**Song List**　`AVH-X8850BT`

Operation is intuitive, as with a smartphone, using such touch gestures as a flick to quickly scroll a list.

*AVH-X8850BT Display*

### ■ Advanced Customization

**Source Menu Display**

Simply drag and drop to change and customize Source Menu order.

*AVH-X5850BT Display*

## Color Customization

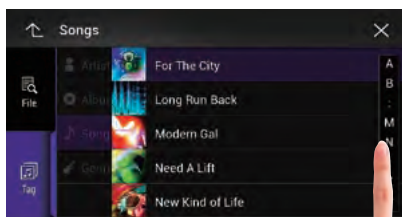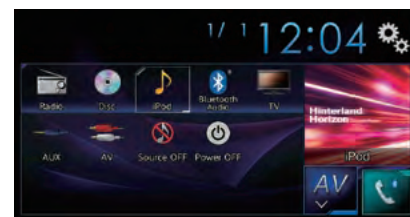**MULTIPLE COLOR**

`AVH-X8850BT` `AVH-X5850BT` `AVH-X4850DVD` `AVH-X2850BT`
`AVH-X1850DVD` `AVH-X7850BT` `AVH-X6850DVD` `AVH-XL5750BT` `AVH-XL4750DVD`

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

*Brilliant!*

## Detachable Face Security™

**DETACHABLE FACE SECURITY.**

`AVH-X8850BT` `AVH-X7850BT` `AVH-X6850DVD`

The extra-thin face panel* of the AVH-X8850BT is easy to remove and carry out of the car to deter theft.

*\* Carrying case is included in the box.*

## Pioneer TV Tuner Accessory

**TV Tuner Ready**

`AVH-X8850BT` `AVH-X5850BT` `AVH-X4850DVD` `AVH-X2850BT`
`AVH-X1850DVD` `AVH-X7850BT` `AVH-X6850DVD` `AVH-XL5750BT` `AVH-XL4750DVD`

GEX-2850DVB2, GEX-1750DVB2, GEX-1750DVB and GEX-1550TV TV tuner can be operated via receiver touch panel displays.
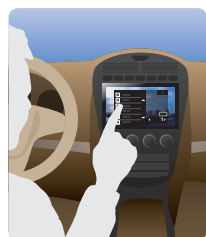
### GEX-2850DVB2*
**Dual Diversity DVB-T2 TV Receiver**

### GEX-1750DVB2*
**HD DVB-T2 Digital TV Receiver**

### GEX-1750DVB*
**HD DVB-T Digital TV Receiver**
*\* Not compatible with RD models.*

### GEX-1550TV
**Analog TV Tuner**
• Compatible broadcasting systems: PAL/SECAM/NTSC

*Note: Each TV Tuner is compatible with the broadcasting system of the country in which the respective product is sold.*

## Clear Type Resistive Touch Panel

`All Receivers`　(Except AVH-XL5750BT, AVH-XL4750DVD, AVH-4850BT and AVH-3850DVD)

The new Pioneer AV receivers' display panel are designed as beautifully crisp and it brings you enhanced visibility.

## Power Off Mode

`AVH-X8850BT` `AVH-X5850BT` `AVH-X4850DVD` `AVH-X2850BT` `AVH-X1850DVD` `AVH-X7850BT` `AVH-X6850DVD`

Now you can turn off the AV receivers' screen separately in right order, not by compelling with turning off vehicles engine.

## Steering Wheel Control Function Expansion

`AVH-X8850BT` `AVH-X5850BT` `AVH-X4850DVD` `AVH-X2850BT` `AVH-X1850DVD` `AVH-X7850BT` `AVH-X6850DVD`

More usefulness are brought, you can receive call by pushing right or left button and use voice recognition function by long-pushing the mute button.

## Dual Zone Audio/Video

**Dual Zone**

`AVH-X8850BT`

Pioneer's AVH-X8850BT allows rear seat passenger to enjoy audio or video content on additional rear seat monitors and headphones, even while the front passenger and driver listen to audio from other sources.
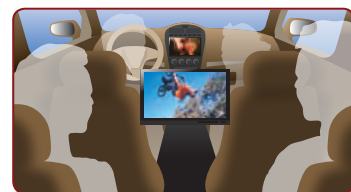
## Multi-Language Display

**MULTI-LANGUAGE DISPLAY**

`All Receivers`

New Pioneer Multimedia AV receiver features Multi-Language Display of Menu and ID3 tag text.

| Asia | |
|---|---|
| English/Thai/Chinese (Simplified)/Chinese (Traditional)/ Bahasa Indonesia | 3 RC* |

| Central America/Latin America/Oceania | |
|---|---|
| English/French**/Spanish/Portuguese/Chinese (Traditional)** ** AVH-X8850BT only | 4 RD* |

| Middle East Asia | |
|---|---|
| English/French/Portuguese/German/Dutch/Russian/ Arabic/Persian/Hebrew | 2 RI* |

*Note: AVH-4850BT/AVH-3850DVD—English/Spanish/Portuguese/Russian*

**XNRC** 1pc.　PIONEER CORPORATION　3
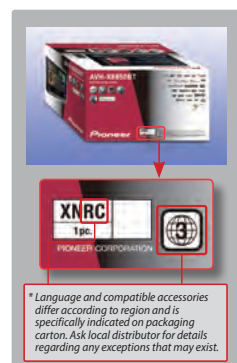
*\* Language and compatible accessories differ according to region and is specifically indicated on packaging carton. Ask local distributor for details regarding any exceptions that may exist.*

# DVH-885AVBT

**DVD Receiver with 3.5" Color TFT Display, Built-in Bluetooth®, and Direct Control for iPod/iPhone and Certain Android Phones**

# DVH-785AV

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

**Rear Panel (DVH-885AVBT)**

Bluetooth Microphone IN | Subwoofer Control | Rear View Camera IN | Video Out
Radio Antenna IN | Audio/Video IN | Audio Preouts

**Remote Control Included**

3.5W/3.0W *1 | LED | MULTI-LANGUAGE DISPLAY | DVD VIDEO | DVD-R/RW CD-R/RW | MP3 WMA AAC | DivX

DOLBY DIGITAL | USB | AUX IN | 2 RCA pre-outs | Hi-VOLT | 24bit DA Converter | WIRED REMOTE INPUT | MOSFET 50W x4 | DETACHABLE FACE SECURITY | Back UP Camera Ready

Bluetooth® | Smartphone Compatible | Made for iPod iPhone

*Note: "Control for Android Phones with CarMediaPlayer App", "Bluetooth Wireless Technology", "iTunes AAC Playback", and "Hi-Volt Preout" for DVH-885AVBT*
*1. 3.0-inch display: DVH-785AV*

# Key Selling Points

**Point 1**
- **Pioneer audio receivers are compatible with certain Android phones and iPod/iPhone*. (DVH-885AVBT)** * Compatible only with music files from iPod/iPhone.
- **Bluetooth Wireless Technology enables hands-free calling. Enjoy wireless audio control and streaming. (DVH-885AVBT)**

Made for iPod iPhone
Smartphone Compatible | Bluetooth®

**Point 2**
**Large built-in 3.5" (DVH-885AVBT) and 3" (DVH-785AV) color TFT displays provide excellent visibility and operability.**

3.5W/3.0W

**Point 3**
**In-car playback of DivX highly compressed digital video files from DVD and USB device.**

DivX | DVD VIDEO | USB

## Common Main Features (Blue text: upgraded features from DVH-345UB)

- Multi-Language Display (Menu/ID3 Tag)
- USB Port (Front)
- Front AUX Input (Audio/Video)
- DVD/CD Player with DVD Video Playback
- MOSFET 50 W x 4

- 3-Band Equalizer (Bass/Mid/Treble)
- JPEG Slide Show
- Back-Up Camera Ready
- Rotary Volume Control
- Detachable Face Security™

- Wired Remote Input
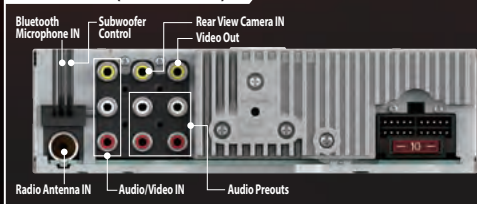- Display Off Mode

*See page 97 for accessories.*

### DVH-885AVBT Main Features (Blue text: upgraded features from DVH-785AV)

- 3.5" Color TFT Display with LED Backlight
- Dual Color (Red/Blue)
- Direct Control for iPod/iPhone (USB)
- Direct Control for Certain Android Phones (Bluetooth)
- Control for Android Phones with CarMediaPlayer App

- Built-in Bluetooth Wireless Technology (Hands-Free Calling/Wireless Audio)
- DivX®/MPEG-1, -2, -4/MP3/WMA/iTunes AAC Playback from USB Device
- DivX/MPEG-1, -2, -4/MP3/WMA/iTunes AAC Playback from CD/DVD
- Hi-Volt RCA Preouts x 2 (4 V)

### DVH-785AV Main Features
(Blue text: upgraded features from DVH-345UB)

- 3" Color TFT Display with LED Backlight
- DivX/MPEG-1, -2, -4/MP3/WMA Playback from USB Device
- DivX/MPEG-1, -2, -4/MP3/WMA Playback from CD/DVD
- RCA Preouts x 2 (2 V)

### iPod/iPhone Compatibility

| Made for |
| --- |
| iPhone 6 Plus, iPhone 6 |
| iPhone 5s, iPhone 5c, iPhone 5 |
| iPhone 4s |
| iPhone 4 |
| iPhone 3GS |
| iPod touch (3rd, 4th, and 5th generation) |
| iPod classic |
| iPod nano (4th, 5th, 6th, and 7th generation) |

**Notes:** *Receiver may not operate other iPod or iPhone models. Compatibility with unit and operations may vary depending on the software version. See page 100 for more details.*

**Point 1**

## USB Direct Control* for iPod/iPhone

DVH-885AVBT

Gain freedom of car entertainment operation by connecting an iPod/iPhone to the DVH-885AVBT. The 3.5" TFT display of this 1-DIN DVD receiver can also be used as an iPod/iPhone interface more easily than that of a 1-DIN single CD player can be used.

*Compatible only with music files from iPod/iPhone.*

**USB**

Made for **iPod** **iPhone**

## Convenient, Easy Bluetooth® Wireless Functions

DVH-885AVBT

• Hands-free calling (HFP) for safe driving
• Wireless Audio Streaming/Control (A2DP)
• File Browsing can be used through AVRCP 1.4 version of Bluetooth. You can easily search songs in the browsing display.

**Bluetooth®**

## Control for Android Phones with CarMediaPlayer App

DVH-885AVBT

Extend your choices in car entertainment by connecting a compatible Android phone to the audio receiver to control CarMediaPlayer.

**Smartphone Compatible**

**Point 2**

## Large Full Color TFT Display

• The DVH-885AVBT and DVH-785AV include a built-in full color TFT display with excellent visibility and comfortable functionality operable with a range of information.
• Having a display built into the front panel makes it easy to enjoy video.

**3.5W/3.0W**
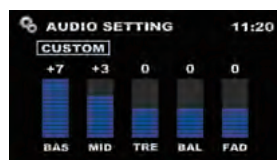
*Audio Setting*
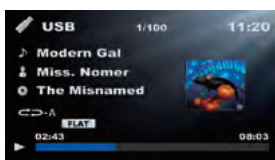
*USB Playback*

*Video Playback*

**3.5" Large Display (DVH-885AVBT)**
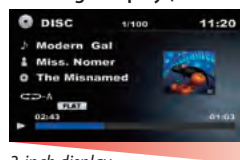
*3-inch display*
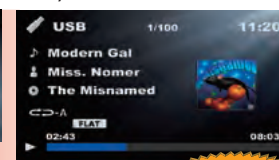
*3.5-inch display* **Larger**

**Point 3**

## Versatile Multimedia Playback and Connectivity

The DVH-885AVBT is compatible with DivX and MP4 video file playback from DVD/CD and USB devices. Also, this receiver can play AAC audio files (encoded by iTunes) from DVD/CD and USB devices.

**AAC** **DIVX™**

DVH-885AVBT

DVD/CD

Certain Android Phones
DVH-885AVBT

Bluetooth-compatible device
DVH-885AVBT

Portable media player*

USB Device

AUX-in** External auxiliary device

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

### DVH-345UB

**DVD Receiver with Front USB Port, and Front AUX-In**

**Rear Panel***

Audio IN    Video OUT

Audio Preouts
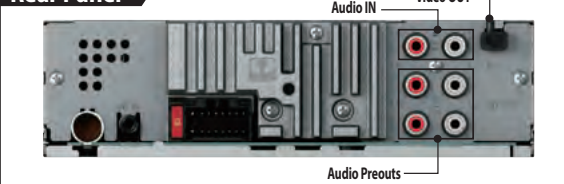
*Rear panel configuration may vary depending on area.*

LED | DVD VIDEO | DVD±R/RW CD-R/RW | MP3 | WMA | AAC | DIVX | DOLBY DIGITAL | USB | AUX IN | 2 RCA pre-outs | 24bit DA Converter | WIRED REMOTE INPUT | RDS | SUPER TUNER III D | MOSFET 50W x4 | DETACHABLE FACE SECURITY

## Main Features

• LCD Display with LED Backlight (10-Character)
• USB Port (Front)
• Front AUX Input (Audio)
• DVD/CD Player with DVD Video Playback
• DivX®/MPEG-1, -2, -4/MP3/WMA/iTunes AAC/WAV Playback from USB Device

• DivX/MPEG-1, -2, -4/MP3/WMA/iTunes AAC Playback from CD/DVD
• Advanced Sound Retriever
• MOSFET 50 W x 4
• RCA Preouts x 2 (2 V)
• 3-Band Equalizer (Bass/Mid/Treble)

• Rotary Volume Control
• Detachable Face Security™
• Wired Remote Input
• RDS

# KEY FEATURES STEP-UP COMPARISON CHART

| Model | Display | Preout | CD Player | Audio Format | AUX Input (Mini-Jack) | USB Interface *1 | Direct Control for iPod/iPhone *2 | Direct Control for Certain Android Phones *3 | Pioneer ARC | Spotify® | SD/SDHC Memory Card Slot | Bluetooth® *4 | MIXTRAX *5 Flashing Color | Music Browser | Color Customization | USB Quick Charge for Android (CDP) | Advanced Sound Retriever | Page Number |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DEX-P99RS | Full Dot OEL 3-Line | 4 (5 V) | ✓ | MP3 WMA AAC WAV | Front | Rear | USB | | | | | With CD-BTB200 | | | ✓ *6 | | ✓ | 24 |
| DEH-80PRS | Full Dot LCD 3-Line | 3 (5 V) | ✓ | MP3 WMA AAC WAV | Front | Rear x 2 | USB | | | | ✓ | | | ✓ | ✓ *7 | | ✓ | 26 |
| DEH-9450UB | Full Dot LCD 3-Line | 3 (4 V) | ✓ | MP3 WMA AAC WAV | Rear | Rear x 2 | USB | | | | | | | ✓ | ✓ *7 | | ✓ | 29 |
| DEH-X9650BT | Full Dot LCD 3-Line | 3 (4 V) | ✓ | MP3 WMA AAC WAV | Front | Rear x 2 | USB | USB | | | ✓ | HFP A2DP AVRCP SPP | ♪ | ✓ | ✓ *7 | | ✓ *8 | 30 |
| DEH-X9650SD | Full Dot LCD 3-Line | 3 (4 V) | ✓ | MP3 WMA AAC WAV | Front | Rear x 2 | USB | USB | | | ✓ | | ♪ | ✓ | ✓ *7 | | ✓ | 30 |
| DEH-X8750BT | Full Dot LCD 3-Line | 3 (4 V) | ✓ | MP3 WMA AAC WAV FLAC *9 | Rear | Rear | USB | USB | | | | HFP A2DP AVRCP SPP | ♪ | ✓ | ✓ *7 | | ✓ *8 | 31 |
| DEH-X7850BT | Wider LCD 2-Line ((13+1)x1+Sub) | GS: 3 (4 V) CS: 3 | ✓ | MP3 WMA AAC WAV FLAC *9 | Front | Front *10 Rear | USB Bluetooth | USB | ✓ | ✓ | | HFP A2DP AVRCP SPP | ♪ | ✓ | ✓ *7 | | ✓ *8 | 32 |
| DEH-X7750UI | Full Dot LCD 3-Line | 3 (4 V) | ✓ | MP3 WMA AAC WAV FLAC *9 | Rear | Rear | USB | USB | | | | | ♪ | ✓ | ✓ *7 | | ✓ | 31 |
| DEH-X6850BT | Wider VA LCD 2-Line (13x1+Sub) | 2 | ✓ | MP3 WMA AAC WAV | Front | Front *10 | USB | USB | ✓ | | | HFP A2DP AVRCP SPP | ♪ | ✓ | ✓ *7 | | ✓ *8 | 33 |
| DEH-X4950BT | Wider VA LCD (13 x 1) | 2 | ✓ | MP3 WMA AAC WAV | Front | Front *10 | USB | USB | ✓ | ✓ | | HFP A2DP AVRCP SPP | ♪ | | ✓ *7 | ✓ | ✓ *8 | 34 |
| DEH-X4850FD | Wider VA LCD (13 x 1) | 2 | ✓ | MP3 WMA WAV | Front | Front *10 | USB | USB | ✓ | | | | | | ✓ | | | 36 |
| DEH-X3950BT | Wider VA LCD (13 x 1) | 2 | ✓ | MP3 WMA AAC WAV | Front | Front *10 | USB | USB | ✓ | ✓ | | HFP A2DP AVRCP SPP | ♪ | | | ✓ (GS model only) | ✓ *8 | 35 |
| DEH-X2950UI | Wider VA LCD (13 x 1) | 2 | ✓ | MP3 WMA WAV | Front | Front *10 | USB | USB | ✓ | | | | ♪ | | ✓ *7 | ✓ | ✓ | 34 |
| DEH-X1953UB | Wider VA LCD (13 x 1) | 3 | ✓ | MP3 WMA WAV | Front | Front *10 | | USB | ✓ | | | | | | ✓ | | ✓ | 35 |
| DEH-X1952UB | Wider VA LCD (13 x 1) | 2 | ✓ | MP3 WMA WAV | Front | Front *10 | | USB | ✓ | | | | | | ✓ | | ✓ | 35 |
| DEH-X1950UB DEH-X1950UBG | Wider VA LCD (13 x 1) | 1 | ✓ | MP3 WMA WAV | Front | Front *10 | | USB | ✓ | | | | | | ✓ | | ✓ | 35 |
| DEH-X5 | Wider VA LCD (13 x 1) | 2 | ✓ | MP3 WMA AAC WAV | Front | Front *10 | USB | USB | ✓ | ✓ | | HFP A2DP AVRCP SPP | ♪ | | ✓ *7 | ✓ | ✓ *8 | 37 |
| DEH-X1 | Wider VA LCD (13 x 1) | 2 | ✓ | MP3 WMA WAV | Front | Front *10 | USB | USB | ✓ | ✓ | | | ♪ | | ✓ *7 | ✓ | ✓ | 37 |

| | Display | Preout | CD Player | Audio Format | AUX Input (Mini-Jack) | USB Interface *1 | Direct Control for iPod/ iPhone *2 | Direct Control for Certain Android Phones *3 | Pioneer ARC | Spotify® | SD/SDHC Memory Card Slot | Bluetooth® *4 | MIXTRAX *5 Flashing Color | Music Browser | Color Customization | USB Quick Charge for Android (CDP) | Advanced Sound Retriever | Page Number |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **DEH-155MP DEH-155MPG** | LCD (12 x 1) | 1 | ● | MP3 WMA WAV | Front | | | | | | | | | | | | ● | 51 |
| **FH-X785BT** | Wider LCD 2-Line ((13+1)x1+Sub) | 3 | ● | MP3 WMA AAC WAV FLAC*9 | Front | Front*10 | USB Bluetooth | USB | ● | ● | | HFP A2DP AVRCP SPP | ♪ | | ●*7 | | ●*8 | 38 |
| **FH-X575UI** | VA LCD 2-Line (13x1+Sub) | 2 | ● | MP3 WMA WAV | Front | Front*10 | USB | USB | | | | | ♪ | | ●*7 | | ● | 39 |
| **FH-X385UB** | Wider VA LCD 2-Line (13 x 1) | 2 | ● | MP3 WMA WAV | Front | Front*10 | | USB | | | | | | | | | ● | 39 |
| **MVH-X585BT** | Wider LCD 2-Line ((13+1)x1+Sub) | 3 (4 V) | | MP3 WMA AAC WAV FLAC*9 | Front | Front*10 Rear | USB Bluetooth | USB | ● | ● | | HFP A2DP AVRCP SPP | ♪ | | ●*7 | | ●*8 | 40 |
| **MVH-X395BT** | Wider VA LCD (13 x 1) | 1 | | MP3 WMA AAC WAV | Front | Front*10 | USB | USB | ● | ● | | HFP A2DP AVRCP SPP | | | ● | | ●*8 | 41 |
| **MVH-X285FD** | Wider VA LCD (13 x 1) | 2 | | MP3 WMA WAV | Front | Front*10 | USB | USB | ● | | | | | | ● | | ● | 36 |
| **MVH-X195UI** | Wider VA LCD (13 x 1) | 1 | | MP3 WMA WAV | Front | Front*10 | USB | USB | | ● | | | | | ● | | ● | 41 |
| **MVH-85UB** | LCD (13 x 1) | 1 | | MP3 WMA WAV FLAC*9 | Front | Front*10 | | USB | | | | | | | ● | | | 41 |
| **MVH-X3** | Wider VA LCD (13 x 1) | 2 | | MP3 WMA AAC WAV | Front | Front*10 | USB | USB | ● | ● | | HFP A2DP AVRCP SPP | ♪ | | ●*7 | | ●*8 | 37 |
| **DXT-X1969UB DXT-X196UB** | Wider VA LCD (13 x 1) | 1 | ● | MP3 WMA WAV | Front | Front*10 | | USB | | | | | | | ● | | | 42 |
| **MXT-X396BT** | Wider VA LCD (13 x 1) | 1 | | MP3 WMA AAC WAV | Front | Front*10 | USB | USB | ● | ● | | HFP A2DP AVRCP SPP | | | ● | | ●*8 | 43 |

♪ For Flashing Color.   ● For Color Customization.

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

*2. Compatibility with unit depends on iPod generation. Requires use of optional cable.

*3. Not all Android phones are compatible.

*4. HFP = Hands-Free Profile, A2DP = Advanced Audio Distribution Profile, AVRCP = Audio/Video Remote Control Profile , SPP = Serial Port Profile. Please refer to instruction manual for other information about profile compatibility.

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

*6. 125 colors. Key illumination only.

*7. 210,000 colors (separated). Colors for key illumination and display are separately adjustable.

*8. Also available for Bluetooth Wireless Audio.

*9. For the files stored in USB thumb drive.

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

# DEX-P99RS

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

**Rear Panel**

OEL | MULTI-LANGUAGE DISPLAY | CD-R/RW | MP3 | WMA | AAC | AUX | 4 RCA pre-outs | Hi-VOLT | Bluetooth® Adapter Ready | USB | Made for iPod iPhone

24bit DA Converter | DSP | Rotary Commander | AUTO FLAP | WIRED REMOTE INPUT | SUPER TUNER III D | DETACHABLE FACE SECURITY.

## Key Selling Points

**Point 1** Devices and materials carefully selected according to the highest standards to achieve the ultimate in sound quality.

**Point 2** L/R Independent 4-Way Crossover, 31-Band L/R Independent EQ and 0.77 cm step Auto Time Alignment help optimize sound field in greater detail.

**Point 3** Built-in USB port allows transmission of digital signals from a connected iPod, iPhone or USB Device to DSP for high-quality sound reproduction.

## Main Features  *(Blue text: upgraded features from DEH-80PRS)*

- Full Dot OEL Display (192 x 48 Pixels, 3-Line)
- 125-Color Button Illumination
- Bluetooth® Adapter Ready (CD-BTB200 Required)*
- USB Direct Control for iPod/iPhone and USB Devices with Digital Direct Signal Transmission (CD-IU51 Required for iPod/iPhone)
- AUX** Input (Front)
- MP3/WMA/WAV/AAC Playback
- Advanced Sound Retriever
- Hi-Volt RCA Preouts x 4 (5 V)
- Built-in DSP with Dual (L/R) 31-Band GEQ

- Auto EQ and Auto Time Alignment
- Multi-Language Display (English/Spanish/Portuguese)
- 7-Way Rotary Commander
- Steering Wheel Remote Control
- Sound Master Clock Circuit
- High-Performance 32-Bit Floating Point DSP
- 24-Bit AKM DACs
- Detachable Face Security™
- Display Off Mode
- Door Mute

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

### CD-IU51
**USB Interface Cable for iPod/iPhone (50 cm)**

### iPod/iPhone Compatibility

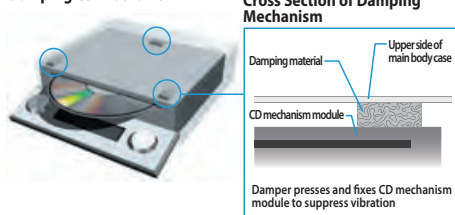| Made for |
| --- |
| iPhone 4 |
| iPhone 3GS |
| iPhone 3G |
| iPhone |
| iPod touch (1st, 2nd, 3rd, and 4th generation) |
| iPod classic |
| iPod with video |
| iPod nano  (1st, 2nd, 3rd, 4th, 5th, and 6th generation) |

*Notes:  Receiver may not operate other iPod or iPhone models. Compatibility with unit and operations may vary depending on the software version.*
*See page 100 for more details.*

**Pioneer**

## Point 1

### High-Performance Damping Material and Mechanism

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

**Damping CD Mechanism**

**Cross Section of Damping Mechanism**

Damping material

Upper side of main body case

CD mechanism module

Damper presses and fixes CD mechanism module to suppress vibration

**Vibration Wave Form of CD Mechanism Module During Playback**

*Without damping material*

*With damping material*
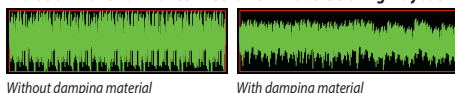
### New High-Precision Sound Master Clock Circuitry

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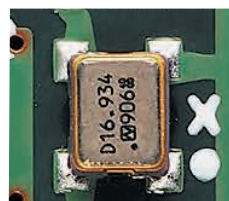
*Sound master clock circuitry*
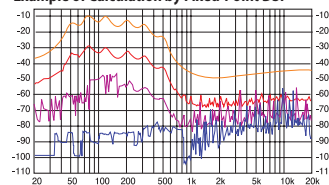
**Clock Wave Form Comparison**
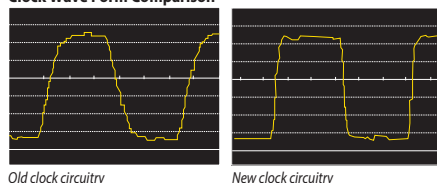
*Old clock circuitry*
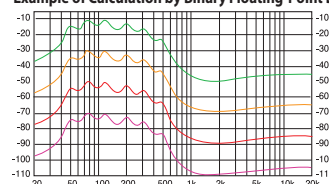
*New clock circuitry*

### 32-Bit Binary Floating-Point DSP

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

**Example of Calculation by Fixed-Point DSP**

**Example of Calculation by Binary Floating-Point DSP**

*Note: DEX-P99RS does not reproduce Dolby® Digital and DTS® digital surround sound.*

## Point 2

### Auto Time Alignment and Auto EQ

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

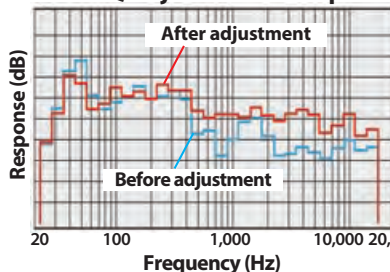*Microphone for Auto EQ frequency band fine-tuning*

*Microphone jack is under front panel (DEH-P80RSII)*

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

**Auto EQ Adjustment Example**

Response (dB)

After adjustment

Before adjustment

Frequency (Hz)
20    100    1,000    10,000 20,000

**After adjustment:**
*Smooth response with subtle nuances reproduced clearly.*

**Before adjustment:**
*Rough frequency response curve; unclear overall sound.*

*For smoother low- to high-range sound.*

### 4-Way Digital Network

To let listeners keep transitions between frequency ranges sounding smooth, the DEX-P99RS features a 4-Way Digital Network that lets you adjust Cutoff Frequency, Cutoff Slope, Level and Phase for any of four (high, mid, low and subwoofer) frequency ranges. Moreover, the adjustments for left and right channels can be made independently of each other. The result: more distinct separation of the four frequency ranges and fuller, more natural sound, with each speaker reaching its full potential as part of a multi-speaker system.
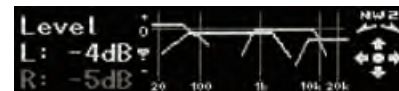
Level
L: -4dB
R: -5dB

**4-Way Digital Network**

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

## Point 3

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

USB

Made for
iPod  iPhone

# DEH-80PRS

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

**Rear Panel**

Full Dot LCD | Separated Color | MULTI-LANGUAGE DISPLAY | CD-R/RW | MP3 WMA AAC | SDHC | AUX IN | 3 RCA pre-outs | Hi-VOLT | 24bit DA Converter | Dual USB | Made for iPod iPhone

DSP | Lever Key | FLAP FACE | Anti-Dust Design | WIRED REMOTE INPUT | RDS | SUPER TUNER IIID | MOSFET 50Wx4 | DETACHABLE FACE SECURITY | Music Browser

## Key Selling Points

**Point 1** — Devices and materials carefully selected according to the highest standards to achieve the ultimate in sound quality.

**Point 2** — Pioneer's exclusive sound field technologies including Auto EQ and Auto Time Alignment help optimize audio in ways that perfectly suit particular listening spaces and allow subtle manual control of settings.

**Point 3** — Versatile connectivity helps deliver exceptional sound quality from various digital devices.

## Main Features  *(Blue text: upgraded features from DEH-9450UB)*

- CD Player
- Full Dot LCD Display (192 x 48 Pixels, 3-Line)
- LED Backlight
- Multi-Language Display (English/Spanish/Portuguese)
- Separated Color Customization (More than 210,000 Colors)
- SD/SDHC Memory Card Slot
- USB Direct Control for iPod/iPhone (CD-IU51 Required)
- Dual USB Ports (Rear: High Current 1A Handling Capability)
- AUX Input (Front)
- Music Browser

- MP3/WMA/WAV/AAC Playback
- 3-Way Digital Network
- DSP with Dual (L/R) 16-Band GEQ
- Auto EQ and Auto Time Alignment
- Exclusively Designed Audio Parts
- Advanced Sound Retriever
- MOSFET 50 W x 4
- Supertuner® IIID
- RDS
- Hi-Volt RCA Preouts x 3 (5 V)

- Flap Face
- Anti-Dust Design
- Wired Remote Input
- Display Off Mode
- Detachable Face Security™
- Lever Key
- Rotary Volume Control
- Aluminum Rotary Volume Knob
- Card Remote Control

### iPod/iPhone Compatibility

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

Notes:  Receiver may not operate other iPod or iPhone models. Compatibility with unit and operations may vary depending on the software version.
See page 100 for more details.

**Point 1**

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

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

### Four-Layer Circuit Board Design

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

## Full-Custom High-Capacitance Power Supply Capacitor

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

### Sound Master Clock Circuitry

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

**Clock Wave Form Comparison**

*Old clock circuitry*    *New clock circuitry*    *Sound master clock circuitry*
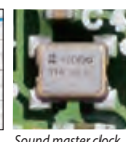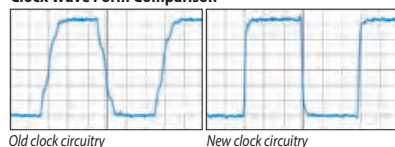
**Point 2**

## 28-bit Binary Floating-Point DSP

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

### ● 3-Way Digital Network Mode

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

**3-Way Digital Network System Connection Example**

| PRS AMP | High |
| PRS AMP | Mid |
| PRS AMP | Low |
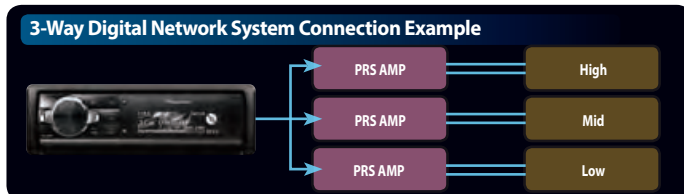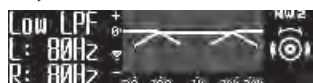
### ● L/R Independent 16-Band Digital Equalizer

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

**16-Band Equalizer Curve**

SPL
+12dB
0
-12dB
20 Hz    100 Hz    1 kHz    20 kHz
Frequency
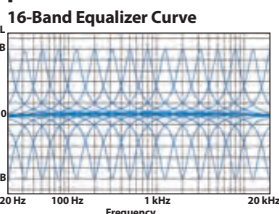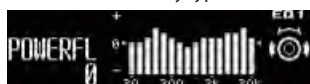
### ● Time Alignment

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

### ● Auto Time Alignment and Auto EQ

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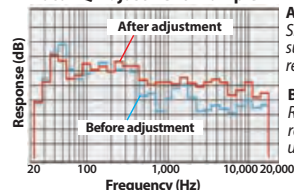
*Microphone for Auto EQ frequency band fine-tuning*

**Auto EQ Adjustment Example**

Response (dB)
After adjustment
Before adjustment
20    100    1,000    10,000 20,000
Frequency (Hz)

**After adjustment:** *Smooth response with subtle nuances reproduced clearly.*

**Before adjustment:** *Rough frequency response curve; unclear overall sound.*

**Point 3**

### Direct Digital Transfer for Superior Compressed Audio File Sound Quality

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

USB → Multimedia Codec IC → DSP → D/A Converter → Electronic Volume IC → Amplifier

**Digital Direct**
*Digital signals are processed directly from Digital devices.*
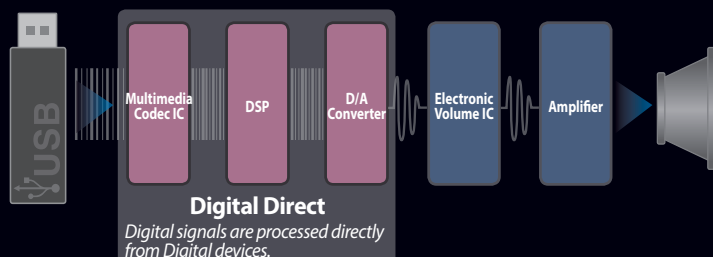
### Connection Example for USB Devices, SD Memory Card and External Auxiliary Device
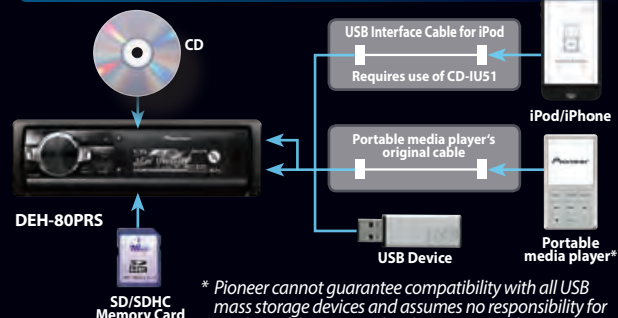
CD

USB Interface Cable for iPod
Requires use of CD-IU51

iPod/iPhone

Portable media player's original cable

DEH-80PRS

SD/SDHC Memory Card

USB Device

Portable media player*

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

# USER INTERFACE

## Pioneer ARC

Pioneer ARC ▶

**All Audio Receivers** (Except DEX-P99RS, DEH-80PRS, DEH-9450UB, DEH-X9650BT, DEH-X9650SD, DEH-X8750BT, DEH-X7750UI, DEH-155MP(G), FH-X575UI and MVH-85UB)

After downloading Pioneer's ARC app from the App Store or Google Play™, you can use your smartphone to control Pioneer receiver functions including presets, fast forward/rewind, and artist/album search.

Download on the **App Store**

GET IT ON **Google Play**

### ■ EQ Setting NEW

**Conventional Setting**

**Setting with Pioneer ARC App**

*Easy!* Easily adjust and select desired EQ setting.

# CONNECTIVITY

## Spotify® NEW

| DEH-X7850BT | DEH-X4950BT | DEH-X3950BT | DEH-X2950UI |
| DEH-X5 | DEH-X1 | FH-X785BT | MVH-X585BT |
| MVH-X395BT | MVH-X195UI* | MVH-X3 | |

*\* Compatible with iOS only.*

Spotify® gives you instant access to millions of songs. With support for Spotify®, you can control the Spotify® app on your smartphone via your car receiver's interface.

**Spotify**

## Built-in Bluetooth®

**Bluetooth®**

| DEH-X9650BT | DEH-X8750BT | DEH-X7850BT | DEH-X6850BT |
| DEH-X4950BT | DEH-X3950BT | DEH-X5 | FH-X785BT |
| MVH-X585BT | MVH-X395BT | MVH-X3 | MXT-X396BT |

Bluetooth Wireless Technology makes hands-free operation comfortable and safe while driving.

## Two-Phone Full Time Connection

**All Audio Receivers Compatible with Bluetooth** (Except DEH-X9650BT)

The receiver can receive calls from either of two mobile phones that are connected to it.

1 Private phone

2 Business phone

# AUDIO

## 13-Band Graphic EQ NEW

| DEH-X7850BT | FH-X785BT | MVH-X585BT |

With the 13-Band Graphic Equalizer, you can adjust sound settings with more precision and detail according to your acoustic preferences.

**POWERFUL**

## 3-Way Network Mode NEW

| DEH-80PRS | DEH-X7850BT | FH-X785BT | MVH-X585BT |

Connect (via three preouts) up to three external amplifiers, for more distinct separation among high-, mid- and low-frequency ranges, and more natural sound that fully realizes each speaker's potential.

**AUDIO HPF 200HZ -24**

## Time Alignment

| DEX-P99RS* | DEH-80PRS* | DEH-X7850BT | FH-X785BT |
| MVH-X585BT | | | |

By using Time Alignment function, you can adjust speaker output timing, so that sound from all speakers reaches the driver's ears in perfect sync.

*\* Auto Time Alignment*

Close

Far

TA ON
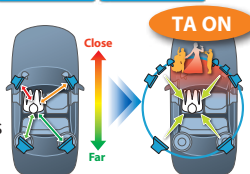
The different distances from each speaker to the driver cause the delay of sound.

Time Alignment makes all speakers sound as if they are virtually equidistant from the driver.

## Support FLAC Codec*

| DEH-X8750BT | DEH-X7850BT | DEH-X7750UI |
| FH-X785BT | MVH-X585BT | MVH-85UB |

**flac**

New Pioneer audio receiver upgrades in-car audio with amazingly brilliant reproduction of sound by FLAC files surpass CD tracks in terms of playback audio quality.

*\* For the files stored in USB thumb drive.*

## Advanced Sound Retriever

**All Audio Receivers** (Except MVH-85UB)

Reproduces high-quality sound from compressed digital audio files and Bluetooth wireless audio streams.
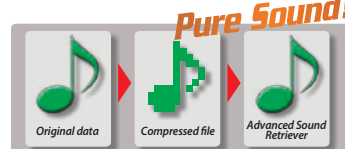
*Pure Sound!*

Original data → Compressed file → Advanced Sound Retriever

# DESIGN

## Prism-cut Rotary Volume Control NEW

| DEH-X4950BT | DEH-X2950UI | DEH-X5 |
| DEH-X1 | MVH-X3 | |

Unique prism-cut rotary volume control can be illuminated in your choice of color to enhance the car cabin's mood.

# OTHERS

## USB Quick Charge for Android (CDP) NEW

QUICK CHARGE

| DEH-X4950BT | DEH-X3950BT* | DEH-X2950UI | DEH-X1953UB |
| DEH-X5 | DEH-X1 | | |

*\* GS model only*

Pioneer's new audio receiver has a charging downstream port (CDP) providing up to 1.5 amperes to give an Android smartphone a quick charge.

# Pioneer

# DEH-9450UB

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

**Rear Panel**

FULL DOT LCD | Separated Color | MULTI-LANGUAGE DISPLAY | CD-R/RW | MP3 WMA AAC | AUX IN | 3 RCA pre-outs | Hi-VOLT | Subwoofer control | 24bit DA Converter | Dual USB | Made for iPod iPhone

Specialized Audio Parts | Lever Key | AUTO FLAP | Anti-Dust Design | WIRED REMOTE INPUT | RDS | SUPERTUNER IIID | MOSFET 50Wx4 | DETACHABLE FACE SECURITY. | Music Browser

## Key Selling Points

**Point 1**
**Pages 48 & 50**
Highly functional, high-quality face panel design features a smoothly motorized auto flap and clear front interface.

AUTO FLAP   FULL DOT LCD

**Point 2**
**Page 47**
Specialized audio parts carefully chosen for outstanding audio quality.

Specialized Audio Parts

**Point 3**
**Page 48**
Music Browser for faster, simpler song search and selection.

Music Browser

## Main Features   (Blue text: upgraded features from DEH-X9650BT)

- CD Player
- Full Dot LCD Display (192 x 48 Pixels, 3-Line)
- LED Backlight
- Multi-Language Display (English/Spanish/Portuguese)
- Separated Color Customization (More than 210,000 Colors)
- USB Direct Control for iPod/iPhone (CD-IU51 Required)
- Dual USB Ports
  (Rear: High Current 1A Handling Capability)
- AUX Input (Rear)
- Music Browser

- MP3/WMA/WAV/AAC Playback
- Specialized Audio Parts
- Advanced Sound Retriever
- MOSFET 50 W x 4
- Supertuner® IIID
- RDS
- Hi-Volt RCA Preouts x 3 (4 V)
- 5-Band Graphic EQ
- Auto Flap Face
- Anti-Dust Design

- Wired Remote Input
- Display Off Mode
- Detachable Face Security™
- Lever Key
- Rotary Volume Control
- Card Remote Control

### iPod/iPhone Compatibility

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

Notes: Receiver may not operate other iPod or iPhone models. Compatibility with unit and operations may vary depending on the software version.
See page 100 for more details.

# DEH-X9650BT

**Audio Receiver with MIXTRAX, Built-in Bluetooth®, Dual USB Ports, Direct Control for iPod/iPhone and Certain Android Phones, and Flap Face**

Rear Panel

# DEH-X9650SD

**Audio Receiver with MIXTRAX, Dual USB Ports, Direct Control for iPod/iPhone and Certain Android Phones, and Flap Face**

Rear Panel

FULL DOT LCD | Separated Color | MULTI-LANGUAGE DISPLAY | CD-R/RW | MP3 WMA | AAC | Media App Control
SDHC | AUX IN | 3 RCA pre-outs | Hi-VOLT | Subwoofer control | 24bit DA Converter | Specialized Audio Parts | Lever Key
FLAP FACE | Anti-Dust Design | WIRED REMOTE INPUT | RDS | SUPER TUNER IIID | MOSFET 50Wx4
Siri Eyes Free | DETACHABLE FACE SECURITY | Music Browser

MIXTRAX | Bluetooth® | Dual USB | Made for iPod iPhone | Smartphone Compatible

*Note: "Bluetooth Wireless Technology" and "Siri Eyes Free" for DEH-X9650BT.*

## Key Selling Points

**Point 1** — Pages 48 & 50
Finely detailed Full Dot 3-Line LCD display features flap face with sleek, elegant design.
FULL DOT LCD / FLAP FACE

**Point 2** — Page 46
Non-Stop Mix Play makes it quick and easy to enjoy simple, seamless music sequencing. Cool Flashing Color livens up the cabin with light pulsing to the beat of the music.
MIXTRAX

**Point 3** — Page 45
Smartphone compatibility lets you play music stored in an iPod, iPhone or Android phone through your car audio system.
Made for iPod iPhone / Smartphone Compatible

**Point 4** — Page 45
Dual USB Ports with 1A high current handling capability enable connections to various digital devices.
Dual USB / 1A

## Common Main Features  *(Blue text: upgraded features from DEH-X8750BT)*

- MIXTRAX (MIXTRAX EZ for Quick Non-Stop MIX Play)
- Flashing Color for MIXTRAX
- CD Player
- Full Dot LCD Display (192 x 48 Pixels, 3-Line)
- LED Backlight
- Multi-Language Display
- Separated Color Customization (More than 210,000 Colors)
- SD/SDHC Memory Card Slot
- Media App Control for iPod/iPhone
- Direct Control for iPod/iPhone (USB)
- Direct Control for Certain Android Phones (USB)

- Dual USB Ports (Rear: High Current 1A Handling Capability)
- AUX Input (Front)
- Music Browser
- MP3/WMA/WAV/AAC Playback
- Specialized Audio Parts
- Advanced Sound Retriever
- MOSFET 50 W x 4
- Supertuner® IIID
- RDS
- Hi-Volt RCA Preouts x 3 (4 V)

- 5-Band Graphic EQ
- Flap Face
- Anti-Dust Design
- Wired Remote Input
- Display Off Mode
- Brightness Setting
- Detachable Face Security™
- Lever Key
- Rotary Volume Control
- Card Remote Control

### DEH-X9650BT Main Features  *(Blue text: upgraded features from DEH-X9650SD)*

- Bluetooth for Hands-Free Calling & Wireless Audio
- Siri Eyes Free
- Media App Control for Android
- Advanced Sound Retriever for Bluetooth Wireless Audio

### iPod/iPhone Compatibility

| Made for |
| --- |
| iPhone 5 |
| iPhone 4s |
| iPhone 4 |
| iPhone 3GS |
| iPhone 3G |
| iPhone |
| iPod touch (1st, 2nd, 3rd, 4th, and 5th generation) |
| iPod classic |
| iPod with video |
| iPod nano (1st, 2nd, 3rd, 4th, 5th, 6th, and 7th generation) |

Notes: Receiver may not operate other iPod or iPhone models. Compatibility with unit and operations may vary depending on the software version.
See page 100 for more details.

# DEH-X8750BT

**Audio Receiver with MIXTRAX, Built-in Bluetooth®, and Direct Control for iPod/iPhone and Certain Android Phones**

**Rear Panel**

# DEH-X7750UI

**Audio Receiver with MIXTRAX, and Direct Control for iPod/iPhone and Certain Android Phones**

**Rear Panel**

FULL DOT LCD · Separated Color · MULTI-LANGUAGE DISPLAY · CD-R/RW · flac · MP3 WMA AAC · Media App Control · MIXTRAX

AUX IN · 3 RCA pre-outs · Hi-Volt · Subwoofer control · 24bit DA Converter · Lever Key · Anti-Dust Design · WIRED REMOTE INPUT · RDS · Bluetooth® · USB

SUPER TUNER IIID · MOSFET 50Wx4 · Siri Eyes Free · DETACHABLE FACE SECURITY. · Music Browser

Made for iPod iPhone

Smartphone Compatible

*Note: "Bluetooth Wireless Technology" and "Siri Eyes Free" for DEH-X8750BT.*

## Key Selling Points

**Point 1**
**Pages 48 & 50**
Finely detailed Full Dot 3-Line LCD large display features lever key.

FULL DOT LCD · Lever Key

**Point 2**
**Page 47**
Experience superior audio performance with Advanced Sound Retriever, 5-Band Graphic EQ, FLAC codec playback* and more.
*\* For the files stored in USB thumb drive.*

flac

**Point 3**
**Page 48**
Music Browser for faster, simpler song search and selection.

Music Browser

## Common Main Features    *(Blue text: upgraded features from DEH-X6850BT)*

- MIXTRAX (MIXTRAX EZ for Quick Non-Stop MIX Play)
- Flashing Color for MIXTRAX
- CD Player
- Full Dot LCD Display (192 x 48 Pixels, 3-Line)
- LED Backlight
- Multi-Language Display
- Separated Color Customization (More than 210,000 Colors)
- Media App Control for iPod/iPhone
- Direct Control for iPod/iPhone (USB)
- Direct Control for Certain Android Phones (USB)
- USB Port (Rear: High Current 1A Handling Capability)

- AUX Input (Rear)
- Music Browser
- MP3/WMA/WAV/AAC Playback
- FLAC* Playback
- Advanced Sound Retriever
- MOSFET 50 W x 4
- Supertuner® IIID
- RDS
- Hi-Volt RCA Preouts x 3 (4 V)
- 5-Band Graphic EQ
- Anti-Dust Design

- Wired Remote Input
- Display Off Mode
- Brightness Setting
- Illumination Line
- Illumination Timer
- Detachable Face Security™
- Lever Key
- Rotary Volume Control
- Card Remote Control

### DEH-X8750BT Main Features

- Media App Control for Android
- Bluetooth for Hands-Free Calling & Wireless Audio
- Siri Eyes Free

- Advanced Sound Retriever for Bluetooth Wireless Audio
- Two-Phone Full Time Connection

### iPod/iPhone Compatibility

| Made for |
|---|
| iPhone 5s, iPhone 5c, iPhone 5 |
| iPhone 4s |
| iPhone 4 |
| iPhone 3GS |
| iPhone 3G |
| iPhone |
| iPod touch (1st, 2nd, 3rd, 4th, and 5th generation) |
| iPod classic |
| iPod with video |
| iPod nano  (1st, 2nd, 3rd, 4th, 5th, 6th, and 7th generation) |

*Notes:  Receiver may not operate other iPod or iPhone models. Compatibility with unit and operations may vary depending on the software version.
See page 100 for more details.*

*\* For the files stored in USB thumb drive.*

# DEH-X7850BT  NEW

**Audio Receiver with MIXTRAX, Built-in Bluetooth®, Dual USB Ports, and Direct Control for iPod/iPhone and Certain Android Phones**

**Rear Panel**

Separated Color | MULTI-LANGUAGE DISPLAY | flac | Media App Control | 3 RCA pre-outs

Hi-VOLT | Subwoofer control | 24bit D/A Converter | Anti-Dust Design | WIRED REMOTE INPUT | SUPER TUNER III D

SHORT WAVE | MOSFET 50Wx4 | Siri Eyes Free | DETACHABLE FACE SECURITY

MIXTRAX  Bluetooth®  Spotify®

Pioneer ARC  Dual USB

Made for  iPod  iPhone

Smartphone Compatible

*Note: "Hi-Volt Preout" and "Shortwave Tuner" for GS models only.*

## Key Selling Points

**Point 1** Page 44 — Browse music files, access music apps, and extend your command of radio in new ways directly from the Pioneer ARC App. It makes even detailed EQ, crossover and other audio settings easy and intuitive using a smartphone touchscreen.  Pioneer ARC

**Point 2** Pages 46 & 47 — Enhanced audio functions for precise definition of sound include 3-Way Network Mode, Time Alignment, 13-Band EQ and FLAC codec playback*.
*\* For the files stored in USB thumb drive.*  flac

**Point 3** Page 48 — New Pioneer display design and technology features.
• Large text and display layout to enhance visibility
• Display designed and built for easier viewing

## Main Features  (Blue text: upgraded features from DEH-X7750UI)

- MIXTRAX (MIXTRAX EZ for Quick Non-Stop MIX Play)
- Flashing Color for MIXTRAX
- CD Player
- Wider 13-Digit + 1 LCD Display (2-Line)
- LED Backlight
- Multi-Language Display
- Separated Color Customization (More than 210,000 Colors)
- Media App Control for iPod/iPhone
- Media App Control for Android
- Pioneer ARC (iPhone/Android)
- Direct Control for iPod/iPhone (USB/Bluetooth)
- Direct Control for Certain Android Phones (USB)
- Spotify®
- Bluetooth for Hands-Free Calling & Wireless Audio
- Siri Eyes Free
- Dual USB Ports (Front/Rear: High Current 1A Handling Capability)

- AUX Input (Front)
- MP3/WMA/WAV/AAC Playback
- FLAC* Playback
- 3-Way Network Mode
- Manual Time Alignment
- Advanced Sound Retriever
- Advanced Sound Retriever for Bluetooth Wireless Audio
- MOSFET 50 W x 4
- Supertuner® III D
- Shortwave Tuner (GS Model Only)**
- RDS
- Hi-Volt RCA Preouts x 3 (4 V) (GS Model)**
- RCA Preouts x 3 (2 V) (CS Model)**
- 13-Band Graphic EQ
- Anti-Dust Design

- Wired Remote Input
- Display Off Mode
- Brightness Setting
- Illumination Line
- Illumination Timer
- Detachable Face Security™
- Rotary Volume Control
- Card Remote Control
- USB Source Change Function
- Two-Phone Full Time Connection

*\* For the files stored in USB thumb drive.*
*\*\* See page 51 for more details about GS and CS models.*

### iPod/iPhone Compatibility

| Made for |
|---|
| iPhone 6s Plus, iPhone 6s, iPhone 6 Plus, iPhone 6 |
| iPhone 5s, iPhone 5c, iPhone 5 |
| iPhone 4s |
| iPhone 4 |
| iPhone 3GS |
| iPhone 3G |
| iPhone |
| iPod touch (1st, 2nd, 3rd, 4th, 5th, and 6th generation) |
| iPod classic |
| iPod with video |
| iPod nano (1st, 2nd, 3rd, 4th, 5th, 6th, and 7th generation) |

*Notes: Receiver may not operate other iPod or iPhone models. Compatibility with unit and operations may vary depending on the software version.
See page 100 for more details.*

# DEH-X6850BT

**Audio Receiver with MIXTRAX, Built-in Bluetooth®, and Direct Control for iPod/iPhone and Certain Android Phones**

**Rear Panel**

VA LCD · Separated Color · MULTI-LANGUAGE DISPLAY · Media App Control · 2 RCA pre-outs · Subwoofer control · 24bit DA Converter · Anti-Dust Design · WIRED REMOTE INPUT · SUPER TUNER IIID · SHORT WAVE · MOSFET 50Wx4 · Siri Eyes Free · DETACHABLE FACE SECURITY · MIXTRAX · Bluetooth · Pioneer ARC · USB · Made for iPod iPhone · Smartphone Compatible

*Note: "Shortwave Tuner" for GS models only.*

## Key Selling Points

**Point 1 / Page 45** — **Greatly improved connectivity to access various media.**
• Wireless Audio Playback by Bluetooth
• USB Direct Control for iPod/iPhone and for certain Android Phones via MTP and AOA 2.0

**Point 2 / Pages 48 & 49** — **Enhanced visual features make interior space richer.**
• Flexible adjustment with Color Customization, Brightness and Dimmer Setting
• Superior visibility and contrast on Large VA LCD display with 2-line text

**Point 3 / Page 46** — **Enjoy your favorite tunes made more lively and entertaining with audio specialized functions.**
• Exciting nonstop mixed music experience by MIXTRAX
• Extra bass from Adjustable Bass Boost

## Main Features  *(Blue text: upgraded features from DEH-X4950BT)*

- MIXTRAX (MIXTRAX EZ for Quick Non-Stop MIX Play)
- Flashing Color for MIXTRAX
- CD Player
- Wider VA LCD Display (13-Character + Sub Display)
- LED Backlight
- Multi-Language Display
- Separated Color Customization (More than 210,000 Colors)
- Media App Control for iPod/iPhone
- Media App Control for Android
- Pioneer ARC (iPhone/Android)
- Direct Control for iPod/iPhone (USB)
- Direct Control for Certain Android Phones (USB)
- Bluetooth for Hands-Free Calling & Wireless Audio
- Siri Eyes Free
- Bright USB Port (Front: High Current 1A Handling Capability)
- AUX Input (Front)
- MP3/WMA/WAV/AAC Playback
- Advanced Sound Retriever
- Advanced Sound Retriever for Bluetooth Wireless Audio
- MOSFET 50 W x 4
- Supertuner® IIID
- Shortwave Tuner (GS Model Only)*
- RDS
- RCA Preouts x 2 (2 V)
- 5-Band Graphic EQ
- Anti-Dust Design
- Wired Remote Input
- Display Off Mode
- Brightness Setting
- Illumination Line
- Illumination Timer
- Detachable Face Security™
- Rotary Volume Control
- Card Remote Control
- USB Source Change Function
- Two-Phone Full Time Connection

*\* See page 51 for more details about GS models.*

### iPod/iPhone Compatibility

| Made for |
|---|
| iPhone 6 Plus, iPhone 6 |
| iPhone 5s, iPhone 5c, iPhone 5 |
| iPhone 4s |
| iPhone 4 |
| iPhone 3GS |
| iPhone 3G |
| iPhone |
| iPod touch (1st, 2nd, 3rd, 4th, and 5th generation) |
| iPod classic |
| iPod with video |
| iPod nano (1st, 2nd, 3rd, 4th, 5th, 6th, and 7th generation) |

Notes: Receiver may not operate other iPod or iPhone models. Compatibility with unit and operations may vary depending on the software version. See page 100 for more details.

# DEH-X4950BT [NEW]

**Audio Receiver with MIXTRAX, Built-in Bluetooth®, and Direct Control for iPod/iPhone and Certain Android Phones**

**Rear Panel**

# DEH-X2950UI [NEW] Audio Receiver with MIXTRAX, Direct Control for iPod/iPhone and Certain Android Phones

**Rear Panel**

VA LCD | Separated Color | MULTI-LANGUAGE DISPLAY
Media App Control | 2 RCA pre-outs | Subwoofer control | 24bit D/A Converter | MIXTRAX | Bluetooth® | Spotify® | Pioneer ARC | USB | QUICK CHARGE | Made for iPod iPhone | Smartphone Compatible
Anti-Dust Design | WIRED REMOTE INPUT | SUPERTUNER IIID | SHORT WAVE
MOSFET 50w×4 | Siri Eyes Free | DETACHABLE FACE SECURITY

*Note: "Bluetooth Wireless Technology" and "Siri Eyes Free" for DEH-X4950BT.*

## Key Selling Points

**Point 1 — Page 44**
Browse music files, access music apps, and extend your command of radio in new ways directly from the Pioneer ARC App. It makes even detailed EQ and other audio settings easy and intuitive using a smartphone touchscreen.
Pioneer ARC

**Point 2 — Page 45**
Greatly improved connectivity to access various media.
• Wireless Audio Playback by Bluetooth (DEH-X4950BT)
• USB Direct Control for iPod/iPhone and for certain Android Phones via MTP and AOA 2.0
Bluetooth® | USB | Made for iPod iPhone | Smartphone Compatible

**Point 3 — Pages 48 & 49**
Enhanced visual features make interior space richer.
• Flexible adjustment with Color Customization, Brightness and Dimmer Setting
• Superior visibility and contrast on Large VA LCD display with 2-line text
Separated Color | VA LCD

## Common Main Features *(Blue text: upgraded features from DEH-X1950UB(G))*

- MIXTRAX (MIXTRAX EZ for Quick Non-Stop MIX Play)
- Flashing Color for MIXTRAX
- CD Player
- Wider VA LCD Display (13-Character)
- LED Backlight
- Multi-Language Display
- Separated Color Customization (More than 210,000 Colors)
- Media App Control for iPod/iPhone
- Media App Control for Android*
- Pioneer ARC (iPhone/Android)
- Direct Control for iPod/iPhone (USB)

- Direct Control for Certain Android Phones (USB)
- Spotify®
- Bright USB Port (Front: High Current 1A Handling Capability)
- AUX Input (Front)
- MP3/WMA/WAV Playback
- Advanced Sound Retriever
- MOSFET 50 W x 4
- Supertuner® IIID
- Shortwave Tuner

- RDS
- RCA Preouts x 2 (2 V)
- 5-Band Graphic EQ
- Anti-Dust Design
- Wired Remote Input
- Display Off Mode
- Brightness Setting
- Separated Dimmer Setting
- Illumination Line
- Illumination Timer
- Detachable Face Security™

- Prism-cut Rotary Volume Control
- Card Remote Control
- USB Source Change Function
- USB Quick Charge for Android (CDP)

### DEH-X4950BT Main Features

- Bluetooth for Hands-Free Calling & Wireless Audio
- Siri Eyes Free
- AAC Playback
- Advanced Sound Retriever for Bluetooth Wireless Audio
- Two-Phone Full Time Connection

* DEH-X2950UI: Required to be used through Pioneer ARC app.

### iPod/iPhone Compatibility

| Made for |
| --- |
| iPhone 6s Plus, iPhone 6s, iPhone 6 Plus, iPhone 6 |
| iPhone 5s, iPhone 5c, iPhone 5 |
| iPhone 4s |
| iPhone 4 |
| iPhone 3GS |
| iPhone 3G |
| iPhone |
| iPod touch (1st, 2nd, 3rd, 4th, 5th, and 6th generation) |
| iPod classic |
| iPod with video |
| iPod nano (1st, 2nd, 3rd, 4th, 5th, 6th, and 7th generation) |

Notes: Receiver may not operate other iPod or iPhone models. Compatibility with unit and operations may vary depending on the software version.
See page 100 for more details.

# DEH-X3950BT NEW

**Audio Receiver with MIXTRAX, Built-in Bluetooth®, and Direct Control for iPod/iPhone and Certain Android Phones**

**Rear Panel**

# DEH-X1953UB NEW

**Audio Receiver with MIXTRAX, and Direct Control for Certain Android Phones**

# DEH-X1950UB(G) NEW

**Audio Receiver with MIXTRAX, and Direct Control for Certain Android Phones**

**Rear Panel (DEH-X1953UB)**

# DEH-X1952UB NEW

**Audio Receiver with MIXTRAX, and Direct Control for Certain Android Phones**

VA LCD | MULTI-LANGUAGE DISPLAY | Media App Control
5 RCA*1 pre-outs | 2 RCA*2 pre-outs | 1 RCA*3 pre-out | Subwoofer control
24bit DA Converter | WIRED REMOTE INPUT | SUPER TUNER IIID
SHORT WAVE | MOSFET 50W x 4 | Siri Eyes Free | DETACHABLE FACE SECURITY

MIXTRAX
Bluetooth®
Spotify

Pioneer ARC ▶

USB

QUICK CHARGE⚡

Made for
iPod iPhone

Smartphone Compatible

*1. DEH-X1953UB  *2. DEH-X3950BT/DEH-X1952UB  *3. DEH-X1950UB(G)
Notes: "Direct Control for iPod/iPhone," "Spotify," "Bluetooth Wireless Technology" and "Siri Eyes Free" for DEH-X3950BT.  "USB Quick Charge for Android" for DEH-X3950BT and DEH-X1953UB.

## Key Selling Points

**Point 1 / Page 44**
Browse music files, access music apps, and extend your command of radio in new ways directly from the Pioneer ARC App. It makes even detailed EQ and other audio settings easy and intuitive using a smartphone touchscreen.

Pioneer ARC ▶

**Point 2 / Page 45**
Greatly improved connectivity to access various media.
• Wireless Audio Playback by Bluetooth (DEH-X3950BT)
• USB Direct Control for iPod/iPhone* and for certain Android Phones via MTP and AOA 2.0
* DEH-X1953UB, DEH-X1952UB and DEH-X1950UB(G) are  not compatible with iPod/iPhone.

Bluetooth®

USB

Made for
iPod iPhone

Smartphone Compatible

**Point 3 / Page 46**
Enjoy your favorite tunes made more lively and entertaining with audio specialized functions.
• Exciting nonstop mixed music experience by MIXTRAX
• Extra bass from Adjustable Bass Boost

MIXTRAX

## Common Main Features

- MIXTRAX (MIXTRAX EZ for Quick Non-Stop MIX Play)
- CD Player
- Wider VA LCD Display (13-Character)
- LED Backlight
- Multi-Language Display
- Media App Control for Android*
- Direct Control for Certain Android Phones (USB)

- Bright USB Port (Front: High Current 1A Handling Capability)
- AUX Input (Front)
- MP3/WMA/WAV Playback
- Advanced Sound Retriever
- MOSFET 50 W x 4
- Supertuner® IIID

- Shortwave Tuner**
- RDS
- 5-Band Graphic EQ
- Anti-Dust Design
- Wired Remote Input
- Display Off Mode
- Brightness Setting

- Illumination Timer
- Detachable Face Security™
- Rotary Volume Control
- Card Remote Control
- USB Source Change Function

### DEH-X3950BT Main Features
*(Blue text: upgraded features from DEH-X2950UI)*

- Media App Control for iPod/iPhone
- Pioneer ARC (iPhone/Android)
- Direct Control for iPod/iPhone (USB)
- Spotify®
- Bluetooth for Hands-Free Calling & Wireless Audio
- Siri Eyes Free
- AAC Playback
- Advanced Sound Retriever for Bluetooth Wireless Audio
- RCA Preouts x 2 (2 V)
- USB Quick Charge for Android (CDP) (GS Model Only)
- Two-Phone Full Time Connection

### DEH-X1953UB Main Features
*(Blue text: upgraded features from DEH-X1952UB)*

- Pioneer ARC (Android)
- RCA Preouts x 3 (2 V)
- USB Quick Charge for Android (CDP)

### DEH-X1952UB Main Features
*(Blue text: upgraded features from DEH-X1950UB(G))*

- Dual Color (Red/Blue)
- Pioneer ARC (Android)
- RCA Preouts x 2 (2 V)
- Carbon Finish Design

### DEH-X1950UB(G) Main Features

- Pioneer ARC (Android)
- RCA Preout x 1 (2 V)

### iPod/iPhone Compatibility

| Made for |
| --- |
| iPhone 6s Plus, iPhone 6s, iPhone 6 Plus, iPhone 6 |
| iPhone 5s, iPhone 5c, iPhone 5 |
| iPhone 4s |
| iPhone 4 |
| iPhone 3GS |
| iPhone 3G |
| iPhone |
| iPod touch (1st, 2nd, 3rd, 4th, 5th, and 6th  generation) |
| iPod classic |
| iPod with video |
| iPod nano  (1st, 2nd, 3rd, 4th, 5th, 6th, and 7th generation) |

Notes:  Receiver may not operate other iPod or iPhone models. Compatibility with unit and operations may vary depending on the software version.
See page 100 for more details.

* DEH-X1953UB/DEH-X1952UB/DEH-X1950UB(G): Required to be used through Pioneer ARC app.
**DEH-X3950BT: GS model only. See page 51 for more details about GS models.

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# DEH-X4850FD

**Audio Receiver with MIXTRAX, Built-in 100 W x 4-ch. Class-FD Amplifier, and Direct Control for iPod/iPhone and Certain Android Phones**

Rear Panel

# MVH-X285FD

**Digital Media Receiver with MIXTRAX, Built-in 100 W x 4-ch. Class-FD Amplifier, and Direct Control for iPod/iPhone and Certain Android Phones**

Rear Panel

VA LCD · MULTI-LANGUAGE DISPLAY · Media App Control · 2 RCA pre-outs · Subwoofer control · 24bit DA Converter · Anti-Dust Design · WIRED REMOTE INPUT · SUPER TUNER IIID · SHORT WAVE · Class FD · DETACHABLE FACE SECURITY. · MIXTRAX · Pioneer ARC · USB · Made for iPod iPhone · Smartphone Compatible

*Note: "Anti-Dust Design" for DEH-X4850FD.*

## Key Selling Points

**Point 1 / Page 47** — Internal 100 W x 4-ch. amplifier with Class-FD configuration including special circuit board made for quality sound and component for stable output brings powerful sound reproduction and music playback.

*Class FD*

**Point 2 / Page 48** — 13-Digit, Wider VA LCD display provides superior visibility and contrast throughout a wide viewing angle range.

*VA LCD*

**Point 3 / Page 46** — Enjoy your favorite tunes made more lively and entertaining with audio specialized functions.
• Exciting nonstop mixed music experience by MIXTRAX
• Extra bass from Adjustable Bass Boost

*MIXTRAX*

## Common Main Features

- MIXTRAX (MIXTRAX EZ for Quick Non-Stop MIX Play)
- Wider VA LCD Display (13-Character)
- LED Backlight
- Multi-Language Display
- Media App Control for iPod/iPhone
- Media App Control for Android*
- Pioneer ARC (iPhone/Android)
- Direct Control for iPod/iPhone (USB)
- Direct Control for Certain Android Phones (USB)
- Bright USB Port (Front: High Current 1A Handling Capability)

- AUX Input (Front)
- MP3/WMA/WAV Playback
- Advanced Sound Retriever
- Class FD 100 W x 4
- Supertuner® IIID
- Shortwave Tuner
- RDS
- RCA Preouts x 2 (2 V)
- 5-Band Graphic EQ
- Wired Remote Input

- Display Off Mode
- Brightness Setting
- Illumination Timer
- Detachable Face Security™
- Rotary Volume Control
- Card Remote Control
- USB Source Change Function

### DEH-X4850FD Main Features

- CD Player
- Anti-Dust Design

*\* Required to be used through Pioneer ARC app.*

### iPod/iPhone Compatibility

| Made for |
|---|
| iPhone 6 Plus, iPhone 6 |
| iPhone 5s, iPhone 5c, iPhone 5 |
| iPhone 4s |
| iPhone 4 |
| iPhone 3GS |
| iPhone 3G |
| iPhone |
| iPod touch (1st, 2nd, 3rd, 4th, and 5th generation) |
| iPod classic |
| iPod with video |
| iPod nano (1st, 2nd, 3rd, 4th, 5th, 6th, and 7th generation) |

Notes: Receiver may not operate other iPod or iPhone models. Compatibility with unit and operations may vary depending on the software version.
See page 100 for more details.

**Pioneer**

## DEH-X5  NEW
**Audio Receiver with MIXTRAX, Built-in Bluetooth®, and Direct Control for iPod/iPhone and Certain Android Phones**

Rear Panel

## DEH-X1  NEW
**Audio Receiver with MIXTRAX, and Direct Control for iPod/iPhone and Certain Android Phones**

Rear Panel

## MVH-X3  NEW
**Digital Media Receiver with MIXTRAX, Built-in Bluetooth, and Direct Control for iPod/iPhone and Certain Android Phones**

Rear Panel

VA LCD | Separated Color | MULTI-LANGUAGE DISPLAY
Media App Control | 2 RCA pre-outs | Subwoofer control | 24bit DA Converter
Anti-Dust Design | WIRED REMOTE IN | SUPERTUNERIIID
MOSFET 50wx4 | Siri Eyes Free | DETACHABLE FACE SECURITY

MIXTRAX
Bluetooth®
Spotify
Pioneer ARC
USB
QUICK CHARGE
Made for iPod iPhone
Smartphone Compatible

*Notes: "Anti-Dust Design" and "USB Quick Charge for Android" for DEH-X5 and DEH-X1. "Bluetooth Wireless Technology" and "Siri Eyes Free" for DEH-X5 and MVH-X3.*

## Key Selling Points

**Point 1**
**Pages 49 & 50**
Unique Prism-cut Rotary Volume Control with illumination synched to the beat of the music.
• Flexible adjustment with Color Customization, Brightness and Separated Dimmer Setting
*Separated Color*

**Point 2**
**Page 46**
Enjoy your favorite music as a nonstop mix complete with visual and audible effects by MIXTRAX.
MIXTRAX

**Point 3**
**Page 44**
Browse music files, access music apps, and extend your command of radio in new ways directly from the Pioneer ARC App. It makes even detailed EQ and other audio settings easy and intuitive using a smartphone touchscreen.
Pioneer ARC

## Common Main Features

- MIXTRAX (MIXTRAX EZ for Quick Non-Stop MIX Play)
- Flashing Color for MIXTRAX
- Wider VA LCD Display (13-Character)
- LED Backlight
- Multi-Language Display
- Separated Color Customization (More than 210,000 Colors)
- Media App Control for iPod/iPhone
- Media App Control for Android*
- Pioneer ARC (iPhone/Android)
- Direct Control for iPod/iPhone (USB)
- Direct Control for Certain Android Phones (USB)

- Spotify®
- Bright USB Port (Front: High Current 1A Handling Capability)
- AUX Input (Front)
- MP3/WMA/WAV Playback
- Advanced Sound Retriever
- MOSFET 50 W x 4
- Supertuner® III*D*
- RDS
- RCA Preouts x 2 (2 V)
- 5-Band Graphic EQ

- Wired Remote Input
- Display Off Mode
- Brightness Setting
- Separated Dimmer Setting
- Illumination Line
- Illumination Timer
- Detachable Face Security™
- Prism-cut Rotary Volume Control
- Card Remote Control
- USB Source Change Function

### iPod/iPhone Compatibility

| Made for |
| --- |
| iPhone 6s Plus, iPhone 6s, iPhone 6 Plus, iPhone 6 |
| iPhone 5s, iPhone 5c, iPhone 5 |
| iPhone 4s |
| iPhone 4 |
| iPhone 3GS |
| iPhone 3G |
| iPhone |
| iPod touch (1st, 2nd, 3rd, 4th, 5th, and 6th generation) |
| iPod classic |
| iPod with video |
| iPod nano (1st, 2nd, 3rd, 4th, 5th, 6th, and 7th generation) |

*Notes: Receiver may not operate other iPod or iPhone models. Compatibility with unit and operations may vary depending on the software version.*
*See page 100 for more details.*

### DEH-X5 Main Features
*(Blue text: upgraded features from DEH-X1)*

- CD Player
- Bluetooth for Hands-Free Calling & Wireless Audio
- Siri Eyes Free
- AAC Playback
- Advanced Sound Retriever for Bluetooth Wireless Audio
- Anti-Dust Design
- USB Quick Charge for Android (CDP)
- Two-Phone Full Time Connection

### DEH-X1 Main Features

- CD Player
- Anti-Dust Design
- USB Quick Charge for Android (CDP)

### MVH-X3 Main Features

- Bluetooth for Hands-Free Calling & Wireless Audio
- Siri Eyes Free
- AAC Playback
- Advanced Sound Retriever for Bluetooth Wireless Audio
- Two-Phone Full Time Connection

*\*DEH-X1: Required to be used through Pioneer ARC app.*

# FH-X785BT  NEW

**Double-DIN Audio Receiver with MIXTRAX, Built-in Bluetooth®, and USB Direct Control for iPod/iPhone and Certain Android Phones**

Rear Panel

Separated Color | MULTI-LANGUAGE DISPLAY | flac | Media App Control | 3 RCA pre-outs
Subwoofer control | 24bit DA Converter | Anti-Dust Design | WIRED REMOTE INPUT | SUPER TUNER IIID
SHORT WAVE | MOSFET 50w x4 | Siri Eyes Free

MIXTRAX
Bluetooth®
Spotify®
Pioneer ARC
USB
Made for iPod iPhone
Smartphone Compatible

## Key Selling Points

**Point 1**
**Page 44**

Browse music files, access music apps, and extend your command of radio in new ways directly from the Pioneer ARC App. It makes even detailed EQ, crossover and other audio settings easy and intuitive using a smartphone touchscreen.

Pioneer ARC

**Point 2**
**Pages 46 & 47**

Enhanced audio functions for precise definition of sound include 3-Way Network Mode, Time Alignment, 13-Band EQ and FLAC codec playback*.
*For the files stored in USB thumb drive.

flac
free lossless audio codec

**Point 3**
**Page 48**

New Pioneer display design and technology features.
• Large text and display layout to enhance visibility
• Display designed and built for easier viewing

## Main Features  (Blue text: upgraded features from FH-X575UI)

- MIXTRAX (MIXTRAX EZ for Quick Non-Stop MIX Play)
- Flashing Color for MIXTRAX
- CD Player
- Wider 13-Digit + 1 LCD Display (2-Line)
- LED Backlight
- Multi-Language Display
- Separated Color Customization (More than 210,000 Colors)
- Media App Control for iPod/iPhone
- Media App Control for Android
- Pioneer ARC (iPhone/Android)
- Direct Control for iPod/iPhone (USB/Bluetooth)
- Direct Control for Certain Android Phones (USB)
- Spotify®
- Bluetooth for Hands-Free Calling & Wireless Audio

- Siri Eyes Free
- Bright USB Port (Front: High Current 1A Handling Capability)
- AUX Input (Front)
- MP3/WMA/WAV Playback
- AAC/FLAC* Playback
- 3-Way Network Mode
- Manual Time Alignment
- Advanced Sound Retriever
- Advanced Sound Retriever for Bluetooth Wireless Audio
- MOSFET 50 W x 4
- Supertuner® IIID
- Shortwave Tuner

- RDS
- RCA Preouts x 3 (2 V)
- 13-Band Graphic EQ
- Anti-Dust Design
- Wired Remote Input
- Display Off Mode
- Brightness Setting
- Illumination Line
- Illumination Timer
- Rotary Volume Control
- Card Remote Control
- USB Source Change Function
- Two-Phone Full Time Connection

*For the files stored in USB thumb drive.

### iPod/iPhone Compatibility

| Made for |
|---|
| iPhone 6s Plus, iPhone 6s, iPhone 6 Plus, iPhone 6 |
| iPhone 5s, iPhone 5c, iPhone 5 |
| iPhone 4s |
| iPhone 4 |
| iPhone 3GS |
| iPhone 3G |
| iPhone |
| iPod touch (1st, 2nd, 3rd, 4th, 5th, and 6th generation) |
| iPod classic |
| iPod with video |
| iPod nano (1st, 2nd, 3rd, 4th, 5th, 6th, and 7th generation) |

Notes: Receiver may not operate other iPod or iPhone models. Compatibility with unit and operations may vary depending on the software version.
See page 100 for more details.

# FH-X575UI

**Double-DIN Audio Receiver with MIXTRAX, and USB Direct Control for iPod/iPhone and Certain Android Phones**

**Rear Panel**

VA LCD · Separated Color · Media App Control · 2 RCA pre-outs · Subwoofer control · 24bit DA Converter · Anti-Dust Design · WIRED REMOTE INPUT · SUPER TUNER III D · SHORT WAVE · MOSFET 50Wx4 · MIXTRAX · USB · Made for iPod iPhone · Smartphone Compatible
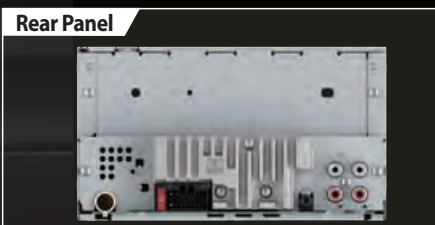
## Key Selling Points

**Point 1 — Page 46**
Non-Stop Mix Play makes it quick and easy to enjoy simple, seamless music sequencing. Cool Flashing Color livens up the cabin with light pulsing to the beat of the music.

MIXTRAX

**Point 2 — Pages 48 & 50**
Cool, sleek new panel is designed to incorporate VA LCD display and fit perfectly in a 2-DIN space in the dash.

VA LCD

**Point 3 — Page 49**
Allows flexible adjustment of illumination and color using Color Customization, Brightness Setting and Dimmer Setting.

Separated Color

## Main Features  (Blue text: upgraded features from FH-X385UB)

- MIXTRAX (MIXTRAX EZ for Quick Non-Stop MIX Play)
- Flashing Color for MIXTRAX
- CD Player
- VA LCD Display (13-Character + Sub Display)
- LED Backlight
- Separated Color Customization (More than 210,000 Colors)
- Media App Control for iPod/iPhone
- Direct Control for iPod/iPhone (USB)
- Direct Control for Certain Android Phones (USB)
- Bright USB Port (Front: High Current 1A Handling Capability)

- AUX Input (Front)
- MP3/WMA/WAV Playback
- Advanced Sound Retriever
- MOSFET 50 W x 4
- Supertuner® IIID
- Shortwave Tuner
- RDS
- RCA Preouts x 2 (2 V)
- 5-Band Graphic EQ
- Anti-Dust Design

- Wired Remote Input
- Display Off Mode
- Brightness Setting
- Illumination Line
- Illumination Timer
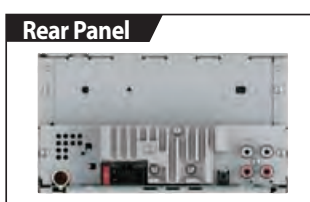- Rotary Volume Control
- Card Remote Control

### iPod/iPhone Compatibility

| Made for |
|---|
| iPhone 6 Plus, iPhone 6 |
| iPhone 5s, iPhone 5c, iPhone 5 |
| iPhone 4s |
| iPhone 4 |
| iPhone 3GS |
| iPhone 3G |
| iPhone |
| iPod touch (1st, 2nd, 3rd, 4th, and 5th generation) |
| iPod classic |
| iPod with video |
| iPod nano  (1st, 2nd, 3rd, 4th, 5th, 6th, and 7th generation) |

Notes:  Receiver may not operate other iPod or iPhone models. Compatibility with unit and operations may vary depending on the software version.
See page 100 for more details.

# FH-X385UB

**Double-DIN Audio Receiver with MIXTRAX, and Direct Control for Certain Android Phones**

**Rear Panel**

VA LCD · MULTI-LANGUAGE DISPLAY · Media App Control · 2 RCA pre-outs · Subwoofer control · 24bit DA Converter · Anti-Dust Design · WIRED REMOTE INPUT · SUPER TUNER III D · SHORT WAVE · MOSFET 50Wx4 · MIXTRAX · Pioneer ARC · USB · Smartphone Compatible

## Main Features

- MIXTRAX (MIXTRAX EZ for Quick Non-Stop MIX Play)
- CD Player
- Wider VA LCD Display (13-Character + Sub Display)
- LED Backlight
- Multi-Language Display
- Media App Control for Android*
- Pioneer ARC (Android)

- Direct Control for Certain Android Phones (USB)
- Bright USB Port (Front: High Current 1A Handling Capability)
- AUX Input (Front)
- MP3/WMA/WAV Playback
- Advanced Sound Retriever
- MOSFET 50 W x 4
- Supertuner® IIID

- Shortwave Tuner
- RDS
- RCA Preouts x 2 (2 V)
- 5-Band Graphic EQ
- Anti-Dust Design
- Wired Remote Input
- Display Off Mode

- Brightness Setting
- Illumination Timer
- Rotary Volume Control
- Card Remote Control
- USB Source Change Function

* Required to be used through Pioneer ARC app.

# MVH-X585BT  `NEW`

**Digital Media Receiver with MIXTRAX, Built-in Bluetooth®, Dual USB Ports, and Direct Control for iPod/iPhone and Certain Android Phones**

**Rear Panel**

Separated Color | MULTI-LANGUAGE DISPLAY | flac | Media App Control | 3 RCA pre-outs
Hi-VOLT | Subwoofer control | 24bit DA Converter | WIRED REMOTE INPUT | SUPER TUNER IIID
SHORT WAVE | MOSFET 50W x 4 | Siri Eyes Free | DETACHABLE FACE SECURITY

MIXTRAX | Bluetooth® | Spotify® | Pioneer ARC | Dual USB | Made for iPod iPhone | Smartphone Compatible

## Key Selling Points

**Point 1** — Page 44
Browse music files, access music apps, and extend your command of radio in new ways directly from the Pioneer ARC App. It makes even detailed EQ, crossover and other audio settings easy and intuitive using a smartphone touchscreen.  **Pioneer ARC**

**Point 2** — Pages 46 & 47
Enhanced audio functions for precise definition of sound include 3-Way Network Mode, Time Alignment, 13-Band EQ and FLAC codec playback*.
*For the files stored in USB thumb drive.

**Point 3** — Page 48
New Pioneer display design and technology features.
• Large text and display layout to enhance visibility
• Display designed and built for easier viewing

## Main Features  *(Blue text: upgraded features from MVH-X395BT)*

- MIXTRAX (MIXTRAX EZ for Quick Non-Stop MIX Play)
- Flashing Color for MIXTRAX
- Wider 13-Digit + 1 LCD Display (2-Line)
- LED Backlight
- Multi-Language Display
- Separated Color Customization (More than 210,000 Colors)
- Media App Control for iPod/iPhone
- Media App Control for Android
- Pioneer ARC (iPhone/Android)
- Direct Control for iPod/iPhone (USB/Bluetooth)
- Direct Control for Certain Android Phones (USB)
- Spotify®
- Bluetooth for Hands-Free Calling & Wireless Audio
- Siri Eyes Free

- Dual USB Ports (Front/Rear: High Current 1A Handling Capability)
- AUX Input (Front)
- MP3/WMA/WAV/AAC Playback
- FLAC* Playback
- 3-Way Network Mode
- Manual Time Alignment
- Advanced Sound Retriever
- Advanced Sound Retriever for Bluetooth Wireless Audio
- MOSFET 50 W x 4
- Supertuner® IIID
- Shortwave Tuner
- RDS

- Hi-Volt RCA Preouts x 3 (4 V)
- 13-Band Graphic EQ
- Wired Remote Input
- Display Off Mode
- Brightness Setting
- Illumination Line
- Illumination Timer
- Detachable Face Security™
- Rotary Volume Control
- Card Remote Control
- USB Source Change Function
- Two-Phone Full Time Connection

* For the files stored in USB thumb drive.

### iPod/iPhone Compatibility

| Made for |
|---|
| iPhone 6s Plus, iPhone 6s, iPhone 6 Plus, iPhone 6 |
| iPhone 5s, iPhone 5c, iPhone 5 |
| iPhone 4s |
| iPhone 4 |
| iPhone 3GS |
| iPhone 3G |
| iPhone |
| iPod touch (1st, 2nd, 3rd, 4th, 5th, and 6th generation) |
| iPod classic |
| iPod with video |
| iPod nano (1st, 2nd, 3rd, 4th, 5th, 6th, and 7th generation) |

Notes: Receiver may not operate other iPod or iPhone models. Compatibility with unit and operations may vary depending on the software version.
See page 100 for more details.

## MVH-X395BT [NEW]
**Digital Media Receiver with MIXTRAX, Built-in Bluetooth®, and Direct Control for iPod/iPhone and Certain Android Phones**

**Rear Panel**

## MVH-X195UI [NEW]
**Digital Media Receiver with MIXTRAX, and Direct Control for iPod/iPhone and Certain Android Phones**

**Rear Panel**

## MVH-85UB
**Digital Media Receiver with Direct Control for Certain Android Phones**

**Rear Panel**

VA LCD | MULTI-LANGUAGE DISPLAY | flac | Media App Control | RCA pre-out | MIXTRAX | Spotify® | Pioneer ARC | Made for iPod iPhone | Smartphone Compatible
Subwoofer control | 24bit DA Converter | WIRED REMOTE INPUT | SUPER TUNER IIID | Bluetooth® | USB |
SHORT WAVE | MOSFET 50Wx4 | Siri Eyes Free | DETACHABLE FACE SECURITY.

*Notes: "Bluetooth Wireless Technology," "Siri Eyes Free" and "Shortwave Tuner" for MVH-X395BT. "MIXTRAX," "VA LCD Display," "Multi-Language Display," "Media App Control," "Pioneer ARC", "Direct Control for iPod/iPhone," "Spotify," "Supertuner IIID" and "Wired Remote Input" for MVH-X395BT and MVH-X195UI. "FLAC Playback" for MVH-85UB.*

## Key Selling Points

**Point 1 / Page 44**
Browse music files, access music apps, and extend your command of radio in new ways directly from the Pioneer ARC App. It makes even detailed EQ and other audio settings easy and intuitive using a smartphone touchscreen.

Pioneer ARC

**Point 2 / Page 45**
Greatly improved connectivity to access various media.
• Wireless Audio Playback by Bluetooth (MVH-X395BT)
• USB Direct Control for iPod/iPhone* and for certain Android Phones via MTP and AOA 2.0
*\* MVH-85UB is not compatible with iPod/iPhone.*

Bluetooth® | USB | Made for iPod iPhone | Smartphone Compatible

**Point 3 / Page 50**
Shallow chassis depth allows for more flexibility in installation.

## Common Main Features

- LED Backlight
- Direct Control for Certain Android Phones (USB)
- Bright USB Port (Front: High Current 1A Handling Capability)
- AUX Input (Front)
- MP3/WMA/WAV Playback
- MOSFET 50 W x 4
- RDS
- RCA Preout x 1 (2 V)
- 5-Band Graphic EQ
- Display Off Mode
- Illumination Timer
- Detachable Face Security™
- Rotary Volume Control
- USB Source Change Function

### MVH-X395BT Main Features
*(Blue text: upgraded features from MVH-X285FD)*

- MIXTRAX (MIXTRAX EZ for Quick Non-Stop MIX Play)
- Wider VA LCD Display (13-Character)
- Multi-Language Display
- Media App Control for iPod/iPhone
- Media App Control for Android
- Pioneer ARC (iPhone/Android)
- Direct Control for iPod/iPhone (USB)
- Spotify®
- Bluetooth for Hands-Free Calling & Wireless Audio
- Siri Eyes Free
- AAC Playback
- Advanced Sound Retriever
- Advanced Sound Retriever for Bluetooth Wireless Audio
- Supertuner® IIID
- Shortwave Tuner
- Wired Remote Input
- Brightness Setting
- Card Remote Control
- Two-Phone Full Time Connection

### MVH-X195UI Main Features
*(Blue text: upgraded features from MVH-85UB)*

- MIXTRAX (MIXTRAX EZ for Quick Non-Stop MIX Play)
- Wider VA LCD Display (13-Character)
- Multi-Language Display
- Media App Control for iPod/iPhone
- Media App Control for Android*
- Pioneer ARC (iPhone/Android)
- Direct Control for iPod/iPhone (USB)
- Spotify®
- Advanced Sound Retriever
- Supertuner® IIID
- Wired Remote Input
- Brightness Setting
- Card Remote Control

### MVH-85UB Main Features

- LCD Display
- FLAC** Playback

*\* Required to be used through Pioneer ARC app.*
*\*\* For the files stored in USB thumb drive.*

### iPod/iPhone Compatibility

| Made for |
|---|
| iPhone 6s Plus, iPhone 6s, iPhone 6 Plus, iPhone 6 |
| iPhone 5s, iPhone 5c, iPhone 5 |
| iPhone 4s |
| iPhone 4 |
| iPhone 3GS |
| iPhone 3G |
| iPhone |
| iPod touch (1st, 2nd, 3rd, 4th, 5th, and 6th generation) |
| iPod classic |
| iPod with video |
| iPod nano (1st, 2nd, 3rd, 4th, 5th, 6th, and 7th generation) |

*Notes: Receiver may not operate other iPod or iPhone models. Compatibility with unit and operations may vary depending on the software version.*
*See page 100 for more details.*

# DXT-X1969UB NEW

**Audio Receiver with MIXTRAX, Direct Control for Certain Android Phones, Front USB Port, and Speaker Package (6" x 9" & 16 cm Speakers)**

**Rear Panel**

# DXT-X196UB NEW

**Audio Receiver with MIXTRAX, Direct Control for Certain Android Phones, Front USB Port, and Speaker Package (16 cm Speakers)**

VA LCD · MULTI-LANGUAGE DISPLAY · Media App Control · 1 RCA pre-out · Subwoofer control · 24bit DA Converter · Anti-Dust Design

WIRED REMOTE INPUT · SUPER TUNER IIID · SHORT WAVE · MOSFET 50Wx4 · DETACHABLE FACE SECURITY

MIXTRAX · Pioneer ARC · USB · Smartphone Compatible

## Key Selling Points

| Point 1 Page 51 | Speaker package models make it easy to upgrade a car audio system. |
|---|---|
| Point 2 Page 44 | Browse music files, access music apps, and extend your command of radio in new ways directly from the Pioneer ARC App. It makes even detailed EQ and other audio settings easy and intuitive using a smartphone touchscreen. Pioneer ARC |
| Point 3 Page 46 | Enjoy your favorite tunes made more lively and entertaining with audio specialized functions. • Exciting nonstop mixed music experience by MIXTRAX • Extra bass from Adjustable Bass Boost MIXTRAX |

## Common Main Features

- MIXTRAX (MIXTRAX EZ for Quick Non-Stop MIX Play)
- CD Player
- Wider VA LCD Display (13-Character)
- LED Backlight
- Multi-Language Display
- Media App Control for Android*
- Pioneer ARC (Android)
- Direct Control for Certain Android Phones (USB)
- Bright USB Port (Front: High Current 1A Handling Capability)
- AUX Input (Front)

- MP3/WMA/WAV Playback
- Advanced Sound Retriever
- MOSFET 50 W x 4
- Supertuner® IIID
- Shortwave Tuner
- RDS
- RCA Preout x 1 (2 V)
- 5-Band Graphic EQ
- Anti-Dust Design
- Wired Remote Input

- Display Off Mode
- Brightness Setting
- Illumination Timer
- Detachable Face Security™
- Rotary Volume Control
- Card Remote Control
- USB Source Change Function

*Required to be used through Pioneer ARC app.*

## Speaker Specifications

|  | DXT-X1969UB | | DXT-X196UB |
|---|---|---|---|
| Size | 6" x 9" | 16 cm | 16 cm |
| Max. Music Power (Nominal) | 230 W (30 W) | 200 W (25 W) | 200 W (25 W) |
| Frequency Response | 28 Hz to 32 kHz | 31 Hz to 16 kHz | 31 Hz to 16 kHz |
| Sensitivity (1 W/1 m) | 88 dB | 88 dB | 88 dB |
| Impedance | 4 Ω | 4 Ω | 4 Ω |
| Mounting Depth | 66.3 mm | 41 mm | 41 mm |
| Cut-Out Dimensions | 153 mm x 222 mm | ø128 mm | ø128 mm |

# MXT-X396BT  NEW

**Digital Media Receiver with MIXTRAX, Built-in Bluetooth®, Direct Control for iPod/iPhone and Certain Android Phones, and Speaker Package (16 cm Speakers)**

113    41

ø128

**Rear Panel**

VA LCD | MULTI-LANGUAGE DISPLAY | Media App Control | 1 RCA pre-out
Subwoofer control | 24bit DA Converter | WIRED REMOTE INPUT | SUPER TUNER IIID
SHORT WAVE | MOSFET 50Wx4 | Siri Eyes Free | DETACHABLE FACE SECURITY

MIXTRAX
Bluetooth
Spotify
Pioneer ARC
USB
Made for iPod iPhone
Smartphone Compatible

## Key Selling Points

**Point 1 / Page 51** — Speaker package models make it easy to upgrade a car audio system.

**Point 2 / Page 45** — Greatly improved connectivity to access various media.
• Wireless Audio Playback by Bluetooth
• USB Direct Control for iPod/iPhone and for certain Android Phones via MTP and AOA 2.0

Bluetooth
USB
Made for iPod iPhone
Smartphone Compatible

**Point 3 / Page 50** — Shallow chassis depth allows for more flexibility in installation.

## Main Features

- MIXTRAX (MIXTRAX EZ for Quick Non-Stop MIX Play)
- Wider VA LCD Display (13-Character)
- LED Backlight
- Multi-Language Display
- Media App Control for iPod/iPhone
- Media App Control for Android
- Pioneer ARC (iPhone/Android)
- Direct Control for iPod/iPhone (USB)
- Direct Control for Certain Android Phones (USB)
- Spotify®
- Bluetooth for Hands-Free Calling & Wireless Audio
- Siri Eyes Free
- Bright USB Port (Front: High Current 1A Handling Capability)
- AUX Input (Front)

- MP3/WMA/WAV/AAC Playback
- Advanced Sound Retriever
- Advanced Sound Retriever for Bluetooth Wireless Audio
- MOSFET 50 W x 4
- Supertuner® IIID
- Shortwave Tuner
- RDS
- RCA Preout x 1 (2 V)
- 5-Band Graphic EQ
- Wired Remote Input
- Display Off Mode
- Brightness Setting
- Illumination Timer

- Detachable Face Security™
- Rotary Volume Control
- Card Remote Control
- USB Source Change Function
- Two-Phone Full Time Connection

## Speaker Specifications

| | MXT-X396BT |
|---|---|
| Size | 16 cm |
| Max. Music Power (Nominal) | 200 W (25 W) |
| Frequency Response | 31 Hz to 16 kHz |
| Sensitivity (1 W/1 m) | 88 dB |
| Impedance | 4 Ω |
| Mounting Depth | 41 mm |
| Cut-Out Dimensions | ø128 mm |

### iPod/iPhone Compatibility

| Made for |
|---|
| iPhone 6s Plus, iPhone 6s, iPhone 6 Plus, iPhone 6 |
| iPhone 5s, iPhone 5c, iPhone 5 |
| iPhone 4s |
| iPhone 4 |
| iPhone 3GS |
| iPhone 3G |
| iPhone |
| iPod touch (1st, 2nd, 3rd, 4th, 5th, and 6th generation) |
| iPod classic |
| iPod with video |
| iPod nano (1st, 2nd, 3rd, 4th, 5th, 6th, and 7th generation) |

Notes: Receiver may not operate other iPod or iPhone models. Compatibility with unit and operations may vary depending on the software version.
See page 100 for more details.

# USER INTERFACE

## Pioneer ARC

Pioneer ARC ▶

All Audio Receivers (Except DEX-P99RS, DEH-80PRS, DEH-9450UB, DEH-X9650BT, DEH-X9650SD, DEH-X8750BT, DEH-X7750UI, DEH-155MP(G), FH-X575UI and MVH-85UB)

Pioneer's ARC app allows you to use your smartphone to control select functions on your Pioneer receiver, including presets, fast forward and rewind, and artist and album search.
You can download the app from the App Store and Google Play.

Download on the **App Store**

GET IT ON **Google Play**

| Swipe Left/Right to Change Tracks | Tap to play/ Pause music | Swipe Up to Source/ App select | Swipe Down to Browse music | Two finger rotation to volume control |
|---|---|---|---|---|

- To utilize this function, the Pioneer ARC application needs to be installed on the smartphone.
- Please download the Pioneer ARC application from the App store or Google Play.
- For compatible iPod/iPhone devices. This function is compatible with iPhone and iPod touch devices operating iOS 8.0 or later.
- For compatible Android devices. This function is compatible with devices running Android OS 4.1 or later that also support Bluetooth SPP (Serial Port Profile) and AOA (Android Open Accessory) 2.0.
- Read the product's operation manual as well as all instructions and cautions before use. Become familiar with any applicable laws in your country and region.
  Pay attention to the road, limit glances at the device, and do not use any feature if it cannot be operated safely in your location and environment. Distracted driving may result in serious injury, including death.
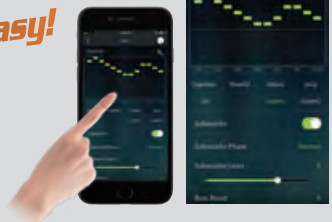- All of the app display image design can be changed or renewed.
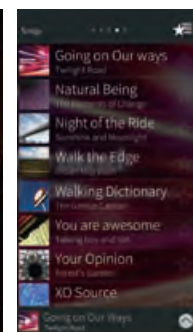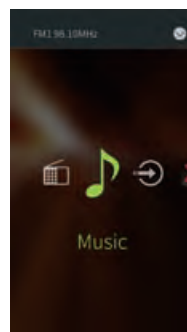
### ■ EQ Setting NEW

**Conventional Setting**

**Setting with Pioneer ARC App**
Easily adjust and select desired EQ setting.
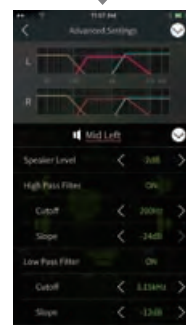
*Easy!*

### ■ Browsing and Searching

Radio source and channels of multiple stations are available.

You can also browse files and folders stored on your smartphone and utilize a variety of music apps with on-screen control of a smartphone.

### ■ Advanced Audio Settings* NEW

* DEH-X7850BT, FH-X785BT and MVH-X585BT only.

**Time Alignment**

**Crossover**

Dedicated interface is available for Crossover filter setting/Time Alignment/ Speaker Level setting.

# CONNECTIVITY

## Spotify® NEW

| DEH-X7850BT | DEH-X4950BT | DEH-X3950BT | DEH-X2950UI | DEH-X5 | DEH-X1 | FH-X785BT | MVH-X585BT | MVH-X395BT |
|---|---|---|---|---|---|---|---|---|

| MVH-X195UI* | MVH-X3 |
|---|---|

* Compatible with iOS only.

Spotify® gives you instant access to millions of songs. With support for Spotify®, you can control the Spotify® app on your smartphone via your car receiver's interface.

Spotify®

# CONNECTIVITY

## Media App Control*

**Media App Control**

**For iPhone and iPod:**
All Audio Receivers Compatible with iPod and iPhone (Except DEX-P99RS)

**For Android Phone:**
All Audio Receivers Compatible with Certain Android Phones (Except DEH-X9650SD, DEH-X7750UI, FH-X575UI and MVH-85UB)

- Use music apps stored in your iPod, iPhone or Android phone for listening through the car speakers.
- Fast forward and reverse can be operated through the receiver.
- Media App Control boots up as a music source for quicker access to iPod, iPhone or Android phone app control.

*For Android Phone, DEH-X4850FD, DEH-X2950UI, DEH-X1953UB, DEH-X1952UB, DEH-X1950UB(G), DEH-X1, FH-X385UB, MVH-X285FD, MVH-X195UI and DXT Series are required to be used through Pioneer ARC app.*

*Note: Not all apps will be compatible with Media App Control, which will provide limited, if any, control over the app.*

*App Mode for DEH-80PRS and DEH-9450UB.*

Made for
iPod  iPhone

Smartphone Compatible

## USB Direct Control

USB

**For iPhone and iPod:**
All Audio Receivers (Except DEH-X1953UB, DEH-X1952UB, DEH-X1950UB(G), DEH-155MP(G), FH-X385UB, MVH-85UB and DXT Series)

**For Android Phone:**
All Audio Receivers (Except DEX-P99RS, DEH-80PRS, DEH-9450UB and DEH-155MP(G))

Take advantage of a wired USB connection to the receiver. Sound stays clean and clear, and song, artist, time and album displays are user-friendly.

Made for
iPod  iPhone

Smartphone Compatible

## Built-in Bluetooth®

Bluetooth®

| DEH-X9650BT | DEH-X8750BT | DEH-X7850BT | DEH-X6850BT | DEH-X4950BT | DEH-X3950BT | DEH-X5 | FH-X785BT | MVH-X585BT | MVH-X395BT | MVH-X3 | MXT-X396BT |

A Pioneer receiver with Built-in Bluetooth Wireless Technology not only makes Bluetooth hands-free function easy and safe to operate while driving—it also extends your enjoyment of wireless audio control and streaming.

Bluetooth Hands-Free Calling = HFP
Bluetooth Wireless Audio = A2DP, AVRCP

**Bluetooth Hands-Free Calling**

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

*Compatible phone with PBAP profile required.*

**Bluetooth Wireless Audio**

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

**Bluetooth Wireless Audio**

### File Browsing (AVRCP Version 1.5)
All Audio Receivers Compatible with Bluetooth (Except DEH-X9650BT)

File Browsing can be used through AVRCP 1.5 version of Bluetooth. You can easily search songs in the browsing display.

**Bluetooth Hands-Free Calling**

### Wide Band Speech (HFP Version 1.6)
All Audio Receivers Compatible with Bluetooth (Except DEH-X9650BT)

Frequency bandwidth is twice as great as in the previous model, for much clearer phone call sound quality.

**Frequency Range Coverage**

Previous Receivers
200 Hz to 3.4 kHz

New Receivers
100 Hz to 7 kHz

Clear Sound!

**Auto Pairing**
All Audio Receivers Compatible with Bluetooth

Connecting an iPhone to the receiver with a USB cable automatically opens a prompt for pairing the unit and iPhone.
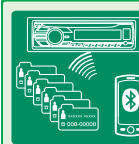
**Bluetooth Wireless Audio**

### Bluetooth Wireless Audio Control (AVRCP)
Press and quickly release button to skip to the next track and display track tag information. Press and hold button to fast forward or fast reverse during playback.

**Bluetooth Hands-Free Calling**

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

## Five Phones Pairing Memory NEW

| DEH-X4950BT | DEH-X3950BT | DEH-X5 | MVH-X395BT | MVH-X3 | MXT-X396BT |

Pioneer's new audio receiver can pre-register connection information for up to five smartphones, so you don't have to register each phone before using it with Bluetooth connection.

## Siri* Eyes Free Compatible

All Audio Receivers Compatible with Bluetooth

Siri Eyes Free

Smart voice control lets users access various iPhone functions to select music, make calls from a contact list, etc., without taking their eyes off the road.

*Siri is available on iPhone 4s or later, iPad with Retina display, iPad mini, and iPod touch (5th generation) and requires Internet access. Siri may not be available in all languages or in all areas, and features may vary by area. Cellular data charges may apply. Some features may not be available for all countries or all areas.*

## Two-Phone Full Time Connection

All Audio Receivers Compatible with Bluetooth (Except DEH-X9650BT)

You can connect two mobile phones (for personal and business use, for example) with the receiver, and an incoming call from either phone can be received without requiring manual switching.

1 Private phone
2 Business phone

## Dual USB Ports

Dual USB

| DEH-80PRS | DEH-9450UB | DEH-X9650BT | DEH-X9650SD | DEH-X7850BT | MVH-X585BT |

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

## Illuminated USB Terminal

USB  Bright!

All Audio Receivers with Front USB Port

Glowing USB terminal brightens the car interior and are easy to identify as needed at night.

Be Cool.

*Illumination emerges when the cap of the USB port is opened.*

45

# AUDIO

## 3-Way Network Mode  NEW

| DEH-80PRS | DEH-X7850BT | FH-X785BT | MVH-X585BT |

3-Way Network Mode allows you to connect (via three preouts) up to three external amplifiers, dedicated to driving high-, mid- and low-frequency ranges, respectively. The result: more distinct separation of the three frequency ranges, for more full, natural sound realizing more of each speaker's potential in a multi speaker system.

## Hi-Volt RCA Preouts

| DEX-P99RS | DEH-80PRS | DEH-9450UB | DEH-X9650BT | DEH-X9650SD |
| DEH-X8750BT | DEH-X7850BT* | DEH-X7750UI | MVH-X585BT |

*GS model only

**Hi-VOLT**

Hi-Volt RCA preouts incorporated throughout the Pioneer Audio receiver lineup help improve S/N (signal-to-noise) ratio.

## 13-Band Graphic EQ  NEW

| DEH-X7850BT | FH-X785BT | MVH-X585BT |

With the 13-Band Graphic Equalizer, you will be able to adjust acoustic settings in greater detail, according to your preferences.
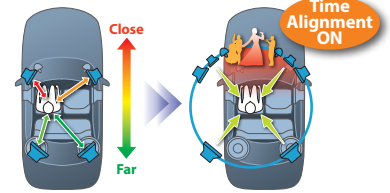
## Time Alignment

| DEX-P99RS* | DEH-80PRS* | DEH-X7850BT | FH-X785BT | MVH-X585BT |

Utilizing Time Alignment function, you can adjust speaker output timing, so that sound from all speakers reaches the driver's ears in perfect sync.

*Auto Time Alignment

Close
Far
Time Alignment ON

The different distances from each speaker to the driver cause the delay of sound.

Time Alignment makes all speakers sound as if they are virtually equidistant from the driver.

## MIXTRAX

# MIXTRAX

### Innovative Pioneer technology that creates a Non-Stop MIX with a range of DJ-inspired effects.
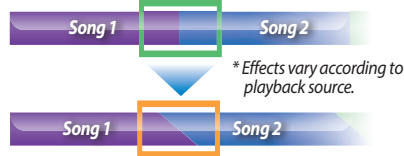
## MIXTRAX Benefit

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

MIXTRAX

Non-Stop Mix of tracks by auto special effect*

**Uninterrupted Excitement!**

Musical High

MIXTRAX
Normal Playback

Special Effect!
Special Effect!

Time

Track A | Track B | Track C

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

## MIXTRAX EZ

| All Audio Receivers | (Except DEX-P99RS, DEH-80PRS, DEH-9450UB, DEH-155MP(G) and MVH-85UB) |

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

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

Song 1 | Song 2

*Effects vary according to playback source.

Song 1 | Song 2

## Short Playback Mode

| All Audio Receivers | (Except DEX-P99RS, DEH-80PRS, DEH-9450UB, DEH-155MP(G) and MVH-85UB) |

You can choose a length of playback (60, 90, 120, 150, 180 sec., random, or off ) to shorten track selections and speed up switching to following tracks in the mix.

**Short Playback Mode**
60", 90", 120", 150", 180", Random, Off

Song 1
Song 2 — DJ-INSPIRED EFFECT
Song 3 — DJ-INSPIRED EFFECT
Song 4 — DJ-INSPIRED EFFECT

*Orange portions indicate playback of each track.

## Flashing Color*

| DEH-X9650BT | DEH-X9650SD | DEH-X8750BT | DEH-X7850BT | DEH-X7750UI | DEH-X6850BT | DEH-X4950BT | DEH-X2950UI | DEH-X5 | DEH-X1 |
| FH-X785BT | FH-X575UI | MVH-X585BT | MVH-X3 |

As MIXTRAX begins, lights start pulsing to the beat of the music, creating a mood-enhancing dance club-like lighting effect.

*Can be switched on or off as desired.

**FLASHING COLOR**

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

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

Choose among six lighting color patterns for both Sound Level Mode (volume) and Low Pass Mode (bass). Colors vary according to levels.

**Key illumination and display pulse to the beat of the music**
When MIXTRAX is on, illumination color changes for the mode that has been selected and set.

**Sound Level Mode**

| | Pattern 1 | Pattern 2 | Pattern 3 | Pattern 4 | Pattern 5 | Pattern 6 | Sound Volume |
|---|---|---|---|---|---|---|---|
| Level 8 | DEEP BLUE | LIGHT BLUE | ROSE | ROSE | LEMON | RED | |
| | BLUE | POWERBLUE | PINK | INDIGO | YELLOW | PINK | |
| | SKYBLUE | SKYBLUE | PINK | LAVENDER | GOLD | LAVENDER | |
| | LIGHT BLUE | OCEANBLUE | LAVENDER | SKYBLUE | ORANGE | INDIGO | |
| | SKY BLUE | ROYALBLUE | LAVENDER | OCEANBLUE | AMBER | SKYBLUE | |
| | BLUE | BLUE | INDIGO | ROYALBLUE | ORANGERED | OCEANBLUE | |
| | DEEP BLUE | BLUE | INDIGO | BLUE | RED | BLUE | |
| Level 1 | DEEP BLUE | BLUE | INDIGO | BLUE | RED | BLUE | |

**Low Pass Mode**

| | Pattern 1 | Pattern 2 | Pattern 3 | Pattern 4 | Pattern 5 | Pattern 6 | Bass Sound |
|---|---|---|---|---|---|---|---|
| Level 8 | LIGHT BLUE | WHITE | ROSE | ROSE | LEMON | RED | |
| | SKY BLUE | LIGHT BLUE | PINK | LAVENDER | YELLOW | PINK | |
| | OCEANBLUE | ROYALBLUE | LAVENDER | ROYALBLUE | GOLD | INDIGO | |
| | BLUE | BLUE | INDIGO | BLUE | ORANGE | OCEAN | |
| | BLUE | DEEP BLUE | INDIGO | BLUE | RED | BLUE | |
| | BLUE | DEEP BLUE | INDIGO | BLUE | RED | BLUE | |
| Level 1 | BLUE | DEEP BLUE | INDIGO | BLUE | RED | BLUE | |

# AUDIO

## Support FLAC Codec*

| DEH-X8750BT | DEH-X7850BT | DEH-X7750UI | FH-X785BT | MVH-X585BT | MVH-85UB |

New Pioneer audio receiver supports dramatically superior car audio experiences with amazingly brilliant reproduction of sound by FLAC (Free Lossless Audio Codec) files that are 50–60% smaller than WAV files, yet retain the integrity of original sound sources. Characterized by 48 kHz sampling frequency and 24-bit bitrate, the sound quality of FLAC file playback exceeds even that of CD playback.

*For the files stored in USB thumb drive.*

**50–60% Smaller**

**File Size**

**Same Quality**

**Sound Quality**
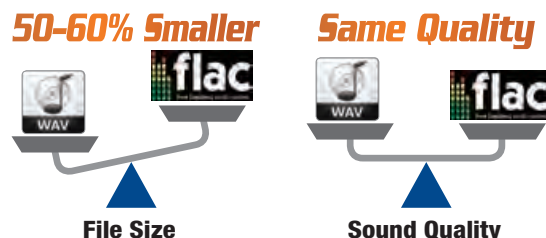
## Built-in High-Power 100 W x 4-Channel Class-FD Amplifier

*Class FD*

| DEH-X4850FD | MVH-X285FD |

Enjoy more powerful sound than a conventional receiver with built-in amplifier can deliver. The Pioneer DEH-X4850FD and MVH-X285FD each incorporate a 100 W x 4-channel Class-FD amplifier; require no outer amplifier box, for simple in-dash installation; and have circuitry exclusively designed to maintain exceptional audio quality.

### Stable Power Output

For supremely stable output and sound quality, Pioneer's advanced amplifier technology built into these models controls input by monitoring current level output. The amplifier section is designed to prevent shutdown, ensuring consistent delivery of power regardless of the car battery's charge.

### Dedicated Circuitry Designed to Dissipate Heat

For superior sound, exclusive circuitry is designed with heat-dissipating internal heatsink and cooling sheet between the printed circuit board and chassis.
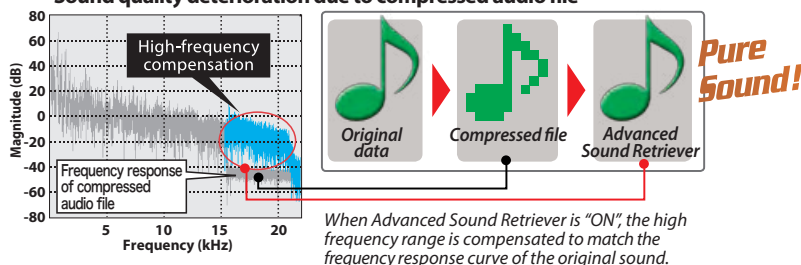
*Large Capacitor and Plate-Type Heatsink*

## Advanced Sound Retriever

**All Audio Receivers** (Except MVH-85UB)

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

**Sound quality deterioration due to compressed audio file**

High-frequency compensation

Magnitude (dB)

Frequency response of compressed audio file

Frequency (kHz)

Original data    Compressed file    Advanced Sound Retriever

**Pure Sound!**

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

### Advanced Sound Retriever for Bluetooth® Wireless Audio

| DEH-X9650BT | DEH-X8750BT | DEH-X7850BT | DEH-X6850BT | DEH-X4950BT | DEH-X3950BT |
| DEH-X5 | FH-X785BT | MVH-X585BT | MVH-X395BT | MVH-X3 | MXT-X396BT |

Advanced Sound Retriever also improves the sound of Bluetooth wireless audio streams.

## 5-Band Graphic EQ

**All Audio Receivers** (Except DEX-P99RS, DEH-80PRS, DEH-X7850BT, FH-X785BT and MVH-X585BT)

5-Band Graphic Equalizer allows more precise adjustment of acoustic settings to suit the car's interior conditions, your personal preferences and the sound mood that you seek.

## Specialized Audio Parts

**Specialized Audio Parts**

| DEH-9450UB | DEH-X9650BT | DEH-X9650SD |

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

*High-capacitance capacitor for audio (DEH-9450UB only)*

*Electronic volume control IC for Audio*

# AUDIO

## Music Browser

| DEH-80PRS | DEH-9450UB | DEH-X9650BT | DEH-X9650SD | DEH-X8750BT | DEH-X7750UI |

Music Browser

Using audio file tag information, Pioneer's built-in Music Browser automatically lists tunes alphabetically by Artist, Album, Song or Genre. Alphabetical search makes it fast and easy to access whatever tune you want from a big archive.

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

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

**Menu Tree**

Artists — All / Artist 1 / Artist 2 * → All / Album 1 / Album 2 * → Song 1 / Song 2 / Song 3 *

Albums — All / Album 1 / Album 2 * → Song 1 / Song 2 / Song 3 *

Songs — Song 1 / Song 2 / Song 3 *

Genre

*Speedy access to desired song*

* All in easy-to-find alphabetical order

**Alphabetical Search**

Natural Being
Need Lif   A
New Kind of Life

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

# DISPLAY

## Widened 13-digit + 1 Two-Line Display   NEW

| DEH-X7850BT | FH-X785BT | MVH-X585BT |

The widened 13-digit + 1 two-line display can show more of the information that you want, especially on its main (second-row) line, and is easily visible from the driver's seat.

**1** This dot-matrix information area can show:
- Artist/Album/Song icon
- EQ while playing music
- Icon for smartphone link

**2** The main segment area is located on the second line which contributes to the visibility from a driver's sheet.
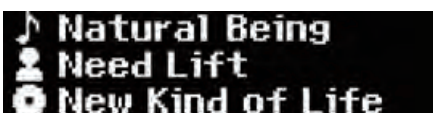
1-DIN
DEH-X7850BT

2-DIN
FH-X785BT

## Full Dot 3-Line LCD Display   FULL DOT LCD

| DEH-80PRS | DEH-9450UB | DEH-X9650BT | DEH-X9650SD | DEH-X8750BT | DEH-X7750UI |

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

♪ Natural Being
👤 Need Lift
⚙ New Kind of Life

DEH-X8750BT Display

## Larger 2-Line VA LCD Display

| DEH-X6850BT | FH-X385UB |

The larger 2-line VA LCD display improves visibility and incorporates finely balanced font to keep text easy to read.

**Main Display (13-Character) & Sub Display**

Large display size:  12.9 mm x 83.9 mm

## 1-Line 13-Character VA LCD Display

| DEH-X4950BT | DEH-X4850FD | DEH-X3950BT | DEH-X2950UI | DEH-X1953UB | DEH-X1952UB | DEH-X1950UB(G) | DEH-X5 |
| DEH-X1 | MVH-X395BT | MVH-X285FD | MVH-X195UI | MVH-X3 | DXT Series | MXT-X396BT | |

In addition to the VA LCD's high contrast and wide viewing angle, its display width has been expanded to accommodate up to 13 characters and allows more information to be more visible.

Large display size:  12.1 mm x 74.7 mm

**Bluetooth profile**
A2DP
HFP

Bluetooth® status icons displayed.

## VA LCD

VA LCD

The receiver display incorporates VA LCD for higher contrast and visibility from a wide viewing angle. Characters on display are easy to read from the driver's viewpoint.

**All Audio Receivers**

(Except DEX-P99RS, DEH-80PRS, DEH-9450UB, DEH-X9650BT, DEH-X9650SD, DEH-X8750BT, DEH-X7850BT, DEH-X7750UI, DEH-155MP(G), FH-X785BT, MVH-X585BT and MVH-85UB)

FH-X575UI

VA LCD   Conventional LCD Image

**High Contrast**
60% better contrast

**Wide View Angle**
Vertical Angle
WIDE
Horizontal Angle

# ILLUMINATION

## Separated Dimmer Setting  NEW

| DEH-X4950BT | DEH-X2950UI | DEH-X5 | DEH-X1 | MVH-X3 |

Brightness of main display and brightness of key illumination zones can be adjusted independently of each other, to levels from 1 to 10.

Key illumination zones

Main display

## Separated Color Customization

| DEH-80PRS | DEH-9450UB | DEH-X9650BT | DEH-X9650SD | DEH-X8750BT | DEH-X7850BT | DEH-X7750UI | DEH-X6850BT |
| DEH-X4950BT | DEH-X2950UI | DEH-X5 | DEH-X1 | FH-X785BT | FH-X575UI | MVH-X585BT | MVH-X3 |

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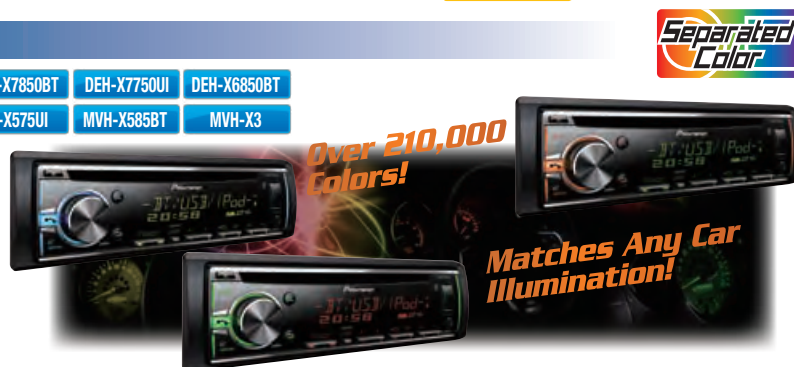
*Separated Color*

Over 210,000 Colors!

Matches Any Car Illumination!

## Brightness Setting

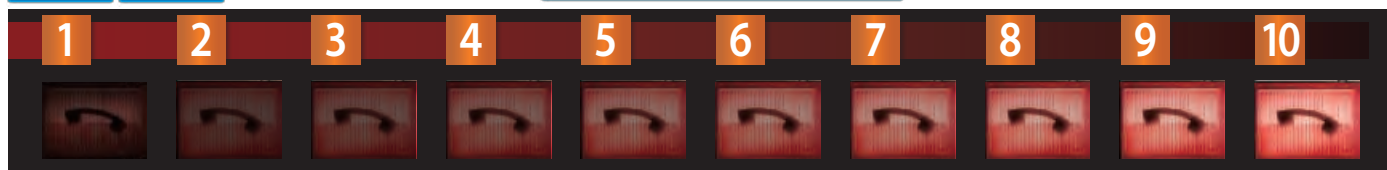All Audio Receivers (Except DEX-P99RS, DEH-80PRS, DEH-9450UB, DEH-155MP(G) and MVH-85UB)

Brightness can be set to any of five or ten different levels to suit various viewing conditions, whether during the day, at night, etc. This allows for excellent visibility regardless of the situation.

### 5-Step Brightness Setting

| DEH-X9650BT | DEH-X9650SD |

### 10-Step Brightness Setting

All Audio Receivers Compatible with Brightness Setting (Except DEH-X9650BT and DEH-X9650SD)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

Note: The range of settings can vary, depending on whether Dimmer is on or off.

## Illumination Effect

All Audio Receivers (Except DEX-P99RS, DEH-80PRS, DEH-9450UB, DEH-155MP(G) and MVH-85UB)

Illumination fades in and out at various times, such as when ACC power is turned on and off *, a CD is being loaded or ejected, or an incoming call is being received on a Bluetooth® receiver.

* For the following receivers, Illumination Effect can be activated for only ACC power on/off.
  DEH-X4950BT/DEH-X4850FD/DEH-X2950UI/DEH-X1953UB/DEH-X1952UB/DEH-X1950UB(G)/DEH-X5/
  DEH-X1/MVH-X395BT/MVH-X285FD/MVH-X195UI/MVH-X3/DXT Series/MXT-X396BT

Incoming Call

## Illumination Line

| DEH-X8750BT | DEH-X7850BT | DEH-X7750UI | DEH-X6850BT | DEH-X4950BT | DEH-X2950UI |
| DEH-X5 | DEH-X1 | FH-X785BT | FH-X575UI | MVH-X585BT | MVH-X3 |

Car's Headlight On/Off automatically links with Dimmer's On/Off. When driving, user doesn't need any extra operation to change Dimmer.

Headlight OFF = Dimmer OFF          Headlight ON = Dimmer ON
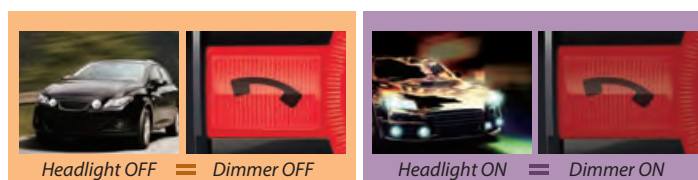
## Illumination Timer

All Audio Receivers (Except DEX-P99RS, DEH-80PRS, DEH-9450UB, DEH-X9650BT, DEH-X9650SD and DEH-155MP(G))

You can set Dimmer On and Off * to a particular time (to go home and to commute, respectively, for example) according to your lifestyle, so you do not need to manually activate or deactivate the dimmer repeatedly at the same regular time.

* Times for Dimmer On and Off can be separately adjusted in 10-minute intervals and set.
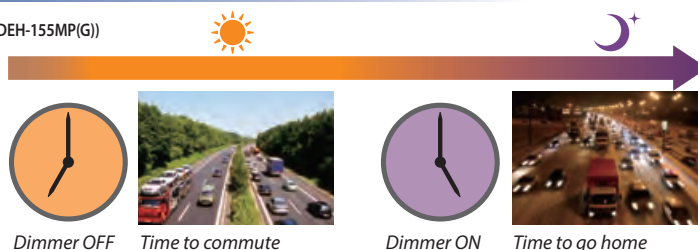
Dimmer OFF          Time to commute          Dimmer ON          Time to go home

# DESIGN

## Prism-cut Rotary Volume Control  NEW

| DEH-X4950BT | DEH-X2950UI | DEH-X5 | DEH-X1 | MVH-X3 |

Unique prism-cut rotary volume control can be illuminated in your choice of color to enhance the car cabin's mood.
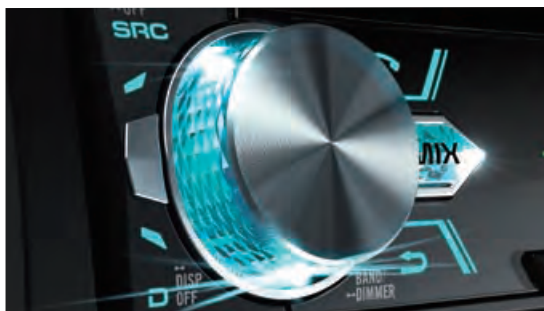
## Smaller Gap for Easier Viewing  NEW

| DEH-X7850BT | FH-X785BT | MVH-X585BT |

The gap between the LCD and its protective acrylic panel is reduced so drivers gain a clearer, more direct view of operation information on the receiver display.

*Previous model: bigger gap*

*New model: smaller gap*

## Auto Flap Face

AUTO FLAP

| DEX-P99RS | DEH-9450UB |

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

## Flap Face Design

FLAP FACE

| DEH-80PRS | DEH-X9650BT | DEH-X9650SD |

The CD slot is concealed behind the front panel flap, so the receiver's face looks extra-sleek and elegant.

## Lever Key

Lever Key

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

**Horizontal lever key**

| DEH-80PRS | DEH-9450UB | DEH-X9650BT | DEH-X9650SD |

**360-degree lever key**

| DEH-X8750BT | DEH-X7750UI |

## Anti-Dust Design*

Anti-Dust Design

| All Audio Receivers | (Except DEX-P99RS, MVH-X585BT, MVH-X395BT, MVH-X285FD, MVH-X195UI, MVH-85UB, MVH-X3 and MXT-X396BT)

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

**Anti-Dust Structure Image**

*Higher Reliability*
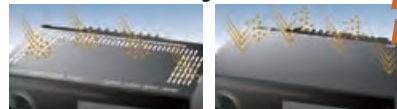
*Non-anti-dust design*     *Anti-dust design*

## Compact Chassis Design

| MVH-X395BT | MVH-X195UI | MVH-85UB | MVH-X3 | MXT-X396BT |

The shallow depth of the chassis of new MVH series receiver provides for optimal ease and flexibility of installation.
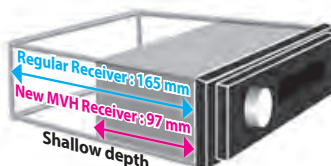
Regular Receiver : 165 mm
New MVH Receiver : 97 mm
Shallow depth

# OTHERS

## USB Quick Charge for Android (CDP)  NEW

QUICK CHARGE

| DEH-X4950BT | DEH-X3950BT* | DEH-X2950UI | DEH-X1953UB | DEH-X5 | DEH-X1 |

*\* GS model only*

Pioneer's new audio receiver has a charging downstream port (CDP) providing up to 1.5 amperes to give an Android smartphone a quick charge.

# OTHERS

## USB Source Change Function

**All Audio Receivers** (Except DEX-P99RS, DEH-80PRS, DEH-9450UB, DEH-X9650BT, DEH-X9650SD, DEH-X8750BT, DEH-X7750UI , DEH-155MP(G) and FH-X575UI)

When the audio receiver is connected to a media player, smartphone or other device via USB, you can choose to set the USB Source Change function ON or OFF.

**ON** The music source automatically changes to the connected source device.

**OFF** The music source being played on the receiver doesn't change, allowing the connected smartphone or portable media player to recharge while the music plays.

## Multi-Language Display

**MULTI-LANGUAGE DISPLAY**

**All Audio Receivers** (Except DEH-155MP(G) and FH-X575UI)

Pioneer audio receivers feature Multi-Language Display.

**Asia/Middle East/Oceania**
English/Spanish/Portuguese/Arabic/Persian
GS*

**Central America/Latin America**
English/Spanish/Portuguese
CS*

**Asia/Middle East/Oceania/
Central America/Latin America**
English/Spanish/Portuguese
ES*

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

## Preset Steering Wheel Control*

**All Audio Receivers** (Except DEX-P99RS, DEH-80PRS, DEH-9450UB, DEH-X9650BT, DEH-X9650SD and DEH-155MP(G))

You can now use buttons on your car steering wheel to control certain car receiver functions.
Setup is simple. Just choose your car brand name in the receiver's PRESET setting interface to automatically ensure compatibility of your vehicle's original steering wheel controller with the system.

* Available in GS and ES models. Required cable is not included, and must be purchased separately. Please contact a nearby local Pioneer Service Center or branch for details.

## Package System Configurations

**DXT-X1969UB** **DXT-X196UB** **MXT-X396BT**

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

### DXT-X1969UB: Audio Receiver + 16 cm & 6" x 9" Speaker Package

16 cm Speaker
6" x 9" Speaker
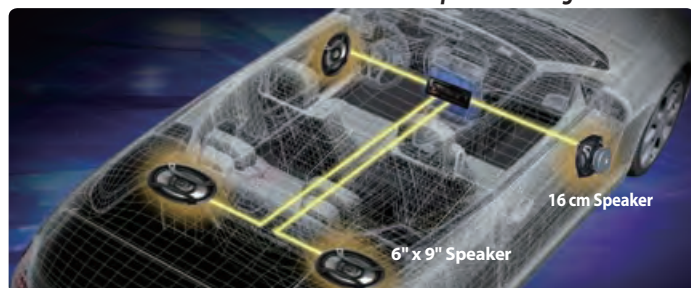
### DXT-X196UB/MXT-X396BT: Audio Receiver + 16 cm Speaker Package

16 cm Speaker
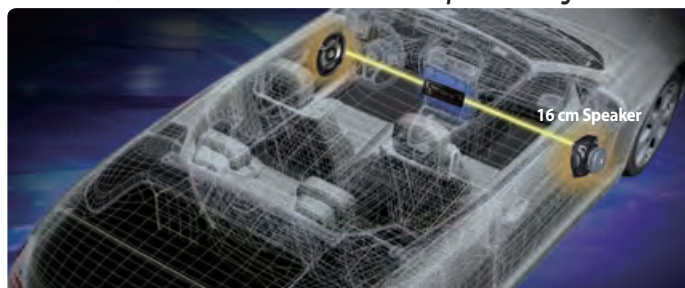
## DEH-155MP/DEH-155MPG

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

DEH-155MP

DEH-155MPG

CD-R/RW  MP3  WMA  AUX IN  1 RCA pre-out  Subwoofer control  24bit DA Converter  Anti-Dust Design  WIRED REMOTE INPUT  RDS  SUPER TUNER III D
SHORT WAVE  MOSFET 50W×4  DETACHABLE FACE SECURITY

**Rear Panel**

## Main Features

- CD Player
- LCD Display (12-Character)
- LED Backlight
- AUX Input (Front)
- MP3/WMA/WAV Playback
- Advanced Sound Retriever
- MOSFET 50 W x 4
- Supertuner® IIID
- Shortwave Tuner
- RDS
- RCA Preout x 1 (2 V)
- 5-Band Graphic EQ
- Anti-Dust Design
- Wired Remote Input
- Display Off Mode
- Detachable Face Security™
- Rotary Volume Control
- Card Remote Control

# INDEX

# Pioneer on Amplifier Development
## — toward higher reliability and sound quality

### ● High Reliability

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

### ● High Power

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

High Reliability

High Power

Pioneer Amplifiers

Commitment to Sound

Advanced Technology

### ● Advanced Technology

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

### ● Commitment to Sound

Pioneer's commitment to sound quality began over seventy years ago with the development of its first home audio speaker. A passion for audio combined with a methodical approach to innovation consistently deliver the best in musical enjoyment. Truly great sound quality goes beyond measurement, as there is no specification that truly defines an awesome musical experience. Dedication to sound quality is at the heart of Pioneer's ongoing quest for musical perfection.

Total Vibration Control

**Vibrational Absorption Time Comparison**

Conventional Chassis

H-Shaped Chassis

*25 % Faster Vibration Absorption*

PRS-A900

# PRS-A900 _400 W MAX._

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

RCA INPUT

282

371        65

## Key Selling Points

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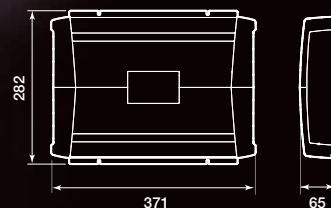- **Left and right channel independent power supplies direct electric current with superior stability and effectiveness.**
- **Strictly tested and tuned high capacity power supply capacitor provides enhanced stability in driving high-power output.**

## Go for Higher-Grade Circuits and Parts

### Advanced Signal Path Design

#### ■ Left and Right Channel Independent Power Supply

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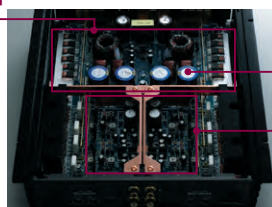
*L/R symmetric circuit layout improves channel separation.*

**Superior Channel Separation**

PRS-A900

Outputs from all channels are equal in level

AL -> AR
AR -> AL
BL -> BR
BR -> BL
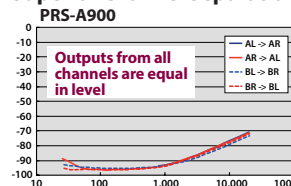
Conventional Circuit Design

Outputs from all channels are not equal in level

AR -> AL
AL -> AR
BR -> BL
BL -> BR
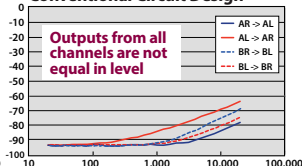
*PRS-A900: Excellent separation among all channels*

### Superior Selection of Internal Components

#### ■ Current Feedback-Type Amplifier Circuit

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

**Slew Rate**

PRS-A900 perfectly follows a sharp rise of input signal

Standard-type high-grade amplifier's (slew rate) characteristic

Voltage (V)

Time (μ sec.)

*PRS-A900 features a more sharply rising characteristic curve than a standard-type high-grade amplifier (which typically features 10-20 V/μ sec. slew rate)*
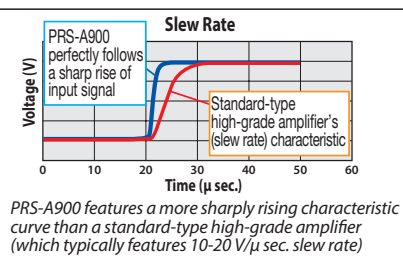
#### ■ Pioneer's Unique High-Capacity Power Supply Capacitor for Audio

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

## The Ultimate in Distortion-Free Sound Quality

### ■ H-shaped Chassis

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

**Vibrational Absorption Time Comparison**

Conventional Chassis

H-shaped Chassis

**25 % Faster Vibration Absorption**
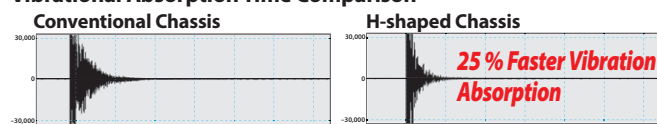
### ■ Copper-Plated Power Transistor Mounts

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

## Specifications

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

# PRS-D800  600 W MAX.

Class-FD 2-Channel Bridgeable Amplifier

Class FD | RCA INPUT

104
255
50

# Key Selling Points

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

## Audio Quality

### ■Class-FD Amplifier

Class FD

**High Performance High-Slew Rate Operational Amp**

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

**Electrolytic Capacitor for Audio**

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

**OFC (Oxygen-Free Copper) Wire Coil for Output**

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

**TVC (Total Vibration Control) Concept**

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

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

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

Total Vibration Control

Transformer
Circuit Board
Chassis

Transformer
Circuit Board
Absorber
Chassis
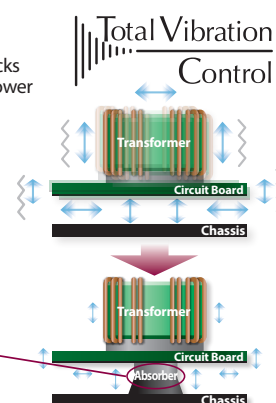
## Compact Design

### ■Very Compact Design for Extra Flexibility of Installation

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

**Slimmed Down 58%**

Conventional Model (PRS-D2200T)

PRS-D800

## Specifications

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

# GM-D9605  `2,000 W MAX.`

## Class-FD* 5-Channel Amplifier

Class FD | Variable LPF | Variable HPF | RCA INPUT | SPEAKER INPUT
Bass Boost Remote

*\* For only A-Ch. and B-Ch.*

315 | 60 | 200
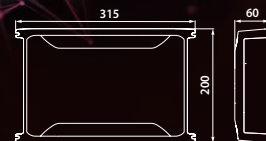
## Key Selling Points

- **Various settings and connections expand your choice of system configuration.**
- **The versatile 5-channel capability of the GM-D9605 features dedicated subwoofer output for ample power to drive strong bass.**
- **Very efficient and compact, the Class-D amp is capable of amazingly high power output.**

## Flexible Installation and Connectivity

A-Channel, B-Channel and Subwoofer-Channel outputs of the GM-D9605 can be matched to one, two or three preouts of a receiver.
The GM-D9605 is also excellent for speaker line output connections and expanding a factory-equipped subwoofer-less car audio system into a 5-channel output system.

### System Connection Examples with GM-D9605 and Receiver

**5-Channel System with One Speaker Line Output**
Front Left/Right
Subwoofer
Speaker Line Output
Rear Left/Right

**5-Channel System with One RCA Preout**
Front Left/Right
Subwoofer
1 RCA Preout
Rear Left/Right

**5-Channel System with Three RCA Preouts**
Front Left/Right
Subwoofer
3 RCA Preouts
Rear Left/Right

**5-Channel System with Two RCA Preouts and Speaker Line Output**
Front Left/Right
Subwoofer
Speaker Line Output
2 RCA Preouts
3-Ch. Output
Bridged Connection
Rear Left/Right

## 5-Channel Amplifier with Dedicated Output for Subwoofer

- Unlike conventional 5-channel amplifiers, the Pioneer GM-D9605 has dedicated large block terminals to drive a subwoofer with plenty of power.

  Block terminal for subwoofer

- Variable low pass filter (LPF) has two types of slopes, selectable according to subwoofer characteristics and personal listening preferences.

  Variable LPF

  **Variable Low Pass Filter (LPF)**

  +37.5 +35 +32.5 +30 +27.5 +25 +22.5 +20 +17.5 +15
  10 20 50 100 200 500 1k 2k 3k
  Hz
  — -24 dB/oct.  — -12 dB/oct.

- GM-D9605 is equipped with A/B-SW input select.

- Bass Boost Remote lets you adjust bass level from 0 to 18 dB by wired controller.

  Bass Boost Remote

## Specifications

| | GM-D9605 |
|---|---|
| **Number of Channels** | 5/4/3/2 |
| **Max. Wattage (4 Ω)** **Max. Wattage (2 Ω)** **Max. Wattage Bridged (4 Ω)** | 150 W x 4 (A-/B-Ch.)/700 W x 1 (Subwoofer-Ch.) 200 W x 4 (A-/B-Ch.)/1,200 W x 1 (Subwoofer-Ch.) 400 W x 2* |
| **Wattage RMS (4 Ω <= 1 % THD+N)** **Wattage RMS (2 Ω <= 1 % THD+N)** **Wattage RMS Bridged (4 Ω)** | 75 W x 4 (A-/B-Ch.)/350 W x 1 (Subwoofer-Ch.) 100 W x 4 (A-/B-Ch.)/600 W x 1 (Subwoofer-Ch.) 200 W x 2* |
| **Frequency Response** | 10 Hz to 50 kHz (A-/B-Ch.)/ 10 Hz to 500 Hz (Subwoofer-Ch.) |
| **Total Harmonic Distortion (1 kHz, 4 Ω)** | <0.05 % (A-/B-Ch.: 1 kHz/Subwoofer-Ch.: 100 Hz) |
| **Signal-to-Noise Ratio (IHF-A Weighted)** | >94 dB |
| **Dimensions (W x H x D)** | 315 mm x 60 mm x 200 mm |

\* Bridgeable for A-ch. and B-ch. only.

# GM-D9604  `1,600 W MAX.`

*Champion series*

**Class-FD 4-Channel Bridgeable Amplifier with Bass Boost Remote**

*Class FD* | Variable **LPF** | Variable **HPF** | **RCA IN/OUT** | **SPEAKER INPUT** | *Bass Boost Remote* | **1 ohm**

## GM-D8604  `1,200 W MAX.`

**Class-FD 4-Channel Bridgeable Amplifier with Bass Boost Remote**

*Class FD* | Variable **LPF** | Variable **HPF** | **RCA IN/OUT** | **SPEAKER INPUT** | *Bass Boost Remote* | **1 ohm**

265 · 60 · 200

## GM-D9601  `2,400 W MAX.`

**Class-D Mono Amplifier with Bass Boost Remote**

Variable **LPF** | **RCA IN/OUT** | **SPEAKER INPUT** | *Bass Boost Remote* | **1 ohm**

315 · 60 · 200

## GM-D8601  `1,600 W MAX.`

**Class-D Mono Amplifier with Bass Boost Remote**

Variable **LPF** | **RCA IN/OUT** | **SPEAKER INPUT** | *Bass Boost Remote* | **1 ohm**

265 · 60 · 200

315 · 60 · 200

# Key Selling Points

- **Very efficient and compact, the Class-D amp is capable of amazingly high power output.**
- **Highly stable, durable circuitry enables 1Ω connection with continuous output.**  **1 ohm**
- **Variable LPF and HPF enhance system tuning flexibility. Bass Boost Remote lets listeners optimize the bass level according to preference and type of music being played.**

Variable **LPF** | Variable **HPF** | *Bass Boost Remote*

## Growing Power, Shrinking Size

Pioneer's new extra-efficient Class-D digital amplifiers mark a dramatic improvement in power output capability, yet are much smaller than Class-AB amplifiers. That makes them more versatile in terms of installation as well as performance.

**More Impact Made More Compact**
**Slimmed down 50 %***
*\* Measured by cubic volume.*

**Dramatically Higher Power Output**
Conventional Class-D Amplifier vs. New Class-D Amplifier

GM-D9500F: 800 W max.  vs. GM-D8604  **1,200 W max.**
GM-D8500M: 1,200 W max. vs. GM-D9601  **2,400 W max.**
GM-D7500M: 800 W max.  vs. GM-D8601  **1,600 W max.**

Conventional Class-AB Model
GM-D8604

## Highly Reliable Circuit Design

To prevent circuit shutdown, Pioneer's new digital amplifier circuit "Protection Control System" senses its internal temperature and automatically moderates input level accordingly. Stable, durable circuitry lessens the risk of high input power for the unit to achieve 1 Ω connection. This design enhances the flexibility to connect multiple subwoofers to a system.

**1 ohm**

**Multiple Block Terminal**
TS-W311S4 x 4
**Stable Circuit!**
GM-D9601
1 Ω · 4 Ω · 4 Ω · 4 Ω · 4 Ω
**Parallel**

## For Extra Versatility

**Variable LPF/HPF**
For extra flexibility, variable LPF and HPF make audio frequency more adjustable according to subwoofer characteristics and personal listening preferences.

**GM-D9604/GM-D8604**
Low-Pass Filter ON | High-Pass Filter ON
*From 40 Hz to 500 Hz*

GM-D9604 / GM-D8604  Variable LPF/HPF: 40 Hz–500 Hz — Variable **LPF** Variable **HPF**
GM-D9601  Variable LFP: 40 Hz–240 Hz — Variable **LPF**
GM-D8601  Variable LFP: 40 Hz–240 Hz

*Bass Boost Remote*

**Bass Boost Remote**
Every new Class-D amplifier has a Bass Boost Remote Controller for optimal bass level adjustment according to listening preferences and music characteristics.

MIN · MAX

**Automatic Signal Sensing and Turn-ON**
Pioneer's Class-D amplifier automatically selects an input signal mode between the RCA level and the speaker level detecting an input signal. Further, when the receiver is turned on, the amplifier will automatically turn on.

## Specifications

| | GM-D9604 | GM-D9601 | GM-D8604 | GM-D8601 |
|---|---|---|---|---|
| Number of Channels | 4/3/2 | Mono | 4/3/2 | Mono |
| Max. Wattage (4 Ω) | 260 W x 4 | 1,000 W x 1 | 200 W x 4 | 600 W x 1 |
| Max. Wattage (2 Ω) | 400 W x 4 | 1,600 W x 1 | 300 W x 4 | 1,000 W x 1 |
| Max. Wattage (1 Ω) | 260 W x 4 | 2,400 W x 1 | 250 W x 4 | 1,600 W x 1 |
| Max. Wattage Bridged (4 Ω) | 800 W x 2 | — | 600 W x 2 | — |
| Wattage RMS (4 Ω <= 1 % THD+N) | 130 W x 4 | 500 W x 1 | 100 W x 4 | 300 W x 1 |
| Wattage RMS (2 Ω <= 1 % THD+N) | 200 W x 4 | 800 W x 1 | 150 W x 4 | 500 W x 1 |
| Wattage RMS (1 Ω <= 1 % THD+N) | 130 W x 4 | 1,200 W x 1 | 125 W x 4 | 800 W x 1 |
| Wattage RMS Bridged (4 Ω) | 400 W x 2 | — | 300 W x 2 | — |
| Frequency Response | 10 Hz to 50 kHz | 10 Hz to 240 Hz | 10 Hz to 50 kHz | 10 Hz to 240 Hz |
| Total Harmonic Distortion (1 kHz, 4 Ω) | <0.05 % | <0.5 % (100 Hz) | <0.05 % | <0.5 % (100 Hz) |
| Signal-to-Noise Ratio (IHF-A Weighted) | >95 dB | >100 dB | >95 dB | >100 dB |
| Dimensions (W x H x D) | 315 mm x 60 mm x 200 mm | 315 mm x 60 mm x 200 mm | 265 mm x 60 mm x 200 mm | 265 mm x 60 mm x 200 mm |

# GM-D1004 `400 W MAX.`

## Class-FD 4-Channel Amplifier

*Class FD* | **LPF** | **HPF** | **RCA INPUT** | **SPEAKER INPUT**

181

38

64
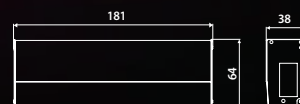
## Key Selling Points

- **Compact design makes for easy installation behind the center console or inside the console box.**
- **Achieves higher power output despite compact dimensions.**
- **GM-D1004 incorporates various outstanding features including TVC (Total Vibration Control) Concept, Automatic Signal Sensing and Turn-ON, and others.**

## Ultra Compact Design

Despite compact dimensions, high power 100 W x 4-ch. achieves maximum output to deliver clear, powerful sound even at loud volumes.

GM-D8604

GM-D1004
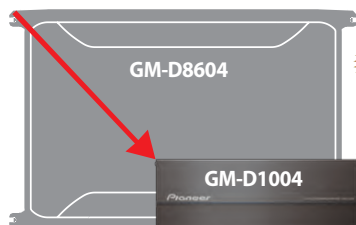
**86% Smaller***

* Measured by cubic volume.

## Easy Installation

Electric power is supplied to the amplifier behind the center console or inside the console box, simplifying wiring and installation so you can upgrade sound quality from a system using a receiver's built-in amplifier.

**Upgraded**

Power Cable

Power Cable

**Center console or Console box** (Wiring in vehicle)

Built-in Amplifier

**50 W x 4 MAX.** → **100 W x 4 MAX.**
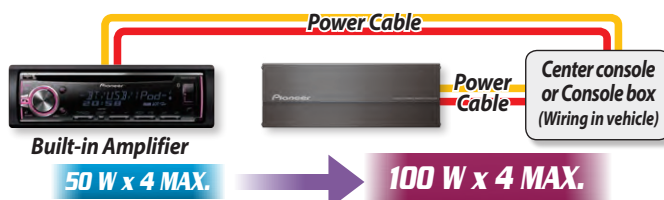
## TVC (Total Vibration Control) Concept

Grooves on bottom of chassis suppresses vibration that normally blocks sound when high current is applied, enhancing power flow stability, minimizing distortion, and raising signal-to-noise ratio.

Total Vibration Control

### TVC (Total Vibration Control) Conceptualization

Conventional Amplifier

Circuit Board

Chassis

Vibration from vehicle

GM-D1004

Circuit Board

Chassis

Vibration from vehicle
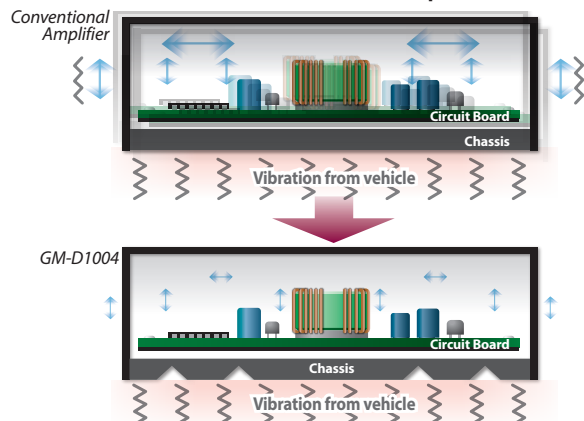
## Automatic Signal Sensing and Turn-ON

When connected to an OEM receiver or a receiver without RCA input using speaker wire, the amplifier is turned on at the same time as the receiver.
Pioneer's amplifiers automatically detect an input signal and select an input signal mode between the RCA level and the speaker level.

## Specifications

* 3-/2-channel and bridged connection wattage specifications available for the UC model only. Refer to product box for regional availability.

| | GM-D1004 |
|---|---|
| **Number of Channels** | 4/3*/2* |
| **Max. Wattage (4 Ω)** | 100 W x 4 |
| **Max. Wattage (2 Ω)** | 100 W x 4 |
| **Max. Wattage Bridged (4 Ω)** | 200 W x 2* |
| **Wattage RMS (4 Ω <= 1 % THD+N)** | 45 W x 4 |
| **Wattage RMS (2 Ω <= 1 % THD+N)** | 45 W x 4 |
| **Wattage RMS Bridged (4 Ω)** | 90 W x 2* |
| **Frequency Response** | 10 Hz to 40 kHz |
| **Total Harmonic Distortion (1 kHz, 4 Ω)** | <0.05 % |
| **Signal-to-Noise Ratio (IHF-A Weighted)** | >90 dB |
| **Dimensions (W x H x D)** | 181 mm x 38 mm x 64 mm |

**Ριοηεεr**

# GM-A6704 `NEW` 1,000 W MAX.

**4-Channel Bridgeable Amplifier with Bass Boost**

LPF | HPF (Variable) | RCA INPUT | SPEAKER INPUT
*Bass Boost*
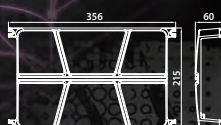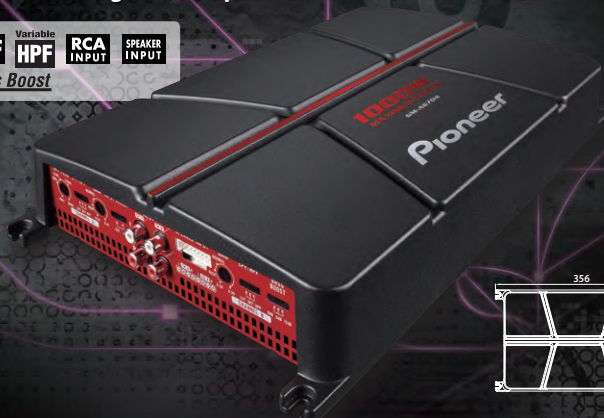
# GM-A4704 `NEW` 520 W MAX.

**4-Channel Bridgeable Amplifier**

LPF | HPF (Variable) | RCA INPUT | SPEAKER INPUT

326 | 60 | 215
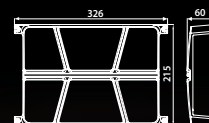
# GM-A5702 `NEW` 1,000 W MAX.

**2-Channel Bridgeable Amplifier with Bass Boost**

LPF (Variable) | RCA INPUT | SPEAKER INPUT | *Bass Boost*

356 | 60 | 215

# GM-A3702 `NEW` 500 W MAX.

**2-Channel Bridgeable Amplifier**

LPF | RCA INPUT | SPEAKER INPUT

246 | 60 | 180

356 | 60 | 215

---

# Key Selling Points

- **Higher power output contained in compact dimensions.**
- **Outstanding features include Bass Boost (GM-A6704/GM-A5702), Automatic Signal Sensing & Turn-On, and others.**
- **Variable high pass filter (for high-frequency-range sound) enhances tuning flexibility and sonic clarity. (GM-A6704/GM-A4704)**

## Variable HPF  GM-A6704/GM-A4704

Variable HPF (A-Ch.) allows for frequency adjustment from 40 Hz to 500 Hz and greater car audio system flexibility. Adjustability of the high pass filter (A-Ch.) enables optimal fine-tuning of front-door-mounted speakers' settings according to car door structure.

**Variable HPF**

### Variable HPF Crossover Frequency Image

**GM-A6704/GM-A4704**

High-Pass Filter ON

16 cm Speaker | 10 cm Speaker

From 40 Hz to 500 Hz

40 Hz | 80 Hz | 500 Hz

*Adjust HPF cutoff frequency flexibly according to front speaker characteristics and personal listening preference.*

**HPF OFF** → **HPF ON**

Amplifier without HPF

HPF | HPF
GM-A6704 or GM-A4704

*Clear Vocal!*
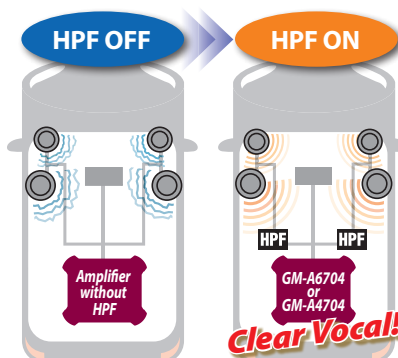
## Bass Boost  GM-A6704/GM-A5702

You can choose among 0 dB, 6 dB, and 12 dB Bass Boost amplification levels according to preference. This control can enhance the balance and impact of overall sound, according to listening preference and music style.

**Bass Boost**

14 | 12 | 10 | 8 | 6 | 4 | 2 | 0
10 | 100 | 1,000

Bass Boost Off
Bass Boost 6 dB
Bass Boost 12 dB

---
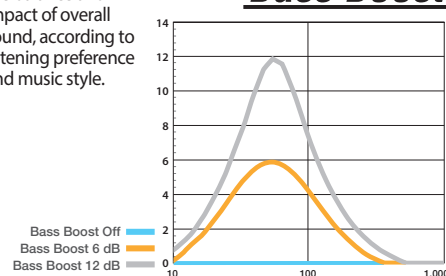
## Automatic Signal Sensing and Turn-ON

Pioneer's amplifier automatically selects an input signal mode between the RCA level and the speaker level detecting an input signal. Further, when the receiver is turned on, the amplifier will automatically turn on. When connected with an OEM receiver or receiver without RCA input using speaker line, the amplifier has its power turned on in sync with the receiver.

---

## Specifications

| | GM-A6704 | GM-A4704 | GM-A5702 | GM-A3702 |
|---|---|---|---|---|
| **Number of Channels** | 4/3/2 | 4/3/2 | 2/1 | 2/1 |
| **Max. Wattage (4 Ω)**<br>**Max. Wattage (2 Ω)**<br>**Max. Wattage Bridged (4 Ω)** | 170 W x 4<br>250 W x 4<br>500 W x 2 | 80 W x 4<br>130 W x 4<br>260 W x 2 | 300 W x 2<br>500 W x 2<br>1,000 W x 1 | 170 W x 2<br>250 W x 2<br>500 W x 1 |
| **Wattage RMS (4 Ω <= 1 % THD+N)**<br>**Wattage RMS (2 Ω <= 1 % THD+N)**<br>**Wattage RMS Bridged (4 Ω)** | 60 W x 4<br>95 W x 4<br>190 W x 2 | 40 W x 4<br>65 W x 4<br>130 W x 2 | 150 W x 2<br>240 W x 2<br>480 W x 1 | 60 W x 2<br>95 W x 2<br>190 W x 1 |
| **Frequency Response** | 10 Hz to 70 kHz | 10 Hz to 70 kHz | 10 Hz to 70 kHz | 10 Hz to 70 kHz |
| **Total Harmonic Distortion (1 kHz, 4 Ω)** | <0.05 % | <0.05 % | <0.05 % | <0.05% |
| **Signal-to-Noise Ratio (IHF-A Weighted)** | >95 dB | >94 dB | >96 dB | >95 dB |
| **Dimensions (W x H x D)** | 356 mm x 60 mm x 215 mm | 326 mm x 60 mm x 215 mm | 356 mm x 60 mm x 215 mm | 246 mm x 60 mm x 180 mm |

# INDEX

# DELVE DEEPER

Applying the kind of innovation that made its SPL subwoofers world championship winners, Pioneer makes all of its subwoofers superior at delivering massive punch for maximum impact.
With stunning dimensions of low-frequency depth, Pioneer achieves the ultimate technical knockout.

## Champion series - PRO

### Champion Series Subwoofer

Built on the strong foundation of the world's top-performing SPL subwoofer, Champion Series subwoofers broaden the reach of Pioneer's spirit and technology toward new horizons. Their reliability, power and capability to produce big, clear, distortion-free sound are simply incomparable in their class.

### Shallow Subwoofer

Our line of shallow subwoofers are designed to provide wider installation options for a broad range of vehicles. These shallow-mount subwoofers feature unique design to deliver big bass performance like a full-size subwoofer, but in a compact design that can be installed either behind or under seats depending on the type of vehicle.

### ib-FLAT

## Pioneer Official 3D Hologram

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

Green images of 3D hologram logo

As seen from above, at an angle

As seen from directly in front
Orange color line

As seen from below, at an angle

* Models TS-W3003D4, TS-W311D4, TS-W311S4, TS-W261D4, TS-W261S4 and TS-W311. In this Dealer Reference Guide, these particular subwoofers and 3D hologram logo appear as in examples below. The product that has a 3D hologram sticker attached to its packaging carton features this logo on product page. Please see product page for more details.

3D HOLOGRAM

**TS-W3003D4**  2,000 W MAX.

30 cm (12") Champion Series PRO Subwoofer

INJECTION MOLDED CONE

Champion series - PRO

ø327
ø283
ø308
176

# TS-W3003D4  2,000 W MAX.  3D HOLOGRAM

**30 cm (12") Champion Series PRO Subwoofer**

*Champion series - PRO*

INJECTION MOLDED CONE ™

ø327
ø283
ø308
176
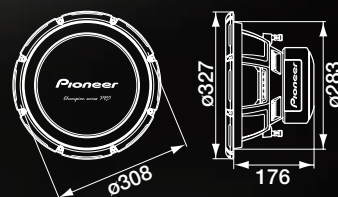
## Key Selling Points

- **The ultimate performance heritage of Pioneer's Championship-winning SPL subwoofers.**
- **High rigidity IMPP™ composite seamless cone reproduces rich, true bass.**
- **Extraordinary structure of dual spiders, a dual-layer surround, a 4-layer overhung voice coil and double stacked magnets for greater excursion and linearity even at extremely high power input.**

# TS-W3003D4 Cut View

## ■ IMPP™ Composite Seamless Cone

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

### Drive Cone for Louder Sound

Fiber material blended in the drive cone improves sound response.

### Highly Rigid Shaped Basket

Four ribbed arms strengthen the basket stiffness while body basket shape has been slimmed down.

**More Rigid Basket!**

### Air Vent

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

### Large-Sized Magnetic Circuit and Projected Pole

A large magnetic circuit and projected pole that brilliantly dissipates heat help to deliver higher power sound.
The projected pole helps reproduce more accurate, linear sound by improving the symmetry of vertical magnetic flux distribution.

**Young's Modulus**

TS-W3003D4

More Rigidity

Conventional material

Young's Modulus [N/m²] — Frequency [Hz]

**Louder Bass!**

### Dual-Layer Surround Fiber Reinforced Elastic Polymer

### Dual Spider

Two spiders supporting the voice coil effectively dampen large cone vibration and enhance linearity of sound reproduction.

**Single Spider**

Displacement [mm] — Frequency [Hz]

**Dual Spider**

Displacement [mm] — Frequency [Hz]

**High Linearity!**
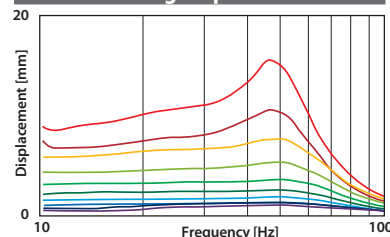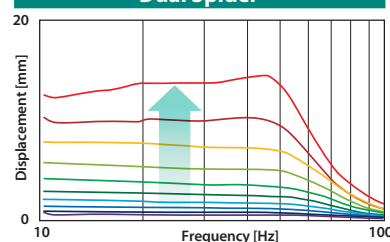
### TS-W310S4
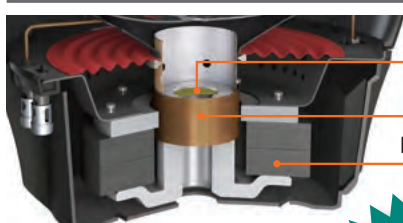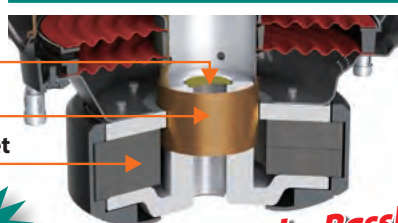
### TS-W3003D4

Bigger Pole
Thicker Wire
Bigger Magnet

**Bl 26 % Up**

**Louder Bass!**

Bl parameter is force factor.
Higher force factor = Higher drive power

## Symmetrical Field of Magnetic Flux

Bg [T] — Displacement [mm]

**More Accurate Sound!**
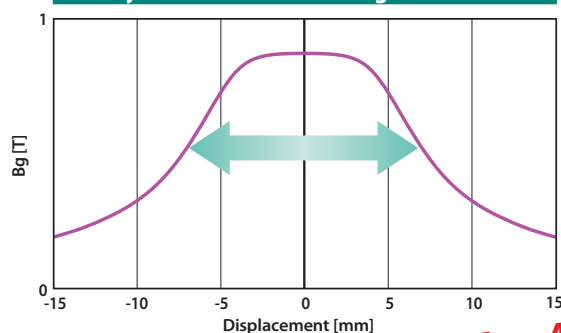
## / Specifications

| | TS-W3003D4 |
|---|---|
| **Size** | 30 cm |
| **Max. Music Power (Nominal)** | 2,000 W (600 W) |
| **Frequency Response** | 20 Hz to 80 Hz |
| **Sensitivity (In Car/1 W)** | 96 dB |
| **Impedance** | 4 Ω x 2 |
| **Mounting Depth** | 176 mm |
| **Cut-Out Dimensions** | ø283 mm |
| **Recommended Enclosure** | 24.1 liters to 49.5 liters |

*For more details, see page 105 (Thiele-Small parameters) and 106 (Enclosures).*

## TS-W311D4/S4  1,400 W MAX.  3D HOLOGRAM

**30 cm (12") Champion Series Subwoofers**
(TS-W311D4: 4 Ω Dual Voice Coil Type/TS-W311S4: 4 Ω Single Voice Coil Type)

INJECTION MOLDED CONE ™

*Champion series*

ø327  ø283  ø308  151
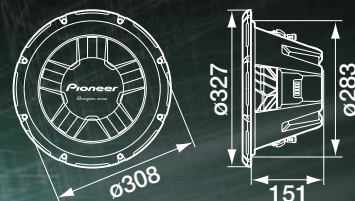
### TS-W261D4/S4  1,200 W MAX.  3D HOLOGRAM

**25 cm (10") Champion Series Subwoofers**
(TS-W261D4: 4 Ω Dual Voice Coil Type/TS-W261S4: 4 Ω Single Voice Coil Type)

INJECTION MOLDED CONE ™

ø259  ø277  ø235  139

## Key Selling Points

- **Extreme performance derives from Pioneer's Championship-winning SPL subwoofers.**
- **The versatile subwoofer lineup provides for various types of installation.**
- **The Voice Coil Cooling System (VCCS) improves durability and faithfully reproduces the sound of original sources. (TS-W306R/TS-W256R)***

*\* TS-W306R and TS-W256R are not Champion Series subwoofers.*

### TS-W311  1,000 W MAX.  3D HOLOGRAM

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

INJECTION MOLDED CONE ™

ø324  ø278  ø302  148
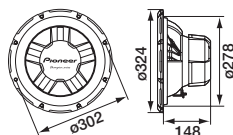
### TS-W306R*  1,300 W MAX.  NEW

**30 cm (12") Component Subwoofer**

INJECTION MOLDED CONE ™

135  ø301.4  ø281
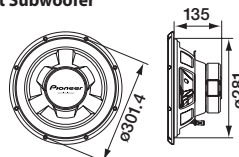
### TS-W256R*  1,100 W MAX.  NEW

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

INJECTION MOLDED CONE ™

122  ø230  ø251.8
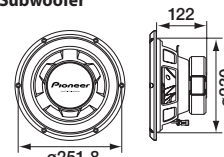
# TS-W311D4 Cut View

## IMPP™ Composite Cone

An extremely rigid yet lightweight cone is vital to prevent cone failure at high sound pressure levels. Pioneer's IMPP Composite Cones meet this need perfectly. CAE (computer-aided engineering) has been applied to create a surface spoke design that ensures high durability and rigidity of the cone.
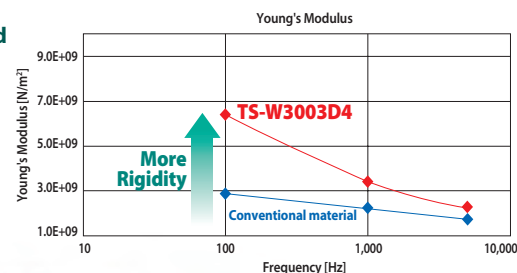
## Air Vent

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

## Fully Enclosed Basket

Magnetic circuit is tightly fixed to the basket to suppress undesirable sound-distorting recoil to the cone, realize clear and punchy bass sound.

**TS-W310D4**

**TS-W311D4**
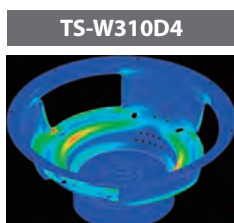
*Clear Bass!*

**4-Layer Copper Voice Coil with Aluminum Former**
Aluminum former improves heat dissipation.

**IMPP Composite Cone Characteristics**

Young's Modulus [N/m²] vs Frequency [Hz]

TS-W311D4

TS-W310D4

**More Rigidity**
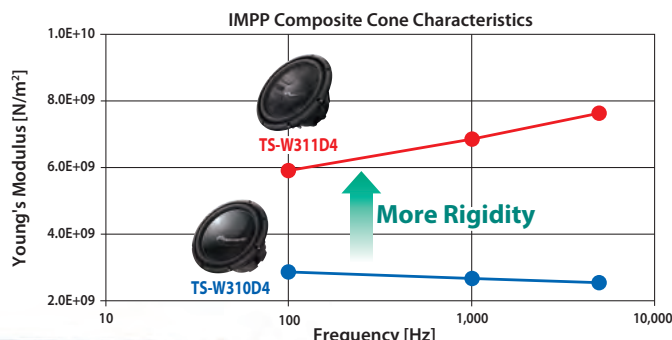
## Dual-Layer Elastic Polymer Surround

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

## Independent Spider Holder

The TS-W311D4 has a feature inherited from Pioneer's competition-dominating SPL subwoofer. By preventing propagation of spider vibration through the basket to the cone, this structure improves high transient and linearity of excursion, enhances clarity of sound reproduction.

**TS-W310D4**          **TS-W311D4**
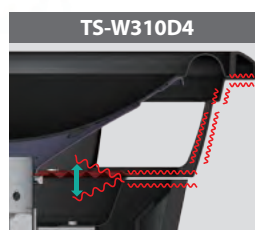
*Shuts out vibration*

*High Linearity!*

# Technology of TS-W306R and TS-W256R

## Solid and Rhythmical Bass

### IMPP™ Composite Seamless Cone
The TS-W306R and TS-W256R deliver superior durability and more solid bass reproduction than their predecessors.

### VCCS Technology
Heat radiation, a key to improved durability and faithful reproduction of original sounds, is optimized by new subwoofer design.

*TS-W306R*

## Voice Coil Cooling System (VCCS)
Heat is removed from the center of the subwoofer in order to improve frequency response and high power handling.

**Current**
- Cap of resin
- Heat source
- (1) Heat radiates from the iron parts of magnetic circuitry.

**New**
- (2) Heat also radiates from the aluminum cap along the aluminum bobbin.
- Aluminum cap
- Aluminum bobbin
- Heat source
- (1) Heat radiates from the iron parts of magnetic circuitry.
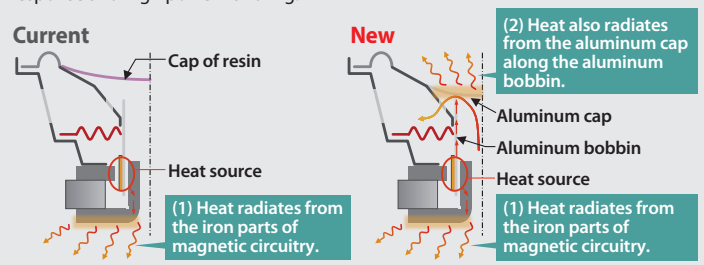
# Specifications

|  | TS-W311D4 | TS-W311S4 | TS-W261D4 | TS-W261S4 | TS-W311 | TS-W306R | TS-W256R |
|---|---|---|---|---|---|---|---|
| **Size** | 30 cm | 30 cm | 25 cm | 25 cm | 30 cm | 30 cm | 25 cm |
| **Max. Music Power (Nominal)** | 1,400 W (400 W) | 1,400 W (400 W) | 1,200 W (350 W) | 1,200 W (350 W) | 1,000 W (300 W) | 1,300 W (350 W) | 1,100 W (300 W) |
| **Frequency Response** | 20 Hz to 125 Hz | 20 Hz to 125 Hz | 20 Hz to 125 Hz | 20 Hz to 125 Hz | 20 Hz to 125 Hz | 20 Hz to 125 Hz | 20 Hz to 160 Hz |
| **Sensitivity (In Car/1 W)** | 95 dB | 95 dB | 93 dB | 93 dB | 95 dB | 96 dB | 92 dB |
| **Impedance** | 4 Ω x 2 | 4 Ω | 4 Ω x 2 | 4 Ω | 4 Ω | 4 Ω | 4 Ω |
| **Mounting Depth** | 151 mm | 151 mm | 139 mm | 139 mm | 148 mm | 135 mm | 122 mm |
| **Cut-Out Dimensions** | ø283 mm | ø283 mm | ø235 mm | ø235 mm | ø278 mm | ø281 mm | ø230 mm |
| **Recommended Enclosure** | 24.1 liters to 49.5 liters | 24.1 liters to 49.5 liters | 18.4 liters to 35.4 liters | 18.4 liters to 35.4 liters | 24.1 liters to 49.5 liters | 24.1 liters to 49.5 liters | 18.4 liters to 35.4 liters |

## TS-SW3002S4 `1,500 W MAX.`

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

ib-FLAT

ø327 ø298
ø327 86

## Key Selling Points

- **Oversized cone structure provides greater surface area to reproduce high SPL with no increase in basket size.**
- **Mica-reinforced IMPP™ cone reproduces powerful bass.**
- **Unique shallow structure of dual spiders, a dual-layer surround and a 4-layer overhung voice coil provides wide excursion and linearity even at high power input.**
- **OEM-FIT™ enables drop-in OEM audio system replacement or upgrading. (TS-SW2002D2).**

### TS-SW2502S4 `1,200 W MAX.`

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

ø278 ø249
ø273 78
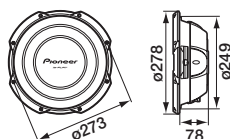
### TS-SW2002D2 `600 W MAX.`

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

ø227 ø179
ø202 67
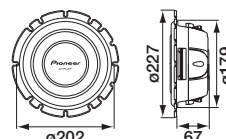
### TS-SWX3002 `1,500 W MAX.` NEW

**Preloaded 30 cm Shallow Subwoofer Enclosure**

163 522
352
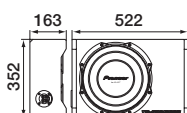
### TS-SWX2502 `1,200 W MAX.`

**Preloaded 25 cm Shallow Subwoofer Enclosure**

150 474
304
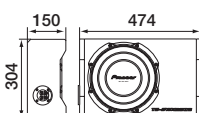
### TS-SWX2002 `600 W MAX.` NEW

**Preloaded 20 cm Shallow Subwoofer Enclosure**

140 300
235
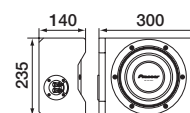
# TS-SW3002S4 Cut View

## Oversized Cone

The TS-SW3002S4 utilizes an oversized cone structure that provides greater cone surface without changing its standard external dimension. This cone surface allows the subwoofer to produce louder and deeper bass by moving more air.

*17% Larger Cone Size!*

## Mica Reinforced IMPP™ Cone

The cone structure of this subwoofer uses a highly rigid cone made with MICA injected molded resin which creates a rigid and durable cone, giving it the ability to produce accurate bass.

*More Punchy Bass!*

Spider Holder

Large-Sized Dust Cap with Spin Pattern

Heat Resistant Polyester Resin 4-Layer Voice Coil

## Dual-Layer Elastic Polymer Surround

Dramatically improves durability and lightness, for superior response, especially for louder volume.

$(N/m^2)$ xE07

Strength

Dual-Layer Elastic Polymer

Rubber

Density  (kg/m$^3$)
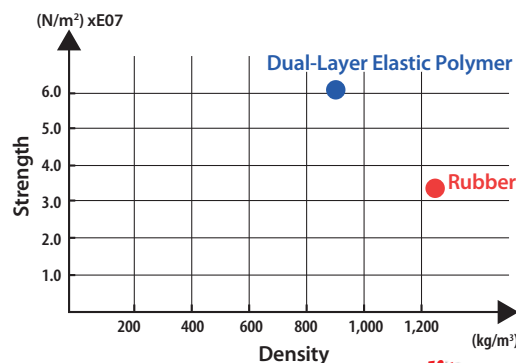
*High Durability despite Lightweight!*

## Dual Spider

Two spiders supporting the voice coil effectively dampen large cone vibration and enhance linearity of sound reproduction.

**Symmetric Excursion Control**

Difference (mm)

Symmetry!

Frequency [Hz]

*High Linearity!*

TS-SW3002S4
Competitor A
Competitor B
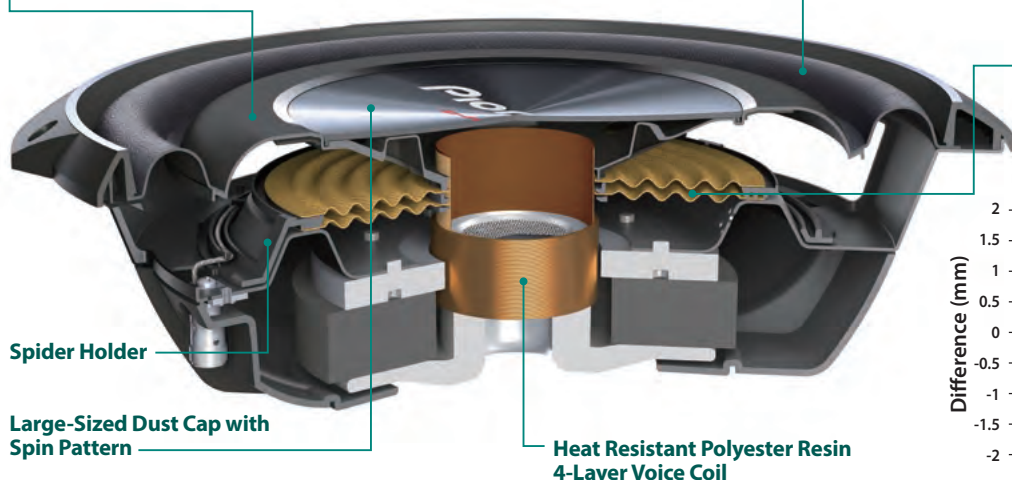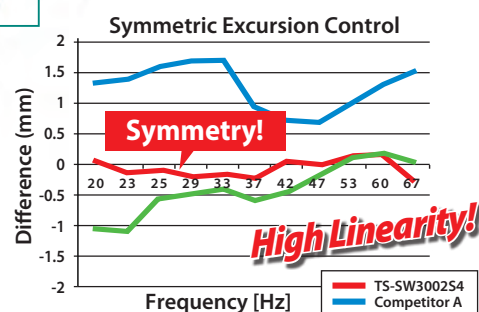
# Deep Bass Sound Produced with Great Efficiency — TS-SWX3002/TS-SWX2502/TS-SWX2002

**Downfiring Subwoofer Technology**

The subwoofer diaphragm is directed downward for this technology to radiate richer, deeper low-frequency bass sound more efficiently, regardless of the enclosure's installed position.

**Flexible Fit Shallow Subwoofer Enclosure**

Thanks to its innovative design, the enclosure can be installed freely in the cabin or luggage area for optimal use of space.

In Compact Car | In Pickup Truck

# Specifications

| | TS-SW3002S4 | TS-SW2502S4 | TS-SW2002D2 | TS-SWX3002 | TS-SWX2502 | TS-SWX2002 |
|---|---|---|---|---|---|---|
| Size | 30 cm | 25 cm | 20 cm | 30 cm | 25 cm | 20 cm |
| Max. Music Power (Nominal) | 1,500 W (400 W) | 1,200 W (300 W) | 600 W (150 W) | 1,500 W (400 W) | 1,200 W (300 W) | 600 W (150 W) |
| Frequency Response | 20 Hz to 125 Hz | 20 Hz to 125 Hz | 20 Hz to 200 Hz | 20 Hz to 315 Hz | 20 Hz to 200 Hz | 20 Hz to 250 Hz |
| Sensitivity (In Car/1 W) | 93 dB | 91 dB | 86 dB | 92 dB | 89 dB | 86 dB |
| Impedance | 4 Ω | 4 Ω | 2 Ω x 2 | 4 Ω | 4 Ω | 2 Ω x 2 |
| Mounting Depth | 86 mm | 78 mm | 67 mm | — | — | — |
| Cut-Out Dimensions | ø298 mm | ø249 mm | ø179 mm | — | — | — |
| Recommended Enclosure | 14.2 liters to 28.3 liters | 9.9 liters to 19.8 liters | 4.2 liters to 14.2 liters | — | — | — |

# TS-WH500A  150 W MAX.† HVT™

**18 cm x 10 cm x 2 HVT Sealed Active Subwoofer**
**Dimensions (W x H x D): 340 mm x 60 mm x 250 mm**

*† Output power*

340    60

250
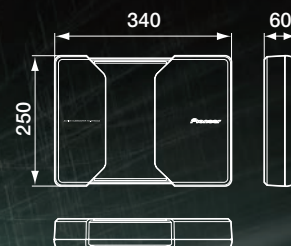
## Key Selling Points

- **The world's first, patented HVT (Horizontal Vertical Transforming) technology from Pioneer enables a micro-height subwoofer system to produce bass output and sound of quality equal to that of conventional subwoofer systems.**
- **Dual symmetric diaphragms positioned vertically in a bi-polar configuration increase output and minimize internal loss.**
- **Height of just 60 mm provides ultimate flexibility of installation (including relatively hard-to-fit installation under seats) for various types of vehicles.**

### What is HVT structure?

HVT stands for "Horizontal Vertical Transforming." This new technology converts the horizontal movement into the vertical movement.

Application Point (Diaphragm)

Joint

Power Point (Voice Coil)

Fulcrum
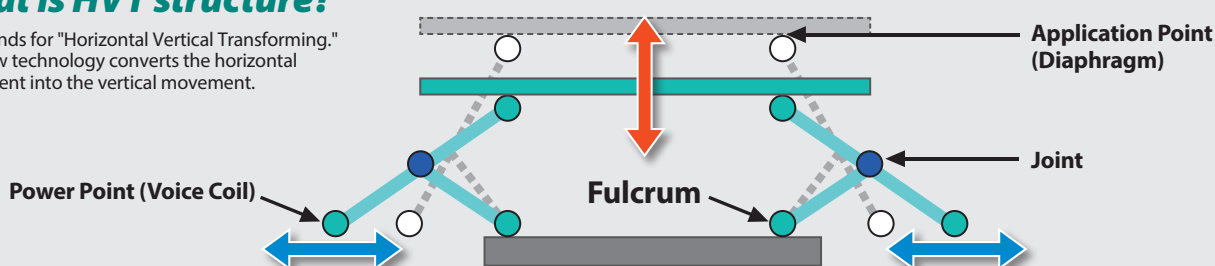
# HVT Structure (TS-WH500A) Cut View & Technology

## Wide-range Bass Sound

### Conventional Subwoofer

Stroke

| Diaphragm | Voice Coil |
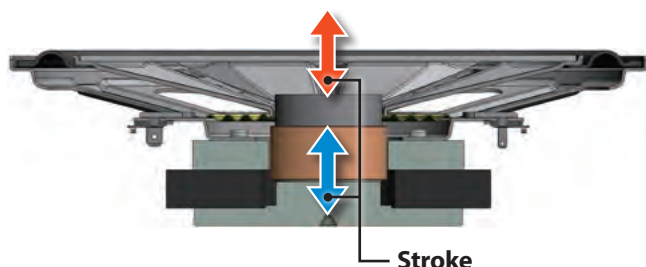
### HVT Subwoofer

Stroke

The cone and voice coil in a conventional subwoofer move only vertically, which makes it difficult to reproduce deep bass in a shallow structure.
The HVT subwoofer which does not rely on depth within its enclosure, reproduces deep bass even in a shallow structure.
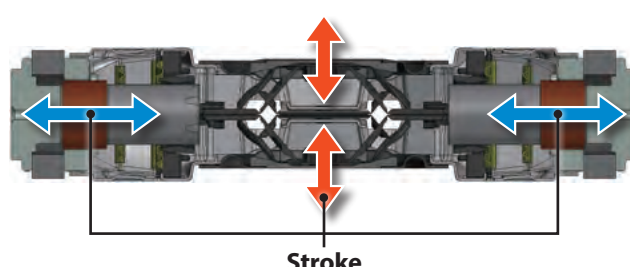
### Comparison Diagram between Conventional Subwoofers vs TS-WH500A

**1/3 Oct. Spectrum Measurement of Loudspeaker**

dB SPL vs Frequency (Hz)

— TS-WH500A
— Conventional Subwoofers
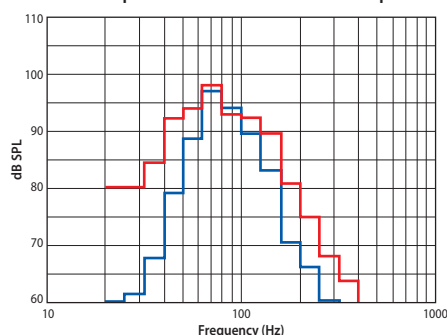
Compared to conventional subwoofers, the TS-WH500A offers wider low range frequency reproduction, for well-balanced bass sound from various musical instruments.

### Sound Direction Image
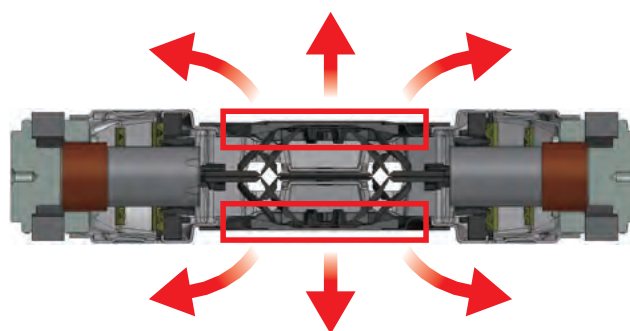
Double Diaphragm enlarges vibration area to increase sensitivity.

## Clear Sound & Less Noise

### Conventional Subwoofer

Floor Noise

**Vibration of Bottom Cabinet**
Forces of action and reaction forces make the chassis vibrate and generate noise.

### HVT Subwoofer

Floor Noise
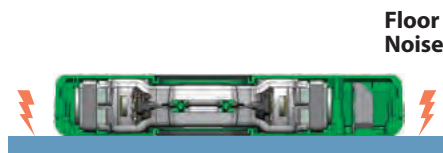
**Less Vibration & Less Noise**
The TS-WH500A voice coil and diaphragm work in symmetry to cancel unnecessary vibrations and reduce noise which instead would travel through the vehicle's body.

### Comparison of Vibration Level at the Bottom Cabinet

— TS-WH500A
— Conventional Type
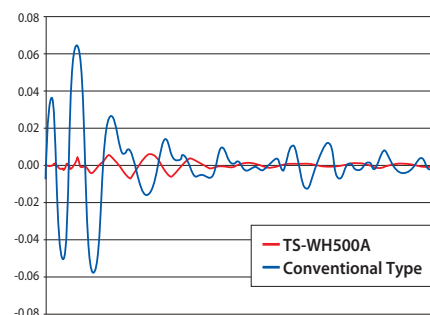
Unnecessary vibrations are drastically decreased.

### Easy & Flexible Installation

The TS-WH500A will fit easily in a wide range of vehicle applications (compact and subcompact vehicles, hybrid vehicles, trucks and SUVs, etc.) without sacrificing performance or sound quality.

## Specifications

| | TS-WH500A |
|---|---|
| Size | 18 cm x 10 cm x 2 |
| Max. Music Power (Nominal) | 150 W* (50 W**) |
| Frequency Response | 20 Hz to 200 Hz |
| Sensitivity (In Car/1 W) | 98 dB |
| Impedance | 4 Ω |

*Maximum output power   ** Nominal output power*

# SUBWOOFERS

## TS-WX305T  [ 1,300 W MAX. ]

**30 cm (12") Bass-Reflex Tube Type Subwoofer**
• Dimensions (W x H x D): ø344 mm x 669 mm

## TS-WX305B  [ 1,300 W MAX. ]

**30 cm (12") Bass-Reflex Subwoofer**
• Dimensions (W x H x D): 500 mm x 379 mm x 280 mm

## Key Selling Points

- **High power and loud sound are achieved by incorporating a long voice coil and large magnetic circuit.**
- **Instantly installable — there's no need to make an enclosure for the subwoofer.**

## TS-WX120A  [ 150 W MAX.† ]

**20 cm x 13 cm Sealed Active Subwoofer**
• Dimensions (W x H x D): 280 mm x 70 mm x 200 mm

*† Output power*

## TS-WX210A  [ 150 W MAX.† ]

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

*† Output power*

## Key Selling Points

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

# Technology of TS-WX305T and TS-WX305B

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

**Urethane Rolled Edge with High Compliance**

### Cone Body with Blended Fiber
The fiber material blended into the drive cone improves sound response.

**Microscopic View**
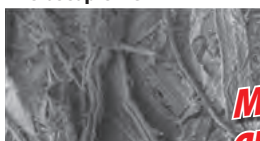
*Cone body with fiber*

*More Rigid Cone and Louder Bass!*

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

### Large and Projected York Pole
Extending the yoke pole of the upper part to the upper side maintains symmetry of vertical cone motion, for sound reproduction of great linearity and accuracy.

### Long Voice Coil with Enlarged Wire Diameter and Aluminum Bobbin
Use of thick magnetic wire and an aluminum bobbin ensures excellent durability to withstand high input power.

### Double Stacked High Energy Magnets
With two large magnets, the cone can be driven at high power.

**Previous Model** | **Bass-Reflex Subwoofer**
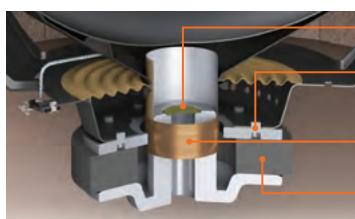
Bigger Pole
Thicker Plate
Thicker Wire Gauge & Wider Wind Width
Bigger Magnet
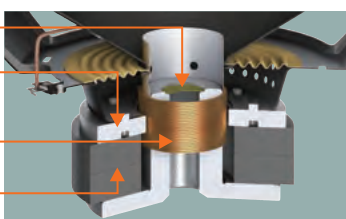
*Louder Bass and More Accurate Sound!*

### Eye-catching and Functional Port (TS-WX305B)

TS-WX305B 1300W MAX

### Installable in Less Space than Previous Subwoofer (TS-WX305B)
Producing high-power sound from an even shallower enclosure depth for easier installation.

Previous Model 192 mm | TS-WX305B 148 mm
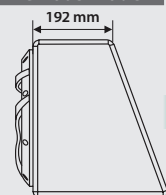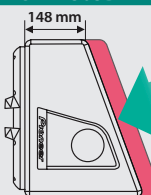
**23% Shallower**
*Easy Installation!*

# Technology of TS-WX120A

**Flexible Installation**
The TS-WX120A has the same width and depth as a previous model, but less height, so it can be easily installed under the seat in various types of cars.

**Previous Model** 75 mm | **TS-WX120A** 70 mm | 70 mm

*Easy Installation!*

## Specifications

| | TS-WX305T | TS-WX305B | TS-WX120A | TS-WX210A |
|---|---|---|---|---|
| Size | 30 cm | 30 cm | 20 cm x 13 cm | 20 cm |
| Max. Music Power (Nominal) | 1,300 W (350 W) | 1,300 W (350 W) | 150 W* (50 W**) | 150 W* (50 W**) |
| Frequency Response | 20 Hz to 125 Hz | 20 Hz to 125 Hz | 30 Hz to 160 Hz | 37 Hz to 200 Hz |
| Sensitivity (In Car/1 W) | 97 dB | 95 dB | 98 dB | 102 dB |
| Impedance | 4 Ω | 4 Ω | — | — |

* Maximum output power   ** Nominal output power

# SPEAKERS

## INDEX

# The Importance of High Sensitivity

## Why is High Sensitivity important for the car speakers?

When you need to turn up the volume from the receiver, the greater the output signal from the receiver's amplifier, the more this signal is distorted, which may cause clipping noise.

### Oscilloscope Images of Sound Distortion

**Distortion becomes too high**

*Proper volume*

*Turned-up volume*

*High volume*
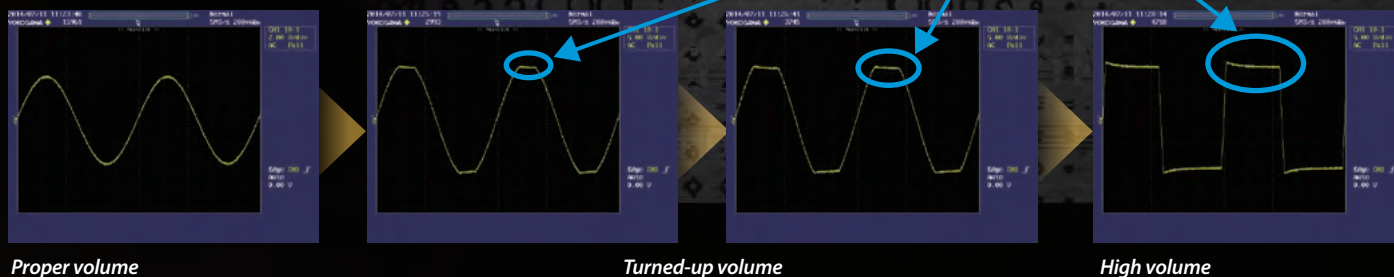
## How do high sensitivity speakers help sound?

Pioneer car speakers sound very clear and sufficiently loud at low receiver volume settings because high sensitivity specifications make the speakers responsive enough to reproduce sound with great precision, even at low receiver amplifier output signal levels.

### Conventional Speaker

Lacks impact

Low SPL

Too noisy

### Pioneer Speaker

Example of TS-G1645R

Good sound!

High SPL

**103 dB***

**102 dB***

**100 dB***

TS-A1686S

TS-R1650S
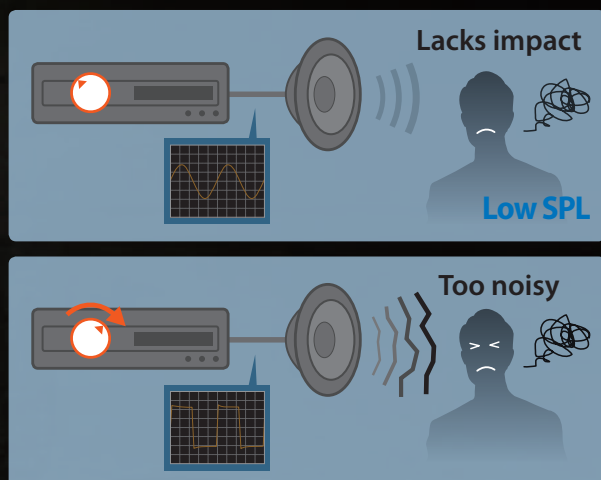
TS-G1645R

*\* The SPL using continuous power of a Pioneer receiver.*

## Pioneer's Sound Concept: Open & Smooth

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

## Pioneering An Ideal

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

## What is "Open & Smooth"?

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

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

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

## Why "Open & Smooth"?

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

## How "Open & Smooth"?

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

### Smoother Off-Axis Response
**Superior Directivity: Pioneer PRS Speakers**

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

Pioneer PRS Speaker

Other Manufacturer's Speaker

Dip
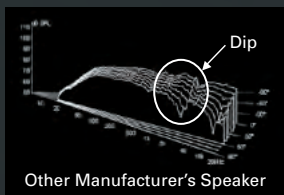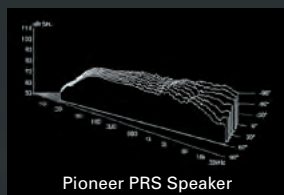
### Low Crossover Frequency
**Wider Response, Lower Crossover Point**

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

Pioneer's Tweeter Reproduction

General Midrange Frequency Response Curve

General Tweeter Frequency Response Curve
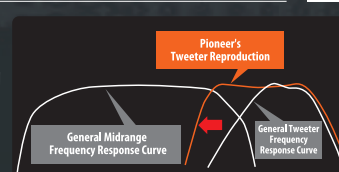
### Low Distortion

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

## Pioneer Official 3D Hologram

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

Green images of 3D hologram logo

As seen from above, at an angle

As seen from directly in front

Orange color line

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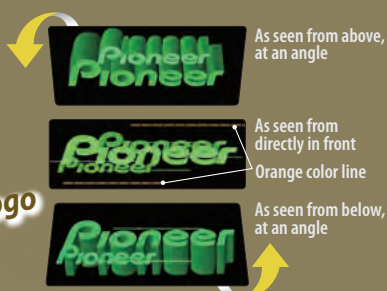
* In this Dealer Reference Guide, particular speakers and 3D hologram logo appear as in examples below. The product that has a 3D hologram sticker attached to its packaging carton features this logo on product page. Please see product page for more details.

**TS-A6996S**  650 W MAX.  3D HOLOGRAM

**6" x 9" 5-Way Speaker**

MULTILAYER MICA MATRIX CONE

High Dynamic Range

166.6  85  117.5  153  222

**Pioneer**
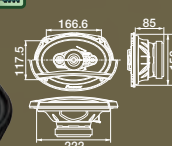
# TS-C172PRS

**17 cm Component Speaker Package**

OPEN & SMOOTH™

ø158
ø142
67

36.6
55
ø55
ø47
52.5
47
22.4
56.7
37
40.2

91.3
133.8
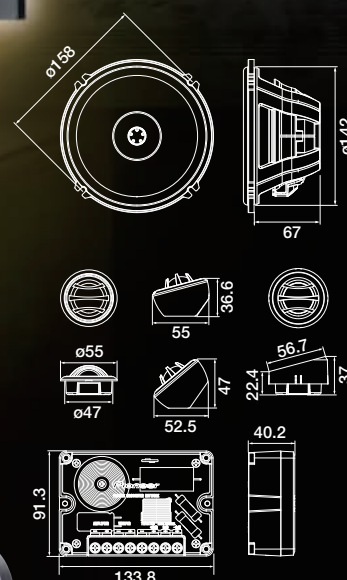
## TS-C132PRS

**13 cm Component Speaker Package**

97
ø123
57.3

36.6
55
ø55
ø47
52.5
47
22.4
56.7
37
40.2

91.3
133.8
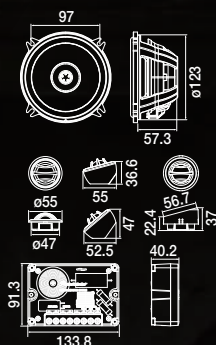
## TS-S062PRS

**66 mm Component Midrange Speaker**

ø64
ø74
32

**With Back Chamber**

ø69
42.2
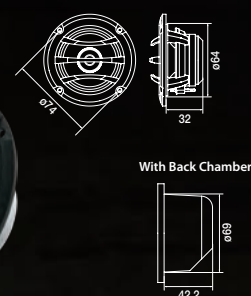
## Key Selling Points

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

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

## PRS Speaker Cut View — Tweeter

**Smooth Off-Axis Response**

**Soft-Dome Diaphragm**
The FEM (Finite Element Method) designed dome allows wide sound dispersion with flat & even response.

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

**Low Distortion**

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

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

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

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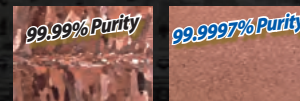
**Lower Crossover Frequency**

**28 mm Large Sized Diaphragm**

**Main Magnet**

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

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

99.99% Purity — OFC

99.9997% Purity — PCOCC®

## PRS Speaker Cut View — Woofer

**High Linearity Sound**
Linear Moving Force System for ultra low distortion and high definition in bass sound.

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

**AL/Brass Dual Metal Center Plug**
Two different metals combine to reduce resonance.

**Voice Coil with Short-Winding Length**
Short voice coil (underhung design) provides maximum control with very light weight, providing high sensitivity and superior musical detail.

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

**2nd Generation Multi-Layer IMX (Injection Molded Matrix) Cone**
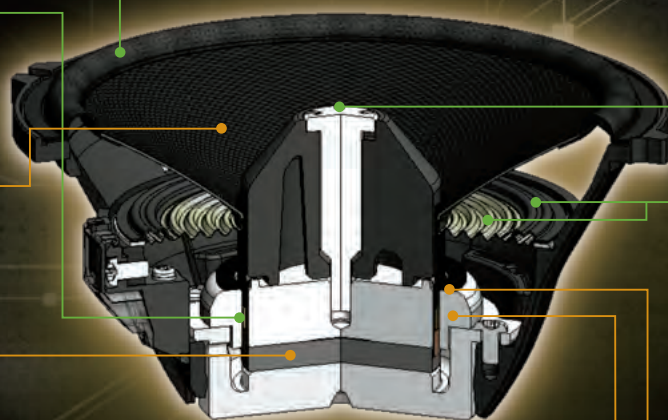
**Inside Magnetic Type with Neodymium Magnet**

**Spider Displacement of Static Load**

Load (N) / Displacement (mm)
— Conventional spider
— PFSS

TS-C172PRS

67 mm (TS-C172PRS/ TS-C171PRS)

73.4 mm (TS-C172PRS)

122 mm (TS-C171PRS)

Conventional Model (TS-C171PRS)

**Installation Capability Improvement!!**

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

**Low Distortion**

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

**Overhung Top Plate**
Focuses the magnetic field towards the voice coil.

# TS-W252PRS

**25 cm (10") Component PRS Subwoofer**

ø255    178    ø238
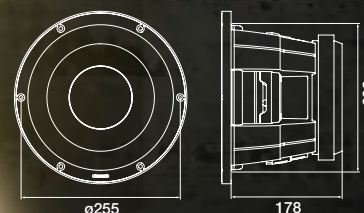
## Key Selling Point

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

## TS-W252PRS Cut View

**Corrugated Surround**
Aramid Fiber (Conex) with Rubber Coating

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

**Block Terminal (Gold-Plated)**
*Accepts up to 4 AWG Cable

**Overhung (Thick) Plate 35 mm**

**Short Voice Coil**

**Sound Quality and Reliability**
Rigid and Light weight Cone and Cap structure realizes both reliability and high speed sound.

**Three layer design creates feather-weight cone with exceptional strength**
■ Aramid Fiber surface layer
■ Foamed PP core
■ Glass Fiber reinforcement layer

**Progressive Flex Suspension System (PFSS)**
It delivers the detail and fast response required, but when the big crescendo hits, it provides the precise control as well as the long excursion required for exceptional sound quality.

**Massive 75 mm Diameter Voice Coil**

**AL-Diecast Basket**
Eliminates ringing and unwanted resonances.

### Harmonic Distortion Comparison

**TS-W252PRS**
Frequency Response, Magn dB re 20.00 μPa
Reduce Harmonic Distortion
10  20  50  100  200  500  1,000  2,000  5,000  10,000  20,000  Hz

**Conventional Subwoofer**
Frequency Response, Magn dB re 20.00 μPa
Harmonic Distortion
10  20  50  100  200  500  1,000  2,000  5,000  10,000  20,000  Hz

■ 2nd HD
■ 3rd HD
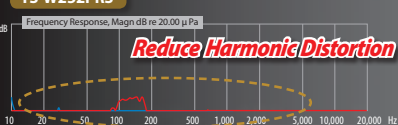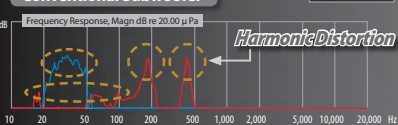
Usually when BL is high, impedance rises, decreasing sensitivity and degrading the mid-bass connection. New PRS improves with application of the appropriate magnetic circuit and adjustments to thickness of Cu ring and voice coil design.

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

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

# TS-D1730C   260 W MAX.

**17 cm Component Speaker Package**

Twaron®
The power of Aramid

OPEN & SMOOTH™

ø158
ø144
65
46
41
ø38 21
47 43
ø50 22
ø42
450   75   450
48
50
1000
26
**Crossover network**

## Key Selling Points

- **Twaron®\* Aramid fiber cone reproduces deep and bold bass & bold vocal sound and also expresses even the most subtle nuances.**
- **Open & Smooth™ sound concept delivers open staging & smooth transition of driver response to provide the ultimate in-car sound.**
- **Included brackets\*\* provide for installation flexibility and wide coverage.**

*Twaron® is a registered trade mark of Teijin Aramid BV.   \*\* Only for TS-D1730C.*

## TS-D1330C   180 W MAX.

**13 cm Component Speaker Package**

Twaron®
The power of Aramid

95
ø121
58
46 41
ø38 21
47 43
ø50 22
ø42
450   75   450
48
50
1000
26
**Crossover network**
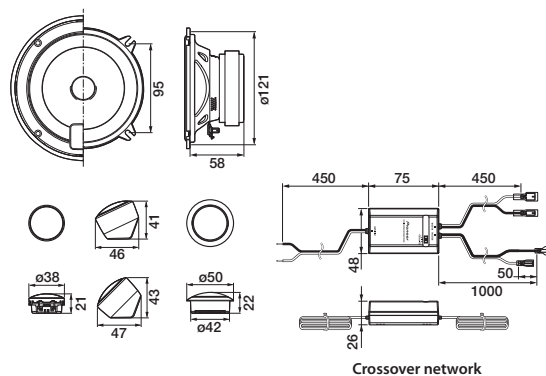
## TS-D6902R — 360 W MAX.
6" x 9" 2-Way Speaker



166.6 · 117.5 · 151 · 89 · 220
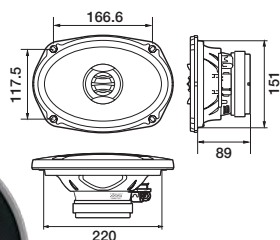
## TS-D1702R — 280 W MAX.
17 cm 2-Way Speaker



110.3 · ø139 · 64.5
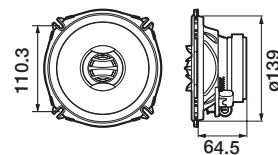
## TS-D1602R — 260 W MAX.
16 cm 2-Way Speaker



ø160 · ø128 · 59
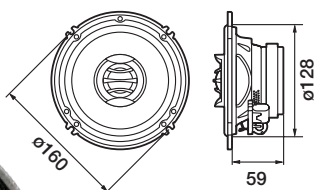
## TS-D1302R — 180 W MAX.
13 cm 2-Way Speaker



95 · ø121 · 57.3
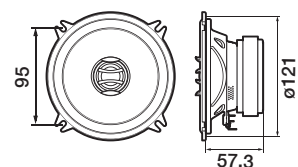
## TS-D1002R — 110 W MAX.
10 cm 2-Way Speaker



ø117 · ø106 · 46.5
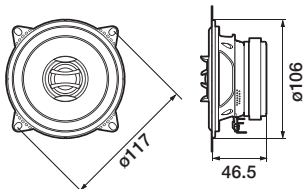
# TS-D Series

## Technology of a D-Series Speaker

### TS-D1730C Cut View

#### ■ Woofer

Bullet Phasing Plug

Cooling & Strength Basket

OFC (Oxygen-Free Copper) Short Ring

Elastic Polymer Surround

The woofer combines a new, rigid Twaron® Aramid Fiber Cone and Elastic Polymer Surround for quicker response and higher sensitivity. It reproduces deep and bold bass & bold vocal sound.

Twaron® Aramid Fiber Cone

*Deeper Bass & Bold Vocal*

*Super Tough*
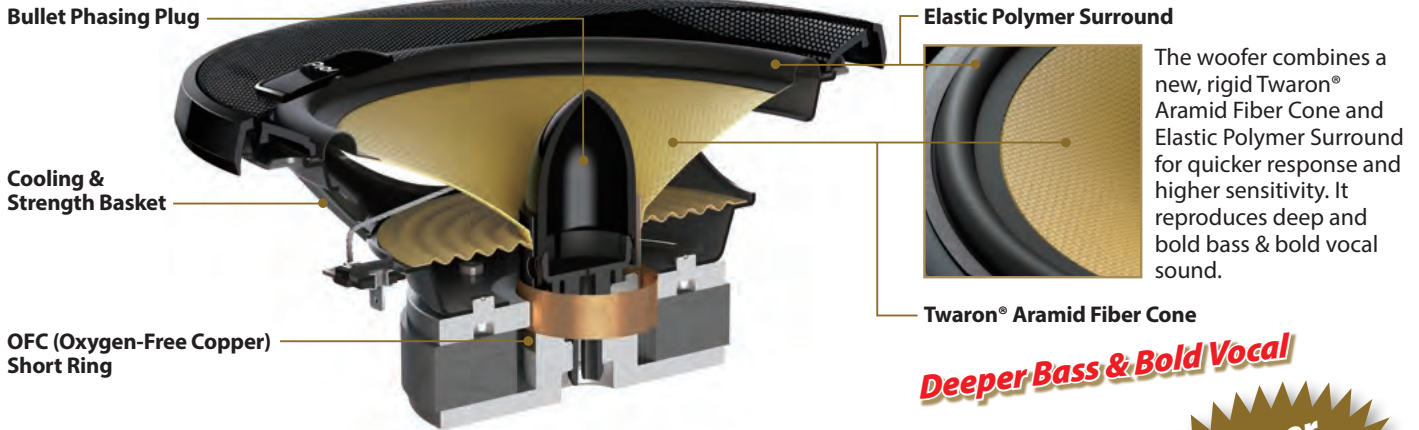
#### Twaron®* Aramid Fiber Cone

**Twaron®**
The power of Aramid

The new cone on the woofer of the Pioneer TS-D component offers a variety of improvements for optimal performance and phenomenal sound. The aramid fiber cone is constructed from Twaron® woven cloth that is hardened and shaped to produce a rigid and durable cone. The woofer offers stiffer dampening for quicker response. The woofer section of the TS-D component produces deep and bold bass & bold vocal sound.

* Twaron® is a registered trade mark of Teijin Aramid BV.
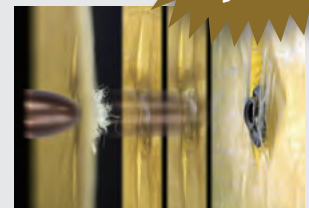
Even bullets cannot penetrate this material, and no other materials match its toughness.

#### ■ Open & Smooth Sound

With the "Open & Smooth" sound of Pioneer D-Series Speakers out on the open road, the journey to more dramatic in-car audio sensations moves every passenger in its natural, dynamic flow.

**OPEN & SMOOTH™**

| Open* | Open staging and sound characteristics enhance the widening effect that extends way beyond the space between speakers. |
| Smooth* | With smooth transitions between mid-bass and tweeter frequency characteristics, sound from these speakers is not marred by crossover frequency dips. |

* For details, please see "Open & Smooth Sound" on page 74.

### A Superior Characteristic of D-Series: Smaller Dips for Wider Angles

**Pioneer**

Smaller dips for wider angles

**Competitor A**

Bigger dips for wider angles
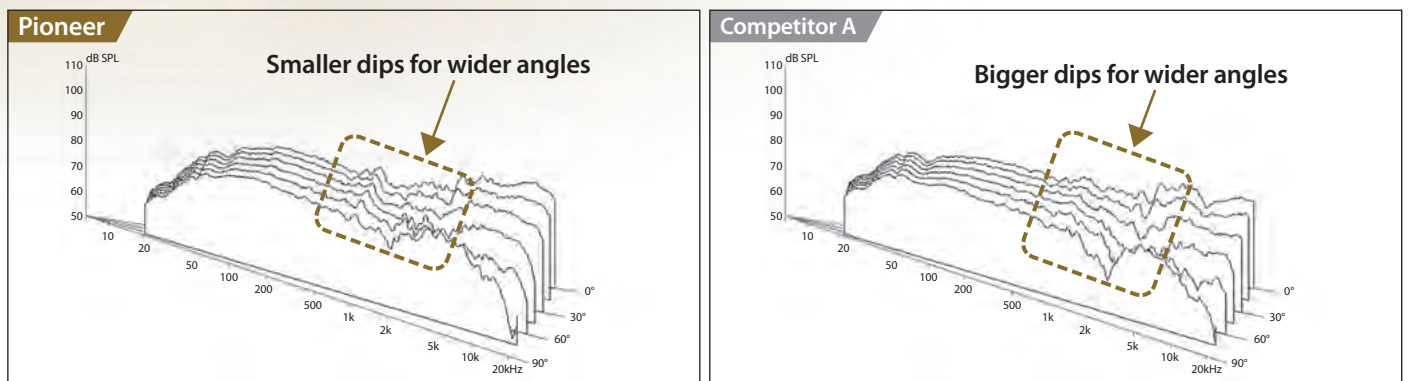
Unlike competitors' speakers, Pioneer D-Series speakers produce more natural sound without big gaps in the high-to-midrange frequency range for various angles.

80

# ◼ Tweeter

**Rear Chamber**



Wide Frequency and Quick Response!

Frequency (Hz)
Frequency response [at 2 V]

— New TS-D
— Previous Model
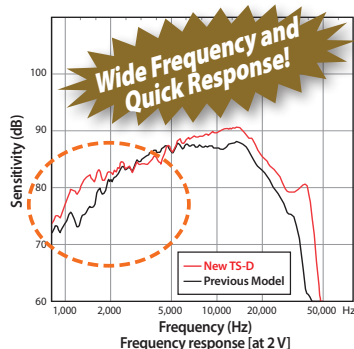
The new D-Series components are capable of wider frequency sound and quicker response in playback than any models that preceded them.

**Light Weight Soft Dome Diaphragm**
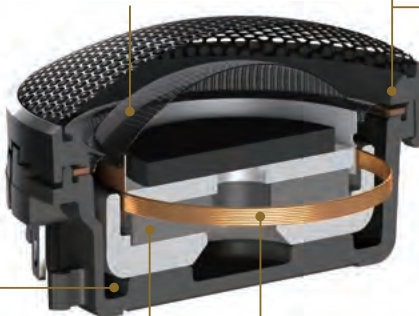
**Neodymium Magnet**

**CCAW (Copper-Clad Aluminum) Voice Coil**

**Optimized Flange Shape**
The flange is optimally shaped for wider directivity and reproduces steady sound.

## ◼ Brackets (for TS-D1730C)

**OEM-like multi-application**

The included bracket can be cut as needed for flexible installation in various types of cars without having to cut vehicle doors.

**23 Pole Tweeter**

**Selectable Angle**

**Flexible Installation**
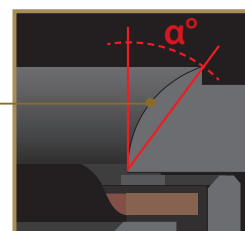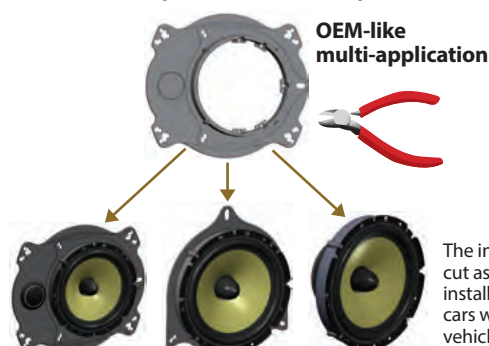
## ◼ Network

Compact body fits small spaces and selectable tweeter level for close matching of the tweeter with the woofer.

## TS-D1602R Cut View

**Smooth Off-Axis Response**

**Wave Guides**
Controls sound dispersion to make sound stage wider in the car.

Improves sound dispersion by Wave Guides construction

SYSNOISE - COMPUTATIONAL VIBRO-ACOUSTICS
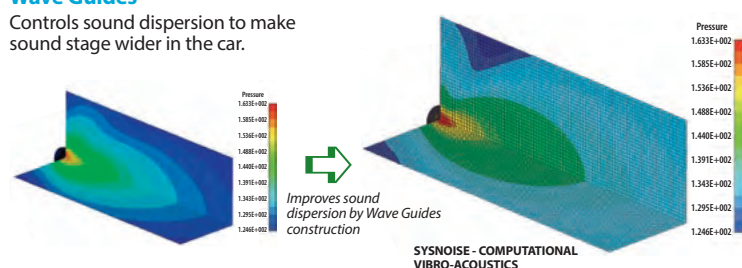
**Lower Crossover Frequency**
- Light Weight Soft-Dome Diaphragm
- High-Power Neodymium Tweeter Magnet
- Rear Chamber

**Low Distortion**
- Thick Woofer Basket
- Large-Sized Woofer Magnet
- Dual-Layer IMX (Injection Molded Matrix) Aramid/Basalt Fiber Composite Cone

**Microscopic Cross Section View**

Melted and Spun

Natural Basalt

**Aramid/Basalt Fiber Skin with Ceramic Coating**
- Reproduces lively sound
- Disperses resonance

**Composite Foamed IMPP**
- Better transience in low and mid-low range
- Better rigidity and velocity
- Light weight for better response
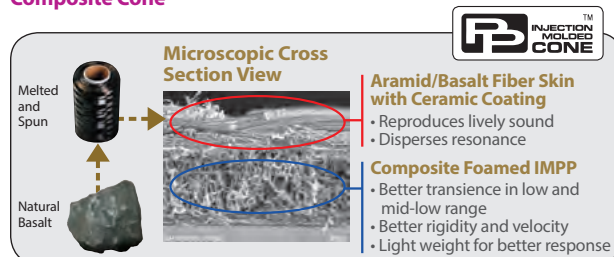
## /Specifications

| | TS-D1730C | TS-D1330C | TS-D6902R | TS-D1702R | TS-D1602R | TS-D1302R | TS-D1002R |
|---|---|---|---|---|---|---|---|
| Size | 17 cm, 23 mm* | 13 cm, 23 mm* | 6" x 9" | 17 cm | 16 cm | 13 cm | 10 cm |
| Max. Music Power (Nominal) | 260 W (60 W) | 180 W (35 W) | 360 W (80 W) | 280 W (60 W) | 260 W (60 W) | 180 W (35 W) | 110 W (25 W) |
| Frequency Response | 27 Hz to 44 kHz | 37 Hz to 44 kHz | 28 Hz to 30 kHz | 30 Hz to 32 kHz | 35 Hz to 32 kHz | 35 Hz to 40 kHz | 40 Hz to 40 kHz |
| Sensitivity (1 W/1 m) | 88 dB | 88 dB | 90 dB | 88 dB | 88 dB | 88 dB | 86 dB |
| Impedance | 4 Ω | 4 Ω | 4 Ω | 4 Ω | 4 Ω | 4 Ω | 4 Ω |
| Crossover Frequency | 4,500 Hz (with -12 dB) | 4,500 Hz (with -12 dB) | 2,800 Hz | 3,200 Hz | 4,000 Hz | 6,000 Hz | 6,000 Hz |
| Mounting Depth | 65 mm 13 mm* | 58 mm 13 mm* | 89 mm | 64.5 mm | 59 mm | 57.3 mm | 46.5 mm |
| Mounting Depth with Mount Adapter | 45 mm** | — | — | — | — | — | — |
| Cut-Out Dimensions | ø144 mm | ø121 mm | 151 mm x 220 mm | ø139 mm | ø128 mm | ø121 mm | ø106 mm |

* Tweeter specification   ** With 6" x 9" tweeter bracket

# TS-A1606C  `350 W MAX.`

**16 cm Component Speaker Package**

MULTILAYER MICA MATRIX CONE™

High Dynamic Range

ø178 | 54
ø158 | ø144
ø35 | 20
ø42 | 19
41 | 46
300 | 37
450 | 66 | 1,000 | 50
24

Crossover network

## Key Selling Points

- Deeper bass and clearer high frequencies sound reproduction is realized with higher dynamic range for greater listening experiences.
- With the balanced combination of the parts, higher power handling ability is realized for more impactful sound and vibrant music playback (Max Power increased for TS-A1676S and 6"x 9" models).
- High-quality appearance and universal design enhance the vehicle interior. High durability can withstand even severe use (fully covered mesh grille included for 6"x 9" models).

# TS-A1306C  `300 W MAX.`

**13 cm Component Speaker Package**
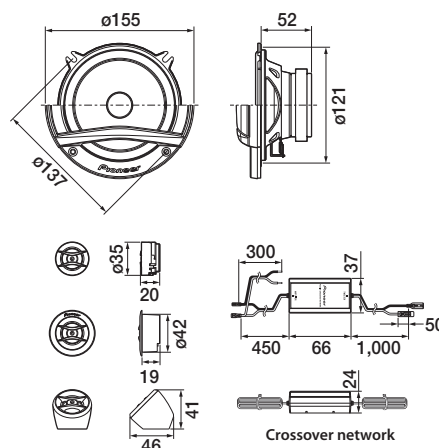
MULTILAYER MICA MATRIX CONE™

High Dynamic Range

ø155 | 52
ø137 | ø121
ø35 | 20
ø42 | 19
41 | 46
300 | 37
450 | 66 | 1,000 | 50
24

Crossover network

## TS-A6996S — 650 W MAX.
3D HOLOGRAM
**6" x 9" 5-Way Speaker**
MULTILAYER MICA MATRIX CONE
High Dynamic Range
166.6 · 85 · 117.5 · 153 · 222
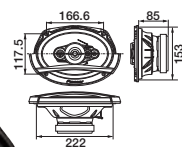
## TS-A6986S — 600 W MAX.
3D HOLOGRAM
**6" x 9" 4-Way Speaker**
MULTILAYER MICA MATRIX CONE
High Dynamic Range
166.6 · 84 · 117.5 · 153 · 222
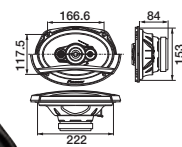
## TS-A6976S — 550 W MAX.
3D HOLOGRAM
**6" x 9" 3-Way Speaker**
MULTILAYER MICA MATRIX CONE
High Dynamic Range
166.6 · 84 · 117.5 · 153 · 222
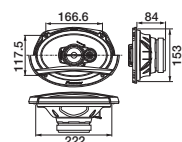
## TS-A6966S — 420 W MAX.
3D HOLOGRAM
**6" x 9" 3-Way Speaker**
MULTILAYER MICA MATRIX CONE
High Dynamic Range
166.6 · 71 · 117.5 · 153 · 222
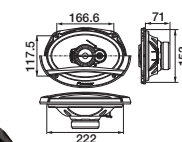
## TS-A1686S — 350 W MAX.
3D HOLOGRAM
**16 cm 4-Way Speaker**
MULTILAYER MICA MATRIX CONE
High Dynamic Range
54 · ø144 · ø158
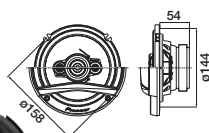
## TS-A1676S — 320 W MAX.
3D HOLOGRAM
**16 cm 3-Way Speaker**
MULTILAYER MICA MATRIX CONE
High Dynamic Range
44 · ø128 · ø142
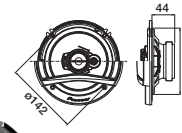
## TS-A1376S — 300 W MAX.
**13 cm 3-Way Speaker**
MULTILAYER MICA MATRIX CONE
High Dynamic Range
53 · ø121 · ø137
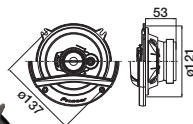
## TS-A6886R — 350 W MAX.
**6" x 8" 4-Way Speaker**
MULTILAYER MICA MATRIX CONE
High Dynamic Range
61 · 126 · 133 · 106.7 · 191
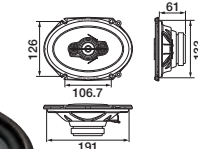
## TS-A4676R — 200 W MAX.
**4" x 6" 3-Way Speaker**
MULTILAYER MICA MATRIX CONE
High Dynamic Range
43 · 76 · 95 · 133 · 153
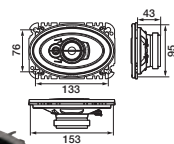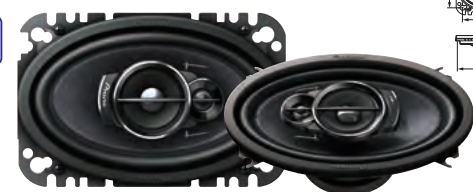
## TS-A4633I — 200 W MAX.
**4" x 6" 3-Way Speaker**
MULTILAYER MICA MATRIX CONE
High Dynamic Range
46 · 73 · 95 · 123 · 153
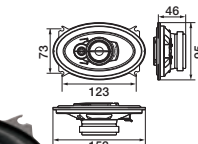
## TS-A2013i — 500 W MAX.
**20 cm 3-Way Speaker**
INJECTION MOLDED CONE
High Dynamic Range
143 · ø186 · ø202 · 89
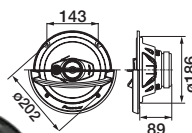
## TS-A2503i — 420 W MAX.
**25 cm 3-Way Speaker**
INJECTION MOLDED CONE
High Dynamic Range
ø236 · ø255 · 115
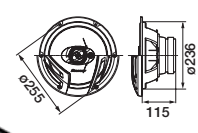
# TS-A Series

## Technology of an A-Series Speaker

### TS-A1606C Cut View

- Quality Design Flange
- Wave Guide Focusing Design
- Light Weight Diaphragm
- Sound Absorbing Material
- Large Cavity
- Neodymium Magnet
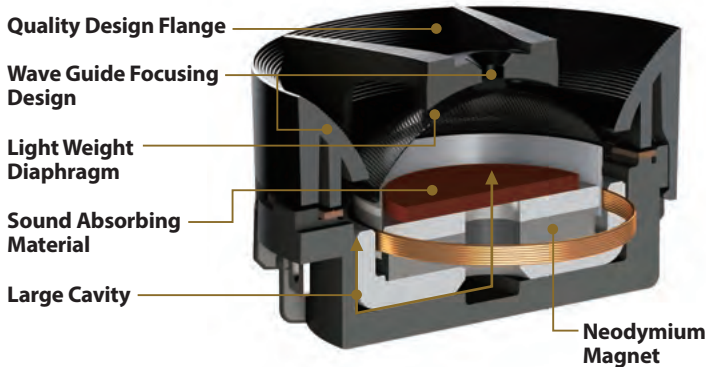
### Installation Flexibility — Tweeter Mounting Options

**Flush Mount Type**     **Slant Type**     **Custom-Fit Type**

The flexible three-way installation tweeter disperses sound more widely with superior control, providing listeners with the best sound under all conditions, regardless of listening position or car.

### External Passive Crossover Network

An external crossover network takes optimal advantage of woofer and tweeter sound characteristics.

### P.F.S.S. Spider*

Achieves the best balance between sound quality and high durability. This system realizes ideal sound reproduction.

*\* For the detailed information, please see the column on the next page.*

- Quality Design Grille
- Elastic Polymer Surround
- Center Cap
- Dustproof Mesh
- Voice Coil: High Heat-Resistant Wire

### Multilayer Mica Matrix Cone

Consistently maintains bass quality even at high input.

### Microscopic Image of Multilayer Mica Matrix Cone

A surface containing mica properly maintains the cone's superior rigidity and internal loss.
The back makes excellent use of light, water-resistant material.

MULTILAYER MICA MATRIX CONE ™

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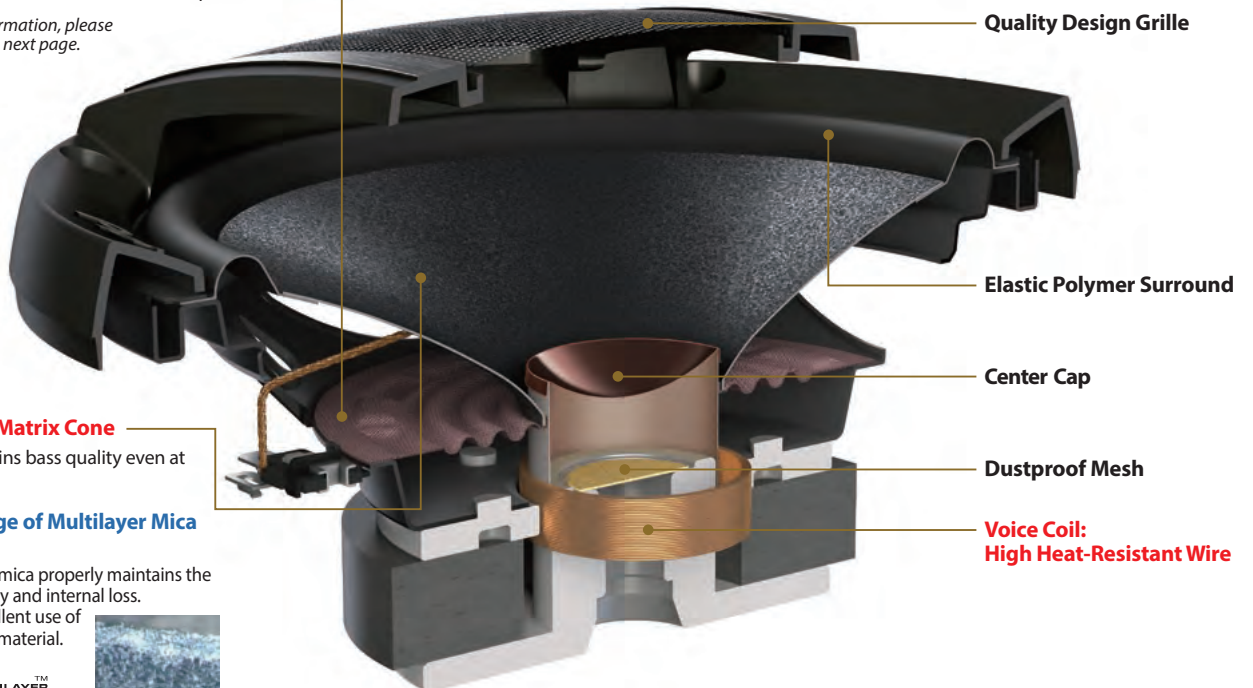
## Solid Bass Sound

Various materials were carefully combined to develop a diaphragm of extra lightness and rigidity to reproduce sound clearly with outstanding responsiveness, sensitivity and a suitable degree of internal loss.

**Flexural Rigidity Ratio** — Ideal

- 0.3
- 0.25
- 0.2

**10% Up**   New

Current

High Rigidity! (by adjusting mixed material and density)

**Deformation**
URES (mm)   Large
- 4.000e-003
- 3.667e-003
- 3.333e-003
- 3.000e-003
- 2.667e-003
- 2.333e-003
- 2.000e-003
- 1.667e-003
- 1.333e-003
- 1.000e-003
- 6.667e-004
- 3.333e-004
- 0.000e-000   Small

Current

New

---
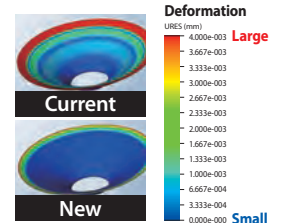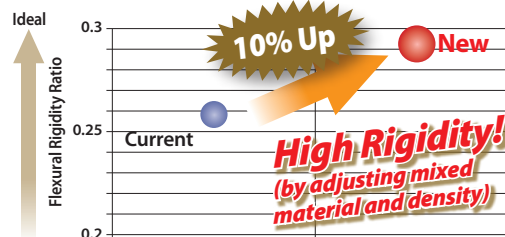
## Deeper Bass Sound

Compared to the former models, the new A-Series can reproduce deeper bass sound, bringing you more impressive experiences of sound and music.

# Technology of an A-Series Speaker

## TS-A6996S Cut View

### Increased Max Power

Max music power resulting from the combination of optimized parts (indicated by red letters on the diagram below) exceeds the power of the previous A-Series models.

*Note: The following explanations are not for TS-A2013i and TS-A2503i.*

#### Example

| Previous | TS-A6995S (600 W MAX.) | → | New | TS-A6996S (650 W MAX.) |
| Previous | TS-A1675S (300 W MAX.) | → | New | TS-A1676S (320 W MAX.) |

### Hard Type Direct Drive Diaphragm

TS-A6996S | TS-A6986S

Prevents deformation caused by excessive input.

#### Tweeter with Direct Drive Diaphragm (TS-A6996S & TS-A6986S)

**Current**
(6" x 9" & 4-/5-Way Models)

Diaphragm
Adhesive
Voice Coil Bobbin
Coil

Winded to voice coil bobbin. Vibration is transmitted to diaphragm via voice coil bobbin and adhesive.

**New**
(6" x 9" & 4-/5-Way Models)

Center Diaphragm
Outer Diaphragm
Coil
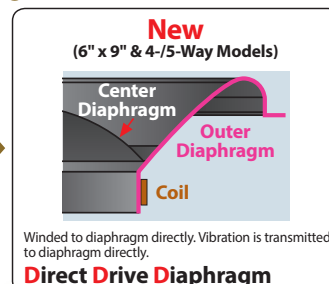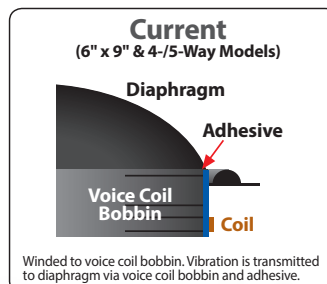
Winded to diaphragm directly. Vibration is transmitted to diaphragm directly.

**Direct Drive Diaphragm**

### Multilayer Mica Matrix Cone
All Models

Consistently maintains bass quality even at high input.

### Elastic Polymer Surround

### P.F.S.S. Spider
TS-A1606C | TS-A6996S | TS-A6986S
TS-A6976S | TS-A6966S | TS-A1686S

Achieves the best balance between sound quality and high durability. This system realizes ideal sound reproduction.

### Voice Coil: High Heat-Resistant Wire
All Models

Incorporating optimized wire material and diameter.

### Quality Design Grille & Flange

### Cooling Basket with Air Vents
TS-A6996S | TS-A6986S | TS-A6976S | TS-A6966S

Air vents under the spider make movement smooth and cool the body.

### Fully Covered Mesh Grille for 6" x 9" Models

Prevents dust from entering speaker body interior.

## Progressive Flex Suspension System
### (P.F.S.S. patented technology, for 6" x 9" models and TS-A1686S)

With exclusive material inherited from Pioneer's high-end PRS Series, this system realizes ideal sound reproduction. At a small input, its soft part makes movement smooth and reproduces clear sound and at excessive input, its hard part controls excessive vibration and prevents movement error.

Load
— Traditional
— P.F.S.S.
Displacement

**Excessive input** (irregular situation)
**Controls excessive vibration**

**High Durability!!** Maximizes power

**Small input** (usually for listening)
**Easy to move!**

**Low resonance frequency!!** Contributes to deep bass sound

Hard part (Hard to move)
Soft part (Easy to move)
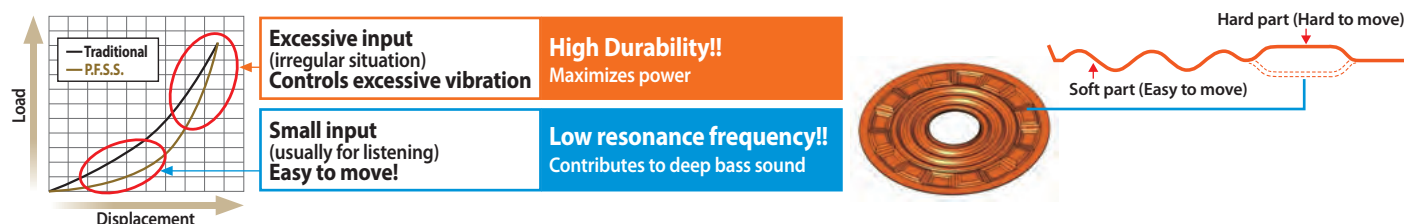
## Specifications

| | TS-A1606C | TS-A1306C | TS-A6996S | TS-A6986S | TS-A6976S | TS-A6966S | TS-A1686S |
|---|---|---|---|---|---|---|---|
| Size | 16 cm 20 mm* | 13 cm 20 mm* | 6" x 9" | 6" x 9" | 6" x 9" | 6" x 9" | 16 cm |
| Max. Music Power (Nominal) | 350 W (60 W) | 300 W (50 W) | 650 W (100 W) | 600 W (100 W) | 550 W (90 W) | 420 W (60 W) | 350 W (60 W) |
| Frequency Response | 32 Hz to 43 kHz | 42 Hz to 42 kHz | 28 Hz to 38 kHz | 27 Hz to 37 kHz | 27 Hz to 24 kHz | 28 Hz to 36 kHz | 32 Hz to 38 kHz |
| Sensitivity (1 W/1 m) | 91 dB | 90 dB | 93 dB | 92 dB | 92 dB | 92 dB | 91 dB |
| Impedance | 4 Ω | 4 Ω | 4 Ω | 4 Ω | 4 Ω | 4 Ω | 4 Ω |
| Mounting Depth | 54 mm 19 mm* | 52 mm 19 mm* | 85 mm | 84 mm | 84 mm | 71 mm | 54 mm |
| Cut-Out Dimensions | ø144 mm | ø121 mm | 153 mm x 222 mm | 153 mm x 222 mm | 153 mm x 222 mm | 153 mm x 222 mm | ø144 mm |

| | TS-A1676S | TS-A1376S | TS-A6886R | TS-A4676R | TS-A4633I | TS-A2013i | TS-A2503i |
|---|---|---|---|---|---|---|---|
| Size | 16 cm | 13 cm | 6" x 8" | 4" x 6" | 4" x 6" | 20 cm | 25 cm |
| Max. Music Power (Nominal) | 320 W (50 W) | 300 W (50 W) | 350 W (60 W) | 200 W (30 W) | 200 W (30 W) | 500 W (80 W) | 420 W (80 W) |
| Frequency Response | 32 Hz to 40 kHz | 40 Hz to 39 kHz | 28 Hz to 39 kHz | 35 Hz to 42 kHz | 35 Hz to 42 kHz | 25 Hz to 28 kHz | 20 Hz to 31 kHz |
| Sensitivity (1 W/1 m) | 90 dB | 89 dB | 91 dB | 88 dB | 88 dB | 91 dB | 92 dB |
| Impedance | 4 Ω | 4 Ω | 4 Ω | 4 Ω | 4 Ω | 4 Ω | 4 Ω |
| Mounting Depth | 44 mm | 53 mm | 61 mm | 43 mm | 46 mm | 89 mm | 115 mm |
| Cut-Out Dimensions | ø128 mm | ø121 mm | 133 mm x 191 mm | 95 mm x 153 mm | 95 mm x 153 mm | ø186 mm | ø236 mm |

* Tweeter specification

## TS-R6951S  400 W MAX.  NEW  3D HOLOGRAM

6" x 9" 3-Way Speaker

MULTILAYER MICA MATRIX CONE™

High Sensitivity

166.6  68  117.5  153  222

## TS-R1750S  250 W MAX.  3D HOLOGRAM

17 cm 3-Way Speaker

MULTILAYER MICA MATRIX CONE™

High Sensitivity

112  47  ø137

## TS-R1650S  250 W MAX.  3D HOLOGRAM

16 cm 3-Way Speaker

MULTILAYER MICA MATRIX CONE™

High Sensitivity

ø142  ø160  40  ø128

## TS-R1350S  250 W MAX.  3D HOLOGRAM

13 cm 3-Way Speaker

MULTILAYER MICA MATRIX CONE™

High Sensitivity

97  ø111  47

## Key Selling Points

- Multilayer Mica Matrix cone design delivers the ultimate listening experience with remarkable efficiency to energize loud, clear sound performance.
- Aggresive grille and red flange design create a strong impression even long after installation.
- Extra screw holes for easier installation for various cars.
- Mesh grill fully covered to keep out dust. Unique design suits those who dare to stand out when it comes to car lifestyle. (TS-R6951S)

# Technology of an R-Series Speaker

## TS-R6951S Cut View

**Loud & Aggressive**

**Multilayer Mica Matrix Cone**
Various materials were carefully combined to develop a diaphragm of extra lightness and rigidity to reproduce sound clearly with outstanding responsiveness, sensitivity and a suitable degree of internal loss.

**MULTILAYER MICA MATRIX CONE**™

**Aggressive Grille and Red Flange**

**Microscopic Image of Multilayer Mica Matrix Cone**
A surface containing mica properly maintains the cone's superior rigidity and internal loss. The back makes excellent use of light, water-resistant material.
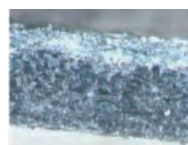
**Fully Covered Mesh Grille**
TS-R6951S
Fully covered mesh grille prevents dust from entering speaker body.

**Progressive Flex Suspension System (P.F.S.S) Spider**
TS-R6951S
Achieves the best balance between sound quality and high durability. This system realizes ideal sound reproduction.

**High Power**

**Voice Coil with Aluminum Bobbin**
Excellent heat dissipation and durability enhance tolerance to high input power.
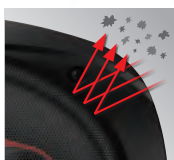
**High Sensitivity**
**Light Weight Rubber Coated Cloth Surround**

## More Flexible Installation
With refined baskets and added screw holes, the TS-R speakers can be installed with greater flexibility in various cars.

**Basket Design**
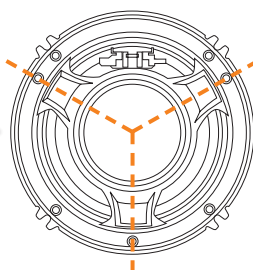
| Conventional Speaker | TS-R1650S | Example of Installable Vehicle |
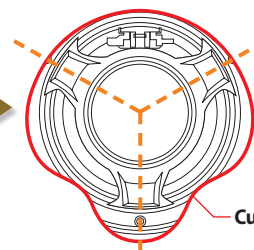
From 4- to 3-basket arm → Installed to → Cut-Out Hole

**Screw Hole**

| Conventional Speaker | TS-R1350S | Conventional Speaker | TS-R1750S |

Four inside screw holes added. → Added screw hole
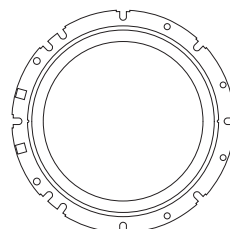
Two outside screw holes added. → Added screw hole
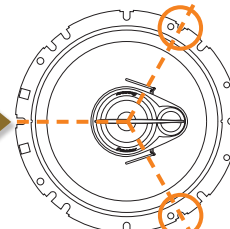
## Specifications

| | TS-R6951S | TS-R1750S | TS-R1650S | TS-R1350S |
|---|---|---|---|---|
| Size | 6" x 9" | 17 cm | 16 cm | 13 cm |
| Max. Music Power (Nominal) | 400 W (50 W) | 250 W (40 W) | 250 W (40 W) | 250 W (35 W) |
| Frequency Response | 31 Hz to 35 kHz | 36 Hz to 31 kHz | 35 Hz to 31 kHz | 44 Hz to 31 kHz |
| Sensitivity (1 W/1 m) | 92 dB | 90 dB | 90 dB | 89 dB |
| Impedance | 4 Ω | 4 Ω | 4 Ω | 4 Ω |
| Mounting Depth | 68 mm | 47 mm | 40 mm | 47 mm |
| Cut-Out Dimensions | 153 mm x 222 mm | ø137 mm | ø128 mm | ø111 mm |

# TS-G1605C  280 W MAX.  3D HOLOGRAM

**16 cm Component Speaker Package**

p.p. INJECTION MOLDED CONE ™

Wide Application

113    39

ø128

ø36

14

37

47

1,200

300    300

Crossover network
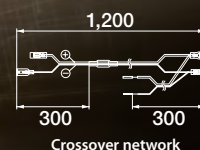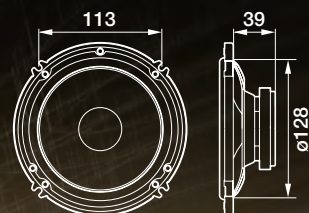


# Key Selling Points

- **Mica-reinforced IMPP cone reproduces natural sound with impressive bass.**
- **Shallow mounting depth and comprehensive lineup allow for wide applications.**
- **Universal cosmetic design suits a variety of automobile interior colors.**

## TS-G1645R  250 W MAX.
**16 cm 2-Way Speaker**

p.p. INJECTION MOLDED CONE ™ | Wide Application | 3D HOLOGRAM

113    38    ø128



## TS-G1345R  250 W MAX.
**13 cm 2-Way Speaker**

p.p. INJECTION MOLDED CONE ™ | Wide Application | 3D HOLOGRAM

97    44    ø121



## TS-G1045R  210 W MAX.
**10 cm 2-Way Speaker**

p.p. INJECTION MOLDED CONE ™ | Wide Application | 3D HOLOGRAM

43    ø106    ø117



## TS-G1615R  230 W MAX.
**16 cm Dual-Cone Speaker**

p.p. INJECTION MOLDED CONE ™ | Wide Application | 3D HOLOGRAM

113    39    ø128



## TS-G1315R  230 W MAX.
**13 cm Dual-Cone Speaker**

p.p. INJECTION MOLDED CONE ™ | Wide Application | 3D HOLOGRAM

97    44    ø121



## TS-G1015R  190 W MAX.
**10 cm Dual-Cone Speaker**

p.p. INJECTION MOLDED CONE ™ | Wide Application | 3D HOLOGRAM

43    ø106    ø117



## TS-G6932I  300 W MAX.
**6" x 9" 2-Way Speaker**

p.p. INJECTION MOLDED CONE ™ | Wide Application | 3D HOLOGRAM

166.6    67    153    117.5    222



## TS-G4645R  200 W MAX.
**4" x 6" 2-Way Speaker**

p.p. INJECTION MOLDED CONE ™ | Wide Application | 3D HOLOGRAM

42    133    153

# Technology of a G-Series Speaker

## TS-G1605C Cut View

**Poly-Propylene Center Cap**

**Rubber Coated Cloth Surround**

**Mica Reinforced IMPP Cone**
The mica is mixed into the cone material in precise proportions to optimize cone rigidity and to reproduce impactful bass.

**Poly-Imide Voice Coil Bobbin**

**Optimized Magnetic Circuit**

**Heat Resistant Voice Coil**

*Speedy Response!*

*Vivid Sound!*

**PEI (Poly-Ether Imide) Balanced Dome Tweeter with Neodymium Magnet and Magnetic Fluid**

## TS-G1645R Cut View

**Rubber Coated Cloth Surround**

**Mica Reinforced IMPP Cone**
The mica is mixed into the cone material in precise proportions to optimize cone rigidity and to reproduce impactful bass.

**OFC Short Ring**
Reduces a distortion, and expands a high frequency range.

**Poly-Imide Voice Coil Bobbin**

**Optimized Magnetic Circuit**

**Heat Resistant Voice Coil**

## Specifications

|  | TS-G1605C | TS-G1645R | TS-G1345R | TS-G1045R | TS-G1615R | TS-G1315R | TS-G1015R | TS-G6932I | TS-G4645R |
|---|---|---|---|---|---|---|---|---|---|
| **Size** | 16 cm 30 mm* | 16 cm | 13 cm | 10 cm | 16 cm | 13 cm | 10 cm | 6" x 9" | 4" x 6" |
| **Max. Music Power (Nominal)** | 280 W (45 W) | 250 W (40 W) | 250 W (35 W) | 210 W (30 W) | 230 W (40 W) | 230 W (35 W) | 190 W (30 W) | 300 W (40 W) | 200 W (30 W) |
| **Frequency Response** | 30 Hz to 28 kHz | 26 Hz to 27 kHz | 34 Hz to 25 kHz | 38 Hz to 29 kHz | 30 Hz to 25 kHz | 33 Hz to 24 kHz | 38 Hz to 26 kHz | 27 Hz to 40 kHz | 37 Hz to 26 kHz |
| **Sensitivity (1 W/1 m)** | 89 dB | 89 dB | 86 dB | 84 dB | 90 dB | 88 dB | 86 dB | 90 dB | 86 dB |
| **Impedance** | 4 Ω | 4 Ω | 4 Ω | 4 Ω | 4 Ω | 4 Ω | 4 Ω | 4 Ω | 4 Ω |
| **Mounting Depth** | 39 mm | 38 mm | 44 mm | 43 mm | 39 mm | 44 mm | 43 mm | 67 mm | 42 mm |
| **Cut-Out Dimensions** | ø128 mm | ø128 mm | ø121 mm | ø106 mm | ø128 mm | ø121 mm | ø106 mm | 153 mm x 222 mm | 95 mm x 153 mm |

*\* Tweeter specification*

## TS-6975 V3  550 W MAX.  NEW  3D HOLOGRAM

*Champion series*

**6" x 9" 3-Way Champion Series Speaker**

166.6  92  117.5  151  220
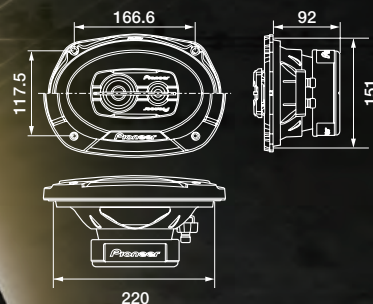
## Key Selling Points

- **Technologies inherited from Champion Series Speakers help reproduce bass with clarity, stability and presence that other 6" x 9" speakers typically cannot achieve. (TS-6975 V3/TS-6965 V3)**
- **Tougher at handling more high power input at higher volume without compromising higher quality. (TS-6975 V3/TS-6965 V3)**
- **Prestige atmosphere products advance the Champion Series Speakers heritage of toughness that's even reflected in their appearance.**
- **Although designed for 16 cm installation, the speaker has a cone that's actually 17 cm, for more powerful sound. (TS-1675 V2)**

### TS-6965 V3  450 W MAX.  NEW  3D HOLOGRAM

**6" x 9" 3-Way Champion Series Speaker**

166.6  84  117.5  151  220

### TS-1675 V2  300 W MAX.  3D HOLOGRAM
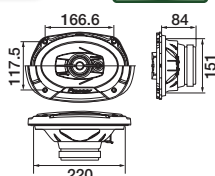
**16 cm* 3-Way Champion Series Speaker**

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

109.6  Ø128  58
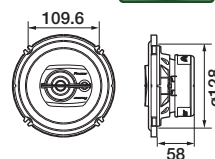
# Technology of a Champion Series Speaker

## TS-6975 V3 Cut View

Polycarbonate Sub-Grille

PI Film Spider

Film Cone Tweeter

**Deep and Rigid Bass** | **High Sensitivity**
TS-6975 V3 | TS-6965 V3 | TS-1675 V2

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

**Gold-Plated Screw Terminal**
TS-6975 V3 | TS-6965 V3* | TS-1675 V2*
* Not screw-type terminal

**Rubber Magnet Cover***
*Magnet cover is removable.

**High Sensitivity**
TS-6975 V3

**PI Film Cone with Urethane Surround**
New PI (Polyimide) cone has great characteristics of rigidity and durability that help to reduce harshness and enhance clarity of sound.

TS-6975 V3 | TS-1675 V2
**Copper-Clad Aluminum Wire Voice Coil**
Lightweight Copper-Clad Aluminum Wire Voice Coil allows for faithful reproduction of louder sounds.

TS-6975 V3 | TS-6965 V3 | TS-1675 V2
**Large Magnetic Circuit for High-Power Drive**

## Deep and Rigid Bass

**Dual Layer Urethane Surround**
TS-6975 V3 | TS-6965 V3 | TS-1675 V2
Improves cone stiffness. Greatly reduces unnecessary resonance that can compromise sound quality.

### ■ Champion Series Speaker Cross Section Detail

**Closeup**

**Upper Urethane Surround**
Suppresses unwanted peaks and dips in the high-frequency range.

**Lower Urethane Surround**
Reinforces strength and durability.

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

Unnecessary Resonance

*Degree of transformation at 300 Hz*

0.5 mm
0 mm
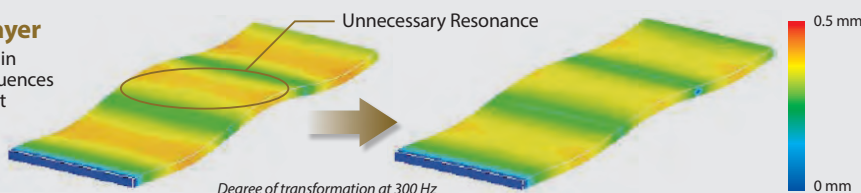
**New Dual Layer**
Minimizes unnecessary cone resonance for higher cone durability and clearer sound.

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

**TS-A1683S** | **TS-1675 V2**

Cut-Out Hole : 128 mm ⟷ Cut-Out Hole : 128 mm

**Same installation capability But...**
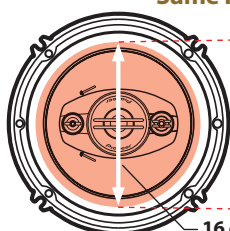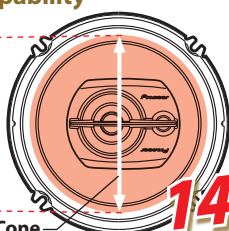
16 cm Cone | 17 cm Cone

**14% Bigger Cone Size**

## Specifications

| | TS-6975 V3 | TS-6965 V3 | TS-1675 V2 |
|---|---|---|---|
| Size | 6" x 9" | 6" x 9" | 16 cm |
| Max. Music Power (Nominal) | 550 W (80 W) | 450 W (80 W) | 300 W (50 W) |
| Frequency Response | 28 Hz to 27 kHz | 23 Hz to 26 kHz | 35 Hz to 20 kHz |
| Sensitivity (1 W/1 m) | 92 dB | 91 dB | 92 dB |
| Impedance | 4 Ω | 4 Ω | 4 Ω |
| Mounting Depth | 92 mm | 84 mm | 58 mm |
| Cut-Out Dimensions | 151 mm x 220 mm | 151 mm x 220 mm | ø128 mm |

# TS-B350PRO

8.7 cm (3.5") Bullet Tweeter    `250 W MAX.`

# TS-B400PRO

10 cm (4") Bullet Tweeter    `500 W MAX.`

# TS-M650PRO

17 cm (6.5") Midbass    `500 W MAX.`

# TS-M800PRO    `700 W MAX.`

20 cm (8") Midbass

# TS-6900PRO    `600 W MAX.`

6" x 9" 2-Way Speaker

**Open Show**
*Sound driven with higher power,
sensitivity and passion for the world to hear*

**P.R.O.**
Pioneer
Reference for
Open show

## Key Selling Points

- Open Show sound: ultra-high power handling and sensitivity of sound reproduction.
- Open Show design: edgy, dynamic appearance.
- Customize your system with any combination of Midbass, Tweeter and 6" x 9".

## 6" x 9" 2-Way Speaker: TS-6900PRO Cut View

**600 W Max.**
**92 dB!!**

- Copper-Clad Aluminum Wire Voice Coil
- Optimized Bullet and Horn Shape
- Large Magnet & High-Power Motor Assembly
- Optimum Blended Pulp Cone
- Terminal with HPF (-12 dB/oct.)
- OFC Short Ring
- Dual-Layer Urethane Surround
- Upper Urethane Surround
- Lower Urethane Surround
- Large Magnet & High-Power Motor Assembly
- Dust-Proof Protection
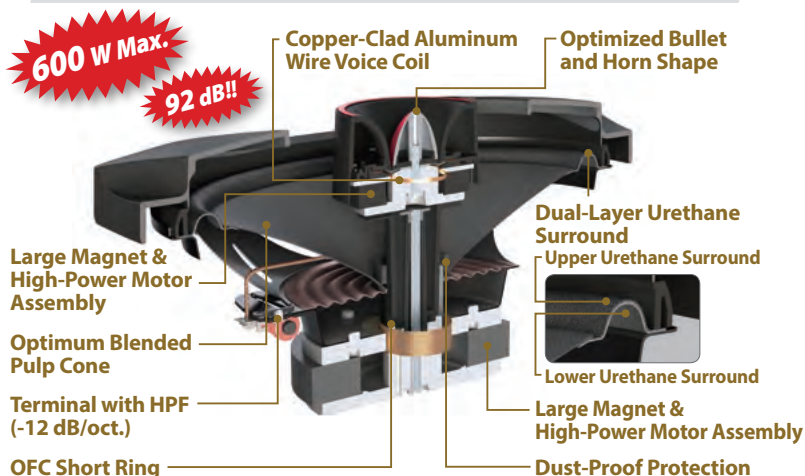
## Specifications

|  | TS-B350PRO | TS-B400PRO | TS-M650PRO |
|---|---|---|---|
| Size | 8.7 cm | 10 cm | 17 cm |
| Max. Music Power (Nominal) | 250 W (100 W) | 500 W (200 W) | 500 W (110 W) |
| Frequency Response | 3,500 Hz to 27 kHz | 2,800 Hz to 27 kHz | 50 Hz to 18 kHz |
| Sensitivity (1 W/1 m) | 100 dB | 106 dB | 94 dB |
| Impedance | 4 Ω | 4 Ω | 4 Ω |
| Mounting Depth | 44 mm | 68 mm | 81 mm |
| Cut-Out Dimensions | ø75 mm | ø95 mm | ø148 mm |

|  | TS-M800PRO | TS-6900PRO |
|---|---|---|
| Size | 20 cm | 6" x 9" |
| Max. Music Power (Nominal) | 700 W (180 W) | 600 W (100 W) |
| Frequency Response | 40 Hz to 15 kHz | 20 Hz to 40 kHz |
| Sensitivity (1 W/1 m) | 96 dB | 92 dB |
| Impedance | 4 Ω | 4 Ω |
| Mounting Depth | 93 mm | 89 mm |
| Cut-Out Dimensions | ø184 mm | 153 mm x 222 mm |

## TS-S20C — 270 W MAX. — NEW

**3D HOLOGRAM**

**20 mm Component Tweeter**

23  62  ø38  19
ø35  54
450  66  2,500  50
37
24

Grille Mesh — PPS Film Dome Diaphragm
— Flange with Equalizer

— Absorbent
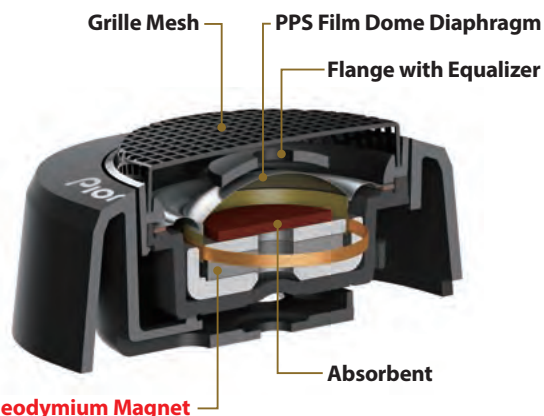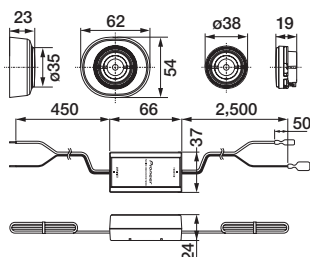
**Neodymium Magnet**
Although the magnet is compact, it creates astonishingly powerful magnetic force.

## Key Selling Points

- **Despite its small body, the TS-S20C pushes sound with an expansive range that retains the essential character of sound reproduced by the TS-S20.**
- **Small body size perfectly fits OEM tweeter location.**
- **The external passive network properly adjusts mid-to-high transitions to maintain smooth sound without crossover frequency dips.**

## Technology of TS-S20C

**Downsized for easy OEM replacement**
Easy-to-install replacement for factory-equipped tweeter in the same position as the original tweeter.

ø38 mm
19 mm

**External passive network**
Controls sound allocation properly and realizes natural, smooth transitions of sound.

**Design**
Includes spacer for on-dash usage. Appealing design exerts distinctive presence, yet is well-suited for car interiors.

## TS-S20 — 200 W MAX.

**3D HOLOGRAM**

**20 mm Component Hard-Dome Tweeter**

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

69  73.5
32.8  85.5
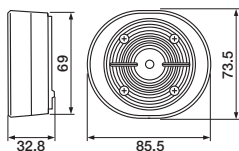
## Specifications

|  | TS-S20C | TS-S20 |
|---|---|---|
| **Size** | 20 mm | 20 mm |
| **Max. Music Power (Nominal)** | 270 W (50 W) | 200 W (50 W) |
| **Frequency Response** | 2,200 Hz to 32 kHz | 3,000 Hz[1]/ 1,200 Hz[2] to 26 kHz |
| **Sensitivity (1 W/1 m)** | 91 dB | 92 dB |
| **Impedance** | 6 Ω | 8 Ω |

*1. With network   *2. Without network

# SPEAKERS

## TS-F1634R    200 W MAX.

**16 cm 2-Way Speaker**

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

113    41    ø128
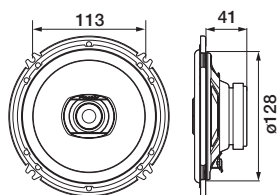
## TS-F1034R    150 W MAX.

**10 cm 2-Way Speaker**

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

43    ø102    117
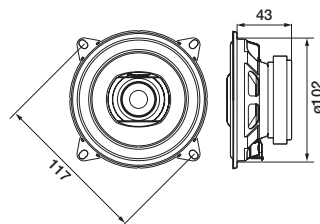
## TS-S250    250 W MAX.

**40 mm High-Power Tune-Up Tweeter**

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

ø44    24
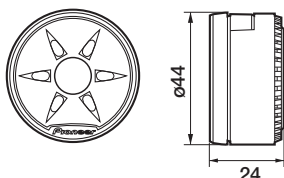
## TS-T110    120 W MAX.

**22 mm Component Hard Dome Tweeter**

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

ø46    ø34    ø45    20
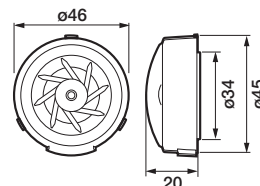
## TS-MR2040  ( 200 W MAX. )



**20 cm Marine-Use 2-Way Speaker**

**FEATURES:**
• White Water-Resistant IMPP Cone Woofer
• Water-Resistant Elastomer Surround
• Glass-Imide Voice Coil Bobbin
• Conex Damper
• 20 mm PI Dome Reflex Horn Tweeter
• High-Quality Corrosion-Resistant Hardware
• Gold-Plated Terminal
• Weather-Proof and Heat-Resistant Resin
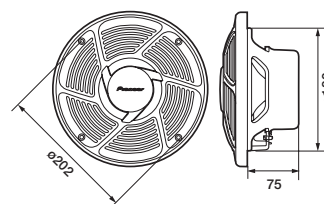
## TS-MR1640  ( 160 W MAX. )



**16 cm Marine-Use 2-Way Speaker**

**FEATURES:**
• White Water-Resistant IMPP Cone Woofer
• Water-Resistant Elastomer Surround
• Glass-Imide Voice Coil Bobbin
• Conex Damper
• 27 mm PEI Balanced Dome Tweeter
• High-Quality Corrosion-Resistant Hardware
• Gold-Plated Terminal
• Weather-Proof and Heat-Resistant Resin
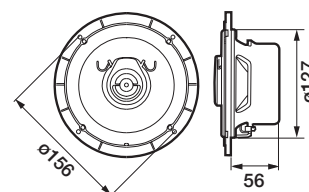
## TS-MR1600  ( 100 W MAX. )



**16 cm Marine-Use Dual-Cone Speaker**

**FEATURES:**
• White Water-Resistant IMPP Cone Woofer
• Water-Resistant Elastomer Surround
• Glass-Imide Voice Coil Bobbin
• Conex Damper
• High-Quality Corrosion-Resistant Hardware
• Gold-Plated Terminal
• Weather-Proof and Heat-Resistant Resin
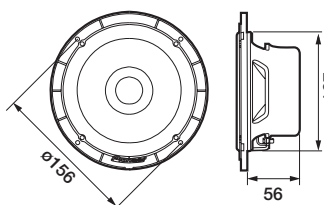
## Specifications

| | TS-F1634R | TS-F1034R | TS-S250 | TS-T110 | TS-MR2040 |
|---|---|---|---|---|---|
| Size | 16 cm | 10 cm | 40 mm | 22 mm | 20 cm |
| Max. Music Power (Nominal) | 200 W (25 W) | 150 W (20 W) | 250 W (50 W) | 120 W (40 W) | 200 W (40 W) |
| Frequency Response | 31 Hz to 16 kHz | 45 Hz to 18 kHz | 6,000 Hz to 40 kHz | 2,500 Hz to 30 kHz | 25 Hz to 30 kHz |
| Sensitivity (1 W/1 m) | 88 dB | 86 dB | 97 dB | 90 dB | 92 dB |
| Impedance | 4 Ω | 4 Ω | 8 Ω | 4 Ω | 4 Ω |
| Mounting Depth | 41 mm | 43 mm | — | — | 75 mm |
| Cut-Out Dimensions | ø128 mm | ø102 mm | — | — | ø183 mm |

| | TS-MR1640 | TS-MR1600 |
|---|---|---|
| Size | 16 cm | 16 cm |
| Max. Music Power (Nominal) | 160 W (30 W) | 100 W (25 W) |
| Frequency Response | 30 Hz to 30 kHz | 30 Hz to 20 kHz |
| Sensitivity (1 W/1 m) | 91 dB | 90 dB |
| Impedance | 4 Ω | 4 Ω |
| Mounting Depth | 56 mm | 56 mm |
| Cut-Out Dimensions | ø127 mm | ø127 mm |

## INDEX

# Accessories Connection Table with AV and Audio Receivers

## ACCESSORY COMPATIBILITY

| | | AVH-X8850BT | AVH-X5850BT AVH-X2850BT AVH-X7850BT | AVH-X4850DVD AVH-X1850DVD AVH-X6850DVD | AVH-XL5750BT AVH-XL4750DVD | AVH-295BT AVH-195DVD MVH-AV285BT MVH-AV185 | AVH-4850BT AVH-3850DVD | DVH-885AVBT | DVH-785AV DVH-345UB | DEX-P99RS | DEH-X9650BT DEH-X8750BT DEH-X7850BT DEH-X6850BT DEH-X4950BT FH-X785BT MVH-X585BT MVH-X395BT MXT-X396BT | DEH-80PRS DEH-9450UB DEH-X9650SD DEH-X7750UI DEH-X4850FD DEH-X3950BT DEH-X2950UI DEH-X5 DEH-X1 FH-X575UI MVH-X285FD MVH-X195UI MVH-X3 | DEH-X1953UB DEH-X1952UB DEH-X1950UB(G) DEH-155MP(G) FH-X385UB MVH-85UB DXT-X1969UB DXT-X196UB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **iPod/iPhone** | CD-IH202 | ✓*1 | | | | | | | | | | | |
| Made for iPod iPhone | CD-IU201S | ✓*2 | | | | | | | | | | | |
| | CD-IU201V | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | | | |
| | CD-IU52 | ✓ | ✓*3 | ✓*3 | ✓*3 | ✓ | | ✓ | | | ✓ | ✓ (Except DEH-80PRS and DEH-9450UB) | |
| | CD-IU51 | | | | | | | ✓ | | ✓ | ✓ | ✓ | |
| **Android** Smartphone Compatible | CD-AH200 | ✓*4 | | | | | | | | | | | |
| | CD-MU200 | ✓*5 | ✓*6 | ✓*6 | ✓*6 | | | | | | ✓*7 | ✓*7 (Except DEH-80PRS and DEH-9450UB) | ✓*7 (Except DEH-155MP(G)) |
| **Built-in MirrorLink™** | CD-MU200 | | | | ✓ | | | | | | | | |
| **Tuner *8** | GEX-2850DVB2*9 | ✓ | ✓ | ✓ | ✓ | | | | | | | | |
| | GEX-1750DVB2*9 | ✓ | ✓ | ✓ | ✓ | | | | | | | | |
| | GEX-1750DVB*9 | ✓ | ✓ | ✓ | ✓ | | | | | | | | |
| | GEX-1550TV*9 | ✓ | ✓ | ✓ | ✓ | | | | | | | | |
| **Back Up Camera** | ND-BC8 | ✓*10 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | DVH-785AV | | | | |
| | ND-BC20PA | ✓*10 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | DVH-785AV | | | | |
| **System** | CD-MC20 | ✓ | ✓ | ✓ | ✓ | | | | | | | | |
| **Remote Control *11** | CD-R320 | | | | | | | | | | ✓ | ✓ | ✓ (Except MVH-85UB) |
| | CD-SR110 | ✓ | ✓ | | AVH-XL5750BT (Except AVH-195DVD and MVH-AV185) | | | ✓ | | | | ✓ | |
| | CD-SR100 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ (Except MVH-85UB) |

Note: Some functions may be limited in terms of remote controllability, even if the receiver and remote control are denoted as compatible in the chart.
*1. Required when AppRadio Mode is in use with iPhone 6 Plus, iPhone 6, iPhone 5s, iPhone 5c, iPhone 5 or 5th generation iPod touch. Requires Apple Lightning Digital AV Adapter and CD-IU52 (sold separately).
*2. Required when AppRadio Mode is in use with iPhone 4/4s or 4th generation iPod touch.
*3. Required when AppRadio Mode USB is in use with iPhone 6 Plus, iPhone 6, iPhone 5s, iPhone 5c, iPhone 5 or 5th generation iPod touch.
*4. Required when AppRadio Mode is in use with Android phone.
*5. Required when Android Auto is in use with Android phone.
*6. Required when AppRadio Mode USB is in use with Android phone.
*7. Required when USB Direct Control is in use with Certain Android phones.
*8. May not be compatible with certain receivers.
*9. The compatibility for each TV Tuner depends on the broadcasting system of your country.
*10. Can display the parking assist guidelines.
*11. Not all functions can be operated using the remote control.

## Audio/Video Receiver Accessories

### ND-BC8
Universal Rear View Camera

### ND-BC20PA
ND-BC2 with Parking Assistant Feature

### GEX-2850DVB2
Dual Diversity DVB-T2 TV Receiver

### GEX-1750DVB2
HD DVB-T2 Digital TV Receiver

### GEX-1750DVB
HD DVB-T Digital TV Receiver

### GEX-1550TV
Analog TV Tuner for PAL/SECAM/NTSC

### CD-MC20
Microphone for Auto EQ and Auto Time Alignment Frequency Band Fine-Tuning

## Remote Controls

### CD-R510
Remote Control
• For use with receiver with Bluetooth wireless technology.

### CD-R320
Optional Remote Control for DEH Series Receivers

### CD-SR110
Steering Wheel Remote Control for Bluetooth Receivers

### CD-SR100
Steering Wheel Remote Control

## Android Connectivity

### CD-AH200
AppRadio Mode App Connectivity Kit for Android

*Note: Please refer to pages 96 and 100 for accessories for connection of Android details.*

## Smartphone Connectivity

### CD-MU200*
USB Interface Cable for AppRadio Mode USB, Android Use with Android Auto™ and MirrorLink™ Devices (USB-USB Cable: 1.5 m/USB-microUSB Cable: 50 cm)

*\* Availability of receiver's features depends on type of smartphone connected.*

## Auxiliary Input Accessory

### CD-RM10
AUX Mini-Plug to Composite A/V Cable (2 m)

## iPod/iPhone Connectivity

### CD-IH202
AppRadio Mode HDMI/USB Interface Cable for iPod/iPhone with Lightning Connector

### CD-IU201S
AppRadio Mode USB Interface Cable for iPhone 4, iPhone 4s, or 4th Generation iPod touch (USB Cable: 50 cm/RGB Cable: 2 m)

### CD-IU51V
USB Interface Cable for iPod/iPhone (USB and AUX Cable: 50 cm)

### CD-IU51
USB Interface Cable for iPod/iPhone (50 cm)

### CD-IU201V
USB Interface Cable for iPod/iPhone (USB and AUX Cable: 50 cm/ AUX Extension Cable: 1.5 m)

### CD-IU52
USB Interface Cable for iPod/ iPhone with Lightning Connector (50 cm)

### CD-V150M
Mini-Jack Cable for iPod (1.5 m)

*Note: Please refer to pages 96 and 100 for accessories for connection of iPod/iPhone details.*

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

# SPECIFICATIONS

## AV Receivers Features Comparison

| Feature | AVH-X8850BT | AVH-X5850BT | AVH-X4850DVD | AVH-X2850BT | AVH-X1850DVD | AVH-295BT | AVH-195DVD | AVH-X7850BT | AVH-X6850DVD | AVH-4850DVD | AVH-3850DVD | AVH-XL5750BT | AVH-XL4750DVD | MVH-AV285BT | MVH-AV185 | DVH-885AVBT | DVH-785AV | DVH-345UB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Display** | | | | | | | | | | | | | | | | | | |
| Screen Size/Aspect Ratio | 7"/16:9 | 7"/16:9 | 7"/16:9 | 6.2"/16:9 | 6.2"/16:9 | 6.2"/16:9 | 6.2"/16:9 | 7"/16:9 | 7"/16:9 | 7"/16:9 | 7"/16:9 | 7"/16:9 | 7"/16:9 | 6.2"/16:9 | 6.2"/16:9 | 3.5"/16:9 | 3"/16:9 | |
| Resolution | WVGA (800 x 480) | WVGA (800 x 480) | WVGA (800 x 480) | WVGA (800 x 480) | WVGA (800 x 480) | WVGA (800 x 480) | WVGA (800 x 480) | WVGA (800 x 480) | WVGA (800 x 480) | WVGA (800 x 480) | WVGA (800 x 480) | WVGA (800 x 480) | WVGA (800 x 480) | WVGA (800 x 480) | WVGA (800 x 480) | QVGA (480 x 240) | QVGA (480 x 240) | |
| LED Backlight | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| Background Picture and Video | 5 BGP, 3 BGV | 5 BGP, 2 BGV | 5 BGP, 2 BGV | 5 BGP, 2 BGV | 5 BGP, 2 BGV | 1 BGP | 1 BGP | 5 BGP, 2 BGV | 5 BGP, 2 BGV | | | 5 BGP, 2 BGV | 5 BGP, 2 BGV | 1 BGP | 1 BGP | | | |
| Spectrum Analyzer | x | | | | | | | | | | | | | x | x | | | |
| Touch Panel Operation | x (Clear Type Resistive Panel) | x (Clear Type Resistive Panel) | x (Clear Type Resistive Panel) | x (Clear Type Resistive Panel) | x (Clear Type Resistive Panel) | x (Clear Type Resistive Panel) | x (Clear Type Resistive Panel) | x (Clear Type Resistive Panel) | x (Clear Type Resistive Panel) | x | x | x | x | x (Clear Type Resistive Panel) | x (Clear Type Resistive Panel) | | | |
| Motorized Display | x | x | x | | | | | x | x | x | x | x | x | | | | | |
| Selected Angle Setting | x | x | x | | | | | x | x | x | x | x | x | | | | | |
| Last Angle Memory | | | | | | | | x | x | x | x | x | x | | | | | |
| **CD/DVD/USB/SD Memory Card/Bluetooth®/iPod/Android/Media Playback** | | | | | | | | | | | | | | | | | | |
| CD-R/CD-RW/Video CD/DVD-R/DVD-RW/DVD-Video Playback | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| SD/SDHC Memory Card Slot | x | | | | | | | | | | | | | | | | | |
| USB Port*1 | Rear x 2 (1 Amp) | Rear (1 Amp) | Rear (1 Amp) | Rear (1 Amp) | Rear (1 Amp) | Rear (1 Amp) | Rear (1 Amp) | Rear (1 Amp) | Rear (1 Amp) | Front*2 | Front*2 | Rear (1 Amp) | Rear (1 Amp) | Rear (1 Amp) | Rear (1 Amp) | Front*2 | Front*2 | Front*2 |
| AUX Input (3.5 mm mini-jack) | Rear (Audio/Video) | Rear (Audio/Video) | Rear (Audio/Video) | Rear (Audio/Video) | Rear (Audio/Video) | Rear (Audio/Video) | Rear (Audio/Video) | Rear (Audio/Video) | Rear (Audio/Video) | Rear (Audio/Video) | Rear (Audio/Video) | Rear (Audio/Video) | Rear (Audio/Video) | Rear (Audio/Video) | Rear (Audio/Video) | Front (Audio/Video) | Front (Audio/Video) | Front (Audio) |
| Built-in Bluetooth*3 | HFP/A2DP/AVRCP/SSP/SPP | HFP/A2DP/AVRCP/SSP/SPP | | HFP/A2DP/AVRCP/SSP/SPP | | HFP/A2DP/AVRCP/SSP | | HFP/A2DP/AVRCP/SSP/SPP | | HFP/A2DP/AVRCP/SSP | | HFP/A2DP/AVRCP/SSP/SPP | | HFP/A2DP/AVRCP/SSP | | HFP/A2DP/AVRCP/SSP/SPP | | |
| Siri Eyes Free | x | | | | | | | x | | | | | | | | | | |
| AppRadio Mode*4 | iPhone/Android*5 | iPhone/Android*5 (AppRadio Mode USB) | iPhone/Android*5 (AppRadio Mode USB) | iPhone/Android*5 (AppRadio Mode USB) | iPhone/Android*5 (AppRadio Mode USB) | | | iPhone/Android*5 (AppRadio Mode USB) | iPhone/Android*5 (AppRadio Mode USB) | | | iPhone/Android*5 (AppRadio Mode USB) | iPhone/Android*5 (AppRadio Mode USB) | | | | | |
| App Mode | | iPhone | iPhone | iPhone | iPhone | | | iPhone | iPhone | | | iPhone | iPhone | | | | | |
| Apple CarPlay Compatible*6 | x | | | | | | | | | | | | | | | | | |
| Android Auto Compatible*7 | x | | | | | | | | | | | | | | | | | |
| Direct Control for iPod/iPhone*8 | USB/Bluetooth | USB/Bluetooth | USB | USB/Bluetooth | USB | USB | USB | USB/Bluetooth | USB | | | USB/Bluetooth | USB | USB | USB | USB*9 | | |
| Direct Control for Certain Android Phones*5*8 | Bluetooth | USB/Bluetooth | USB | USB/Bluetooth | USB | | | USB/Bluetooth | USB | | | USB/Bluetooth | USB | | | Bluetooth | | |
| Control for Android Phones with CarMediaPlayer App | | | | | | | | | | | | | | | | x | | |
| Spotify® | | iPhone/Android | iPhone | iPhone/Android | iPhone | | | iPhone/Android | iPhone | | | | | | | | | |
| Built-in MirrorLink™*7 | | | | | | | | | | | | | | x | x | | | |
| Link Search | x | x | x | x | x | | | x | x | | | x | x | | | | | |
| MP3/WMA/iTunes AAC Playback | DVD/CD/SD/USB | DVD/CD/USB | DVD/CD/USB | DVD/CD/USB | DVD/CD/USB | DVD/CD/USB | DVD/CD/USB | DVD/CD/USB | DVD/CD/USB | DVD/CD/USB | DVD/CD/USB | DVD/CD/USB | DVD/CD/USB | USB | USB | DVD/CD/USB | DVD/CD/USB (MP3/WMA) | DVD/CD/USB |
| WAV Playback | SD/USB | USB | USB | USB | USB | DVD/CD/USB | DVD/CD/USB | USB | USB | USB | USB | USB | USB | USB | USB | USB | | USB |
| FLAC Playback | USB | USB | USB | USB | USB | | | USB | USB | | | | | | | | | |
| DivX® Video Playback | DVD/CD | DVD/CD | DVD/CD | DVD/CD | DVD/CD | DVD/CD/USB | DVD/CD/USB | DVD/CD | DVD/CD | DVD/CD/USB | DVD/CD/USB | DVD/CD/USB | DVD/CD/USB | | | DVD/CD/USB | DVD/CD/USB | DVD/CD/USB |
| WMV Playback | SD/USB | | | | | | | | | | | | | | | | | |
| MPEG-4 Playback | DVD/CD/SD/USB | DVD/CD/USB | DVD/CD/USB | DVD/CD/USB | DVD/CD/USB | DVD/CD/USB | DVD/CD/USB | DVD/CD/USB | DVD/CD/USB | DVD/CD/USB | DVD/CD/USB | DVD/CD/USB | DVD/CD/USB | USB | USB | DVD/CD/USB | DVD/CD/USB | DVD/CD/USB |
| H.264/FLV Playback | SD/USB | USB (H.264) | USB (H.264) | USB (H.264) | USB (H.264) | | | USB (H.264) | USB (H.264) | | | USB (H.264) | USB (H.264) | | | | | |
| Linear PCM Decoder | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| Dolby® Digital Decoder | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| DVD Chapter/Title Direct Search | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| DVD Chapter/Title/Disc Repeat | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| DVD Auto Play | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| Repeat (Disc/Title) | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| **Tuner** | | | | | | | | | | | | | | | | | | |
| Supertuner® IIID | x | x | x | x | x | x | x | x | x | | | x | x | x | x | | | x |
| 24 Stations/6 Presets | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| BSM (Best Stations Memory) | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| Local Seek Tuning | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| RDS | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| **Audio** | | | | | | | | | | | | | | | | | | |
| Built-in Amplifier | MOSFET 50 W x 4 | MOSFET 50 W x 4 | MOSFET 50 W x 4 | MOSFET 50 W x 4 | MOSFET 50 W x 4 | MOSFET 50 W x 4 | MOSFET 50 W x 4 | MOSFET 50 W x 4 | MOSFET 50 W x 4 | MOSFET 50 W x 4 | MOSFET 50 W x 4 | MOSFET 50 W x 4 | MOSFET 50 W x 4 | MOSFET 50 W x 4 | MOSFET 50 W x 4 | MOSFET 50 W x 4 | MOSFET 50 W x 4 | MOSFET 50 W x 4 |
| Hi-Volt RCA Preouts | 3 (4 V) | 3 (4 V) | 3 (4 V) | 3 (4 V) | 3 (4 V) | | | 3 (4 V) | 3 (4 V) | | | 3 (4 V) | 3 (4 V) | | | 2 (4 V) | | |
| RCA Preouts | | | | | | 2 (2 V) | 2 (2 V) | | | 3 (2 V) | 3 (2 V) | | | 2 (2 V) | 2 (2 V) | | 2 (2 V) | 2 (2 V) |
| D/A Converter | 96 kHz/24-bit | 96 kHz/24-bit | 96 kHz/24-bit | 96 kHz/24-bit | 96 kHz/24-bit | | | 96 kHz/24-bit | 96 kHz/24-bit | | | 96 kHz/24-bit | 96 kHz/24-bit | | | 96 kHz/24-bit | 96 kHz/24-bit | 96 kHz/24-bit |
| Specialized Audio Parts | x | | | | | | | | | | | | | | | | | |
| Auto EQ & Auto Time Alignment (CD-MC20 Required) | x | x | x | x | x | | | x | x | | | x | x | | | | | |
| 3-Way Network Mode (High/Mid/Low) | | | | | | | | | | | | | | | | | | |
| Crossover Network | HPF/LPF | HPF/LPF | HPF/LPF | HPF/LPF | HPF/LPF | HPF/LPF | HPF/LPF | HPF/LPF | HPF/LPF | HPF/LPF | HPF/LPF | HPF/LPF | HPF/LPF | HPF/LPF | HPF/LPF | LPF | LPF | LPF |
| Equalizer | 13-Band Graphic | 13-Band Graphic | 13-Band Graphic | 13-Band Graphic | 13-Band Graphic | 5-Band Graphic | 5-Band Graphic | 13-Band Graphic | 13-Band Graphic | Bass/Mid/Treble | Bass/Mid/Treble | 13-Band Graphic | 13-Band Graphic | 5-Band Graphic | 5-Band Graphic | Bass/Mid/Treble | Bass/Mid/Treble | Bass/Mid/Treble |
| Advanced Sound Retriever | x | x | x | x | x | | | x | x | | | x | x | | | | | |
| SR Air | x | | x | | | | | x | | | | x | | | | | | |
| Subwoofer Control | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| **MIXTRAX** | | | | | | | | | | | | | | | | | | |
| MIXTRAX*10 | x | | | | | | | | | | | | | | | | | |
| MIXTRAX EZ*11 | x | x | x | x | x | | | x | x | | | x | x | | | | | |
| MIXTRAX App Control | x | | | | | | | | | | | | | | | | | |
| **General** | | | | | | | | | | | | | | | | | | |
| Pioneer TV Tuner Ready (GEX-2850DVB2/GEX-1750DVB2/GEX-1750DVB/GEX-1550TV) | x | x | x | x | x | | | x | x | | | x | x | | | | | |
| Rear-View Camera Input*12 | x | x | x | x | x | x | x | x | x | x | x | x | x | | | x | x | |
| Composite A/V Input | 1 (Audio/Video) | 1 (Audio/Video) | 1 (Audio/Video) | 1 (Audio/Video) | 1 (Audio/Video) | 1 (Audio/Video) | 1 (Audio/Video) | 1 (Audio/Video) | 1 (Audio/Video) | 1 (Audio/Video) | 1 (Audio/Video) | 1 (Audio/Video) | 1 (Audio/Video) | 1 (Audio/Video) | 1 (Audio/Video) | 1 (Audio/Video) | 1 (Audio/Video) | 1 (Audio)*13 |
| Composite Video Output | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| HDMI Input | x | | | | | | | | | | | | | | | | | |
| RGB Input | x | x | x | x | x | | | x | x | | | x | x | | | | | |
| Dual Zone Audio/Video | x | | | | | | | | | | | | | | | | | |
| Color Customization | 5-Display Colors 112-Key Colors | 5-Display Colors 112-Key Colors | 5-Display Colors 112-Key Colors | 5-Display Colors 112-Key Colors | 5-Display Colors 112-Key Colors | 3-Display Colors | 3-Display Colors | 5-Display Colors 112-Key Colors | 5-Display Colors 112-Key Colors | | | 5-Display Colors 112-Key Colors | 5-Display Colors 112-Key Colors | 3-Display Colors | 3-Display Colors | 2 Colors (Red/Blue) | | |
| Power Off Mode | x | x | x | x | x | | | x | x | | | x | x | | | | | |
| Display Off Mode | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | |
| JPEG Slide Show*14 | SD/USB | USB | USB | USB | USB | USB | USB | USB | USB | | | USB | USB | USB | USB | USB | USB | |
| Multi-Language Display | Menu/ID3 Tag*15 | Menu/ID3 Tag*15 | Menu/ID3 Tag*15 | Menu/ID3 Tag*15 | Menu/ID3 Tag*15 | Menu/ID3 Tag*15 | Menu/ID3 Tag*15 | Menu/ID3 Tag*15 | Menu/ID3 Tag*15 | Menu/ID3Tag (English/Spanish/Portuguese/Russian) | Menu/ID3Tag (English/Spanish/Portuguese/Russian) | Menu/ID3 Tag*15 | Menu/ID3 Tag*15 | Menu/ID3 Tag*15 | Menu/ID3 Tag*15 | Menu/ID3 Tag*16 | Menu/ID3 Tag*16 | |
| Rotary Volume Control | | | | | | | | | | x | x | | | | | x | x | x |
| Wired Remote Input | x | x | x | x | x | x | x | x | x | | | x | x | x | x | x | x | x |
| Remote Control | x | x | x | x | x | x*17 | x*17 | x | x | x | x | x | x | x | x | x | x | x |
| Steering Wheel Control Function Expansion | x | x | x | x | x | | | x | x | | | x | x | x | | | | |
| Learning Steering Wheel Control | x | x | x | x | x | | | x | x | | | x | x | x | x | x | x | |
| USB Quick Charge for Android (CDP) | x | | | | | | | x | | | | | | | | | | |
| Detachable Face Security™ | x | | | | | | | x | | | | | | | | x | x | x |

*1. Pioneer cannot guarantee compatibility with all USB mass storage devices and assumes no responsibility for any loss of data on media players, smart phones, or other devices while using receiver.
*2. Please use CD-U50E USB extension cable if a direct connection causes a USB Device to protrude from the receiver in a way that can interfere with driving.
*3. HFP = Hands-Free Profile, A2DP = Advanced Audio Distribution Profile, AVRCP = Audio/Video Remote Control Profile, SSP = Secure Simple Profile, SPP = Serial Port Profile. Please refer to instruction manual for other information about profile compatibility.
*4. Optional cable required when AppRadio Mode is in use.
*5. Not all Android phones are compatible.
*6. CD-IU52 required (sold separately).
*7. CD-MU200 required (sold separately).
*8. Optional cable required. Please refer to page 100 for compatible cable information.
*9. Only for audio files.
*10. Compatible with full-featured Non-Stop Mix Play based on data from music analysis performed using MIXTRAX software. Compatible sources: USB Device and SD Memory Card.
*11. Quick, easy, accessible Non-Stop Mix Play without music analysis data from MIXTRAX software. Compatible sources: iPod, iPhone, USB Device and SD Memory Card.
*12. Use input only for reverse or mirror image rear view camera. Other use may result in injury or damage.
*13. Available only in certain regions of product distribution.
*14. JPEG files are displayed automatically as a slideshow.
*15. Usable language differs according to region. Please see page 19 for more details.
*16. RI: English/Russian. RD: English/Spanish/Portuguese.
*17. RC/RI: Remote control unit included. RD: Remote control unit is optional.

# Audio Receivers Features Comparison

| Feature | DEX-P99RS | DEH-80PRS | DEH-9450UB | DEH-X9650BT | DEH-X9650SD | DEH-X8750BT | DEH-X7850UI | DEH-X7750UI | DEH-X6850BT | DEH-X4950BT | DEH-X4850FD | DEH-X3950BT | DEH-X2950UI | DEH-X1953UB | DEH-X1952UB | DEH-X1950UB / DEH-X1950UG | DEH-X5 | DEH-X1 | FH-X785BT | FH-X575UI | FH-X385UB | MVH-X585BT | MVH-X395BT | MVH-X285FD | MVH-X195UI | MVH-85UB | MVH-X3 | DXT-X1969UB / DXT-X1960B | MXT-X3968T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **CD/USB/SD Memory Card/Bluetooth®/iPod/Android/Media Playback** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CD-R/CD-RW Compatible | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | x | x |
| Built-in Bluetooth*1 | | | | HFP/A2DP/AVRCP/SSP/SPP | | HFP/A2DP/AVRCP/SSP/SPP | HFP/A2DP/AVRCP/SSP/SPP | | HFP/A2DP/AVRCP/SSP/SPP | HFP/A2DP/AVRCP/SSP/SPP | | HFP/A2DP/AVRCP/SSP/SPP | | | | | | | HFP/A2DP/AVRCP/SSP/SPP | HFP/A2DP/AVRCP/SSP/SPP | | HFP/A2DP/AVRCP/SSP/SPP | HFP/A2DP/AVRCP/SSP/SPP | | | | | HFP/A2DP/AVRCP/SSP/SPP | HFP/A2DP/AVRCP/SSP/SPP |
| Direct Control for iPod/iPhone | USB | USB | USB | USB | USB | USB | USB/Bluetooth | USB | USB | USB | USB | USB | | | | | USB | USB | USB/Bluetooth | USB | | USB/Bluetooth | USB | USB | USB | | | USB | USB |
| Direct Control for Certain Android Phones | | | USB | USB | USB | USB | USB | USB | USB | USB | USB | USB | USB | USB | USB | USB | USB | USB | USB | USB | USB | USB | USB | USB | USB | USB | USB | USB | USB |
| Siri Eyes Free | | | | x | | x | x | | x | | | | | | | | | | x | x | | x | | | | | | x | x |
| Media App Control*2 | | iPhone*3 | iPhone*3 | iPhone/Android | iPhone | iPhone/Android | iPhone/Android | iPhone | iPhone/Android | iPhone/Android | iPhone/Android | iPhone/Android | iPhone/Android | Android | Android | Android | iPhone/Android | iPhone/Android | iPhone/Android | iPhone | Android | iPhone/Android | iPhone/Android | iPhone/Android | iPhone/Android | | x | iPhone/Android | iPhone/Android |
| Pioneer ARC | | | | | | | iPhone/Android | | iPhone/Android | iPhone/Android | iPhone/Android | iPhone/Android | iPhone/Android | Android | Android | Android | iPhone/Android | iPhone/Android | iPhone/Android | | Android | iPhone/Android | iPhone/Android | iPhone/Android | iPhone/Android | | Android | iPhone/Android | iPhone/Android |
| SD/SDHC Memory Card Slot | | x | | x | x | | | | | | | | | | | | | | | | | | | | | | | | |
| USB Port*4 | Rear | Rear x 2 | Rear x 2 | Rear x 2 | Rear x 2 | Rear | Front*5/Rear | Rear | Front*5 | Front*5 | Front*5 | Front*5 | Front*5 | Front*5 | Front*5 | Front*5 | Front*5 | Front*5 | Front*5 | Front*5 | Front*5 | Front*5/Rear | Front*5 | Front*5 | Front*5 | Front*5 | | Front*5 | Front*5 |
| Music Browser | | SD/USB | USB | SD/USB | SD/USB | USB | | USB | | | | | | | | | | | | | | | | | | | | | |
| AUX Input (3.5 mm mini-jack) | Front*6 | Front | Rear | Front | Front | Rear | Front | Rear | Front | Front | Front | Front | Front | Front | Front | Front | Front | Front | Front | Front | Front | Front | Front | Front | Front | Front | Front | Front | Front |
| Spotify® | | | | | | | x | | | x | | x | x | | | | x | x | x | | | x | x | | x | | | x | x |
| MP3/WMA/WAV Playback | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| iTunes AAC Playback*7 | x | x | x | x | x | x | x | x | x | x | x | x | x | | | | x | | x | x | | x | x | | x | | | x | x |
| FLAC Playback*8 | | | | | | | x | | x | x | | | | | | | | | x | | | x | | x | | | | | |
| CD Text | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | | | | | | | | | | x | x |
| **Tuner** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Supertuner® IIID | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | | | x | x |
| 6 Presets (Stations) | 24 | 24 | 24 | 24 | 24 | 24 | GS: 36*9 CS: 24 | 24 | GS: 36*9 CS: 24 | 36 | 36 | GS: 36*9 CS: 24 | 36 | 36 | 36 | 36 | 24 | 24 | 36 | 36 | 36 | 24 | 36 | 36 | 24 | 24 | 24 | 36 | 36 |
| BSM (Best Stations Memory) | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| RDS | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x*10 | x | x |
| Shortwave Tuner | | | | | | | x*11 | | x*11 | x | x | x*11 | x | x | x | x | x | x | x | x | x | x | x | x | x | | | x | x |
| **Audio** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Built-in Amplifier: MOSFET 50 W x 4 | | x | x | x | x | x | x | x | x | x | | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| Class FD 100 W x 4 | | | | | | | | | | | x | | | | | | | | | | | | x | | | | | | |
| Hi-Volt RCA Preouts | 4 (5 V) | 3 (5 V) | 3 (4 V) | 3 (4 V) | 3 (4 V) | 3 (4 V) | GS: 3 (4 V) | 3 (4 V) | | | | | | | | | | | | | | 3 (4 V) | | | | | | | |
| RCA Preouts | | | | | | | CS: 3 (2 V) | | 2 (2 V) | 2 (2 V) | 2 (2 V) | 2 (2 V) | 3 (2 V) | 2 (2 V) | 2 (2 V) | 1 (2 V) | 2 (2 V) | 2 (2 V) | 3 (2 V) | 2 (2 V) | 2 (2 V) | | 1 (2 V) | 2 (2 V) | 1 (2 V) | 1 (2 V) | 2 (2 V) | 1 (2 V) | 1 (2 V) |
| DSP | x | x | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D/A Converter | AKM 24-bit | Burr Brown 24-bit | 24-bit | 24-bit | 24-bit | 24-bit | 24-bit | 24-bit | 24-bit | 24-bit | 24-bit | 24-bit | 24-bit | 24-bit | 24-bit | 24-bit | 24-bit | 24-bit | 24-bit | 24-bit | 24-bit | 24-bit | 24-bit | 24-bit | 24-bit | 24-bit | 24-bit | 24-bit | 24-bit |
| Exclusively Designed Audio Parts | x | x | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Specialized Audio Parts | | | x | x | x | | | | | | | | | | | | | | | | | | | | | | | | |
| Auto-EQ (with Mic Included) | x | x | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Time Alignment | Auto/Manual | Auto/Manual | | | | | Manual | | | | | | | | | | | | Manual | | | | Manual | | | | | | |
| Equalizer | Dual (L/R) 31-Band GEQ | Dual (L/R) 16-Band GEQ | 5-Band GEQ | 5-Band GEQ | 5-Band GEQ | 5-Band GEQ | 13-Band GEQ | 5-Band GEQ | 5-Band GEQ | 5-Band GEQ | 5-Band GEQ | 5-Band GEQ | 5-Band GEQ | 5-Band GEQ | 5-Band GEQ | 5-Band GEQ | 5-Band GEQ | 5-Band GEQ | 13-Band GEQ | 5-Band GEQ | 5-Band GEQ | 13-Band GEQ | 5-Band GEQ | 5-Band GEQ | 5-Band GEQ | 5-Band GEQ | 5-Band GEQ | 5-Band GEQ | 5-Band GEQ |
| 3-Way Network Mode (High/Mid/Low) | 4-Way (High/Mid/Low/Sub) | x | | | | | x | | | | | | | | | | | | x | | | x | | | | | | | |
| Crossover Network | HPF/LPF | HPF/LPF | HPF/LPF | HPF/LPF | HPF/LPF | HPF/LPF | HPF/LPF | HPF/LPF | HPF/LPF | HPF/LPF | HPF/LPF | HPF/LPF | HPF/LPF | HPF/LPF | HPF/LPF | HPF/LPF | HPF/LPF | HPF/LPF | HPF/LPF | HPF/LPF | HPF/LPF | HPF/LPF | HPF/LPF | HPF/LPF | HPF/LPF | HPF/LPF | HPF/LPF | HPF/LPF | HPF/LPF |
| Advanced Sound Retriever | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | | | x | x |
| Advanced Sound Retriever for Bluetooth Wireless Audio | | x | | | | | x | | x | x | | x | | | | | | | x | | | x | | | | | | x | x |
| Bass Boost | | | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| Subwoofer Control | | | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| Loudness | 1-Mode | 1-Mode | 3-Mode | 3-Mode | 3-Mode | 3-Mode | 3-Mode | 3-Mode | 3-Mode | 3-Mode | 3-Mode | 3-Mode | 3-Mode | 3-Mode | 3-Mode | 3-Mode | 3-Mode | 3-Mode | 3-Mode | 3-Mode | 3-Mode | 3-Mode | 3-Mode | 3-Mode | 3-Mode | 3-Mode | 3-Mode | 3-Mode | 3-Mode |
| Listening Position Selector | x | x | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Selectable Fader | | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| **MIXTRAX** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MIXTRAX EZ | | | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | | | x | x |
| Compatible Source | | | iPod/SD/USB | iPod/SD/USB | iPod/SD/USB | iPod/USB | iPod/USB | iPod/USB | iPod/USB | iPod/USB | iPod/USB | iPod/USB | USB | USB | USB | USB | iPod/USB | iPod/USB | iPod/USB | iPod/USB | USB | iPod/USB | iPod/USB | iPod/USB | iPod/USB | | USB | iPod/USB | iPod/USB |
| Flashing Color | | | x | x | x | x | x | x | x | x | | x | x | x | x | x | x | x | x | x | | x | | | | | | x | x |
| Short Playback Mode | | | x | x | x | x | x | x | x | x | | x | | | | | x | x | x | | | x | | | | | | x | x |
| Sound Level Indicator | | | x | x | x | x | x | | | | | | | | | | | | x | | | x | | | | | | x | x |
| MIXTRAX App Control | | | x | x | x | x | x | x | x | x | | x | | | | | x | x | x | | | x | | | | | | x | x |
| **General** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| IP-Bus | x | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Color Customization | 125 Colors*12 | 210,000 Colors (Separated)*13 | 210,000 Colors (Separated)*13 | 210,000 Colors (Separated)*13 | 210,000 Colors (Separated)*13 | 210,000 Colors (Separated)*13 | 210,000 Colors (Separated)*13 | 210,000 Colors (Separated)*13 | 210,000 Colors (Separated)*13 | | | 210,000 Colors (Separated)*13 | | | | | | | 210,000 Colors (Separated)*13 | 210,000 Colors (Separated)*13 | 210,000 Colors (Separated)*13 | 210,000 Colors (Separated)*13 | | 210,000 Colors (Separated)*13 | | | | 210,000 Colors (Separated)*13 | |
| Display with LED Backlight | Full Dot OEL (3-Line) | Full Dot LCD (3-Line) | Full Dot LCD (3-Line) | Full Dot LCD (3-Line) | Full Dot LCD (3-Line) | Full Dot LCD (3-Line) | Wider 13+1 LCD (2-Line) | Full Dot LCD (3-Line) | Wider VA LCD (2-Line) | Wider VA LCD (1-Line) | Wider VA LCD (1-Line) | Wider VA LCD (1-Line) | Wider VA LCD (1-Line) | Wider VA LCD (1-Line) | Wider VA LCD (1-Line) | Wider VA LCD (1-Line) | Wider VA LCD (1-Line) | VA LCD (2-Line) | Wider VA LCD (1-Line) | Wider 13+1 LCD (2-Line) | Wider VA LCD (1-Line) | Wider VA LCD (1-Line) | Wider VA LCD (1-Line) | LCD (1-Line) | Wider VA LCD (1-Line) | Wider VA LCD (1-Line) | | Wider VA LCD (1-Line) | Wider VA LCD (1-Line) |
| Display Off Mode | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | | x | x | x |
| Brightness Setting | | | 5-Step | 5-Step | 5-Step | 10-Step | 10-Step | 10-Step | 10-Step | 10-Step | 10-Step | 10-Step | 10-Step | 10-Step | 10-Step | 10-Step | 10-Step | 10-Step | 10-Step | 10-Step | 10-Step | 10-Step | 10-Step | 10-Step | 10-Step | | | 10-Step | 10-Step |
| Manual Dimmer Control | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | | x | x | x |
| Separated Dimmer Setting | | | | | | | | | x | | | x | | | | | | | | | | | | x | | | | | |
| Illumination Effect | | | x | x | x | x | x | x | x*14 | x*14 | | x*14 | x*14 | x*14 | x*14 | x*14 | x*14 | x*14 | x | x | x | x | x*14 | x*14 | x*14 | | x*14 | x*14 | x*14 |
| Illumination Line | | | | | x | x | x | x | x | | | x | | | | | | | x | x | x | x | | x | | | | | |
| Illumination Timer | | | | | x | x | x | x | x | x | | x | x | x | x | x | x | x | x | x | x | x | x | x | x | | x | x | x |
| Multi-Language Display | x*15 | x*15 | x*15 | x*16 | x*16 | x*16 | x*17 | x*16 | x*17 | x*17 | x*18 | x*17 | x*17 | x*17 | x*17 | x*17 | x*18 | x*18 | x*18 | | x*18 | x*18 | x*17 | x*18 | x*17 | | | x*18 | x*17 |
| Voltage Display | x | x | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Spectrum Analyzer | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | | | x | x |
| Level Indicator | | | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | | | x | x |
| Lever Key | | | x | x | x | x | x | | | | | | | | | | | | | | | | | | | | | | |
| Rotary Volume Control | Rotary Commander | x | x | x | x | x | x | x | x | Prism-Cut | x | x | Prism-Cut | x | x | Prism-Cut | x | x | x | x | x | x | x | x | x | | | Prism-Cut | x |
| Wired Remote Input | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| Preset Steering Wheel Control | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Remote Control | Steering Remote | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | | | x | x |
| USB Source Change Function | | | | | | | x | | x | x | x | x | | | | | x | x | x | | | x | | | | | | x | x |
| USB Quick Charge for Android (CDP) | | | | | | | | | x | | | x (GS) | | | | | | | | | | | | | | | | | |
| Two-Phone Full Time Connection | | | | | | | x | | x | x | | x | | | | | x | | x | | | x | | | | | | x | x |
| Cellular Mute | x | | | | | | | | | | | | | | | | | | | | | | | | | x | | | |
| Anti-Dust Design | | | | x | x | | x | | x | x | | x | | | | | x | | x | | | x | | | | | | x | x |
| Flap Face | Auto Slide | x | Auto Slide | x | x | | | | | | | | | | | | | | | | | | | | | | | | |
| Detachable Face Security™ | | | | | | | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | | x | x | x |

*1. HFP = Hands-Free Profile, A2DP = Advanced Audio Distribution Profile, AVRCP = Audio/Video Remote Control Profile, SSP = Secure Simple Profile, SPP = Serial Port Profile. Please refer to instruction manual for other information about profile compatibility.
*2. For Android Phone, DEH-X4850FD, DEH-X2950UI, DEH-X1953UB, DEH-X1952UB, DEH-X1950UB(G), DEH-X1, FH-X575UI, FH-X385UB, MVH-X285FD, MVH-X195UI and DXT Series are required to be used through Pioneer ARC app. Operations of certain applications may be limited.
*3. App Mode: Can't directly access from Music source.
*4. Pioneer cannot guarantee compatibility with all USB mass storage devices and assumes no responsibility for any loss of data on media players, smart phones, or other devices while using receiver.
*5. Please use CD-U50E USB extension cable if a direct connection causes a USB Device to protrude from the receiver in a way that can interfere with driving.
*6. Use a 2.5 mm diameter mini-jack to connect to the AUX input while the Auto-Flap Motorized Face is at open position.
*7. iTunes AAC Playback: AAC player can decode only AAC files ripped and encoded using iTunes; they cannot decode AAC DRM files down loaded from iTunes music store.
 AAC: AAC is a short for Advanced Audio Coding and refers to audio compression technology standard used with MPEG-4.

*8. For the files stored in USB thumb drive.
*9. See page 51 for more details about GS and CS models.
*10. Displays only radio station name.
*11. Only for GS models. See page 51 for more details about GS models.
*12. Key illumination only.
*13. Colors for key illumination and display are separately adjustable.
*14. For only ACC power on/off.
*15. English/Spanish/Portuguese.
*16. GS models for Asia/Middle East/Oceania: English/Spanish/Portuguese/Arabic/Persian. CS models for Central America/Latin America: English/Spanish/Portuguese.
*17. GS models: English. CS models: English/Spanish
*18. English/Spanish

## The Best Solutions To Enjoy iPod & Android

## Connection Table for iPod/iPhone with Pioneer Receivers

🎵 : Plays audio
🎵🎞 : Plays audio and video

| Model | Interface | Use with | iPhone*1 iPhone*2 | iPhone 3G iPhone 3GS | iPhone 4 iPhone 4s | iPod 5th gen. | iPod classic 160GB (2007/2009) 120GB 80GB | iPod touch*1 1st gen.*2 | 2nd gen. | 3rd gen. | 4th gen. | iPod nano 1st/2nd gen. | 3rd gen. | 4th gen. | 5th gen. | 6th gen. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AVH-X8850BT | USB Direct Connection for Video, Music and AppRadio Mode | CD-IU201S*3 | | | 🎵🎞 AppRadio MODE | | | | | | | 🎵🎞 AppRadio MODE | | | | |
| | USB Direct Connection for Video and Music | CD-IU201V | | 🎵🎞 (iPhone 3GS only) | 🎵🎞 | 🎵🎞 | | 🎵🎞 | 🎵🎞 | 🎵🎞 | 🎵🎞 | | 🎵🎞 | 🎵🎞 | 🎵🎞 | 🎵 |
| AVH-X5850BT/AVH-X4850DVD/AVH-X2850BT/ AVH-X1850DVD/AVH-X7850BT/AVH-X6850DVD/ AVH-XL5750BT/AVH-XL4750DVD | USB Direct Connection for Video and Music | CD-IU201V | 🎵🎞 APP MODE (iPhone 3GS only) | 🎵🎞 APP MODE | | 🎵🎞 | | 🎵🎞 APP MODE | 🎵🎞 APP MODE | 🎵🎞 APP MODE | | | | | | |
| AVH-295BT/AVH-195DVD/MVH-AV285BT/ MVH-AV185 | USB Direct Connection for Video and Music | CD-IU201V | 🎵🎞 (iPhone 3GS only) | | | | | 🎵🎞 | 🎵🎞 | 🎵🎞 | | | 🎵🎞 | 🎵🎞 | 🎵🎞 | 🎵 |
| AVH-4850BT/AVH-3850DVD | AUX | 3.5 mm AUX Cable | 🎵🎞 | 🎵🎞 | 🎵🎞 | 🎵🎞 | 🎵🎞 | 🎵🎞 | 🎵🎞 | 🎵🎞 | 🎵🎞 | 🎵 | 🎵 | 🎵 | 🎵 |
| DVH-885AVBT | USB Direct Connection for Music | CD-IU51 | 🎵 (iPhone 3GS only) | 🎵 | 🎵 | 🎵 | | 🎵 | 🎵 | 🎵 | | 🎵 | 🎵 | 🎵 | 🎵 |
| | AUX | 3.5 mm AUX Cable | 🎵🎞 | 🎵🎞 | 🎵🎞 | 🎵🎞 | 🎵🎞 | 🎵🎞 | 🎵🎞 | 🎵🎞 | 🎵🎞 | 🎵 | 🎵 | 🎵 | 🎵 |
| DVH-785AV | AUX | 3.5 mm AUX Cable | 🎵🎞 | 🎵🎞 | 🎵🎞 | 🎵🎞 | 🎵🎞 | 🎵🎞 | 🎵🎞 | 🎵🎞 | 🎵🎞 | 🎵 | 🎵 | 🎵 | 🎵 |
| DVH-345UB | AUX | 3.5 mm AUX Cable | 🎵 | 🎵 | 🎵 | 🎵 | 🎵 | 🎵 | 🎵 | 🎵 | 🎵 | 🎵 | 🎵 | 🎵 | 🎵 |
| DEX-P99RS/DEH-80PRS/DEH-9450UB | USB Direct Connection for Music | CD-IU51 | 🎵*4 | 🎵*4 | 🎵*4 (iPhone 4 only) | 🎵 | 🎵 | 🎵*4 | 🎵*4 | 🎵*4 | 🎵*4 | 🎵 | 🎵 | 🎵 | 🎵 |
| DEH-X9650BT/DEH-X9650SD/DEH-X8750BT/ DEH-X7850BT/DEH-X7750UI/DEH-X6850BT/ DEH-X4950BT/DEH-X4850FD/DEH-X3950BT/ DEH-X2950UI/DEH-X5/DEH-X1/FH-X785BT/ FH-X575UI/MVH-X585BT/MVH-X395BT/ MVH-X285FD/MVH-X195UI/MVH-X3/ MXT-X396BT | USB Direct Connection for Music | CD-IU51 | 🎵*4 | 🎵*4 | 🎵*4 | 🎵 | 🎵 | 🎵*4 | 🎵*4 | 🎵*4 | 🎵*4 | 🎵 | 🎵 | 🎵 | 🎵 |
| DEH-X1953UB/DEH-X1952UB/DEH-X1950UB(G)/ DEH-155MP(G)/FH-X385UB/MVH-85UB/ DXT-X1969UB/DXT-X196UB | AUX | 3.5 mm AUX Cable | 🎵 | 🎵 | 🎵 | 🎵 | 🎵 | 🎵 | 🎵 | 🎵 | 🎵 | 🎵 | 🎵 | 🎵 | 🎵 |

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

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

### iPhone 5s, iPhone 5c, iPhone 5, iPhone 6, iPhone 6 Plus, 5th generation iPod touch, and 7th generation iPod nano

🎵 : Plays audio    🎵🎞 : Plays audio and video

| Model | Interface | Use with | iPhone iPhone 5 | iPhone 5c, iPhone 5s | iPhone 6, iPhone 6 Plus | iPod touch 5th gen. | iPod nano 7th gen. |
|---|---|---|---|---|---|---|---|
| AVH-X8850BT | HDMI/USB Direct Connection for Video, Music and AppRadio Mode | CD-IH202*1 *2 | 🎵🎞 AppRadio MODE | 🎵🎞 AppRadio MODE | 🎵🎞 AppRadio MODE | 🎵🎞 AppRadio MODE | 🎵 |
| | USB Direct Connection for Music | CD-IU52 | 🎵 | 🎵 | 🎵 | 🎵 | 🎵 |
| AVH-X5850BT/AVH-X4850DVD/AVH-X2850BT/ AVH-X1850DVD/AVH-X7850BT/AVH-X6850DVD/ AVH-XL5750BT/AVH-XL4750DVD | USB Direct Connection for Video, Music and AppRadio Mode USB | CD-IU52*2 | 🎵 AppRadio MODE | 🎵 AppRadio MODE | 🎵 AppRadio MODE | 🎵 | 🎵 |
| AVH-295BT/AVH-195DVD/MVH-AV285BT/MVH-AV185 | USB Direct Connection for Music | CD-IU52 | 🎵 | 🎵 | 🎵 | 🎵 | 🎵 |
| DVH-885AVBT | USB Direct Connection for Music | CD-IU52 | 🎵 | 🎵 | 🎵 | 🎵 | 🎵 |
| AVH-4850BT/AVH-3850DVD/DVH-785AV/DVH-345UB | AUX | 3.5 mm AUX Cable | 🎵 | 🎵 | 🎵 | 🎵 | 🎵 |
| DEH-X9650BT/DEH-X9650SD | USB Direct Connection for Music | CD-IU52 | 🎵*3 | | | 🎵*3 | 🎵 |
| DEH-X8750BT/DEH-X7750UI/FH-X575UI | USB Direct Connection for Music | CD-IU52 | 🎵*3 | 🎵*3 | | 🎵*3 | 🎵 |
| DEH-X7850BT/DEH-X6850BT/DEH-X4950BT/DEH-X4850FD/ DEH-X3950BT/DEH-X2950UI/DEH-X5/DEH-X1/FH-X785BT/ MVH-X585BT/MVH-X395BT/MVH-X285FD/MVH-X195UI/ MVH-X3/MXT-X396BT | USB Direct Connection for Music | CD-IU52 | 🎵*3 | 🎵*3 | 🎵*3 | 🎵*3 | 🎵 |
| DEX-P99RS/DEH-80PRS/DEH-9450UB/DEH-X1953UB/ DEH-X1952UB/DEH-X1950UB(G)/DEH-155MP(G)/ FH-X385UB/MVH-85UB/DXT-X1969UB/DXT-X196UB | AUX | 3.5 mm AUX Cable | 🎵 | 🎵 | 🎵 | 🎵 | 🎵 |

*1. Requires Apple® Lightning Digital AV Adapter and Apple Lightning to USB Cable (sold separately).
*2. When AppRadio Mode and AppRadio Mode USB are in use. AppRadio App is available from iTunes App Store. Please use in Internet connection situations. AppRadio App & Compatible Apps may not be available in some countries.
*3. Media App Control Available. You can enjoy music using apps installed in iPhone and iPod touch. In Media App Control, operability of app on receiver's display is limited. Pioneer Receiver can play audio content from an iPod touch or iPhone with an app that outputs audio signals. Not every app, however, is compatible with Media App Control.

## Connection Table for Android Devices with Pioneer Receivers

Smartphone Compatible

🎵 : Plays audio
🎵🎞 : Plays audio and video

| Model | Connection via CD-AH200*1 Smartphone Compatible | CD-MU200*1 Smartphone Compatible | Bluetooth® *2 Bluetooth | USB *3 USB Smartphone Compatible | AUX |
|---|---|---|---|---|---|
| AVH-X8850BT | 🎵🎞 AppRadio MODE | | 🎵 | | 🎵 |
| AVH-X5850BT/AVH-X2850BT/AVH-X7850BT/AVH-XL5750BT | | 🎵 AppRadio MODE | 🎵 | 🎵 | 🎵 |
| AVH-X4850DVD/AVH-X1850DVD/AVH-X6850DVD/AVH-XL4750DVD | | 🎵 AppRadio MODE | 🎵 | 🎵 | 🎵 |
| AVH-4850BT/AVH-295BT/MVH-AV285BT | | | 🎵 | | 🎵 |
| DVH-885AVBT | | | 🎵 | | 🎵 |
| AVH-195DVD/AVH-3850DVD/MVH-AV185/DVH-785AV/DVH-345UB | | | | | 🎵 |
| DEH-X9650BT/DEH-X8750BT | | | 🎵 | 🎵 | 🎵 |
| DEH-X7850BT/DEH-X6850BT/DEH-X4950BT/DEH-X3950BT/DEH-X5/FH-X785BT/ MVH-X585BT/MVH-X395BT/MVH-X3/MXT-X396BT | | | 🎵 | 🎵 | 🎵 |
| DEH-X9650SD/DEH-X7750UI/FH-X575UI | | | | 🎵 | 🎵 |
| DEH-X4850FD/DEH-X2950UI/DEH-X1953UB/DEH-X1952UB/DEH-X1950UB(G)/DEH-X1/ FH-X385UB/MVH-X285FD/MVH-X195UI/MVH-85UB/DXT-X1969UB/DXT-X196UB | | | | 🎵 | 🎵 |
| DEX-P99RS/DEH-80PRS/DEH-9450UB/DEH-155MP(G) | | | | | 🎵 |

*1. When AppRadio Mode and AppRadio Mode USB are in use. AppRadio App is available from Google Play. Please use in Internet connection situations. AppRadio App & Compatible Apps may not be available in some countries.
*2. Audio is transmitted via A2DP (Advanced Audio Distribution Profile). Audio is controlled via AVRCP (Audio/Video Remote Control Profile) and limited accordingly.
*3. USB Direct Control for Certain Android Phones is available (via MTP Mode). The connectivity depends on OS version, number of files stored on an Android Phone, etc.

## General Information about Subwoofer Connection

### Important Caution against Improper Connection

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

### Single Voice Coil (SVC)

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

#### Single Subwoofer Connection

**1 SVC**

• 2 Ohm Subwoofer: 2 Ohm
• 4 Ohm Subwoofer: 4 Ohm

#### Multiple Subwoofer Connection

**2 SVC**
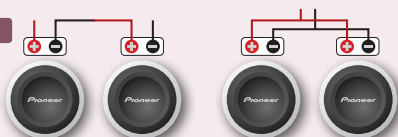
**Series (+)**
• 2 Ohm Subwoofers: 4 Ohm
• 4 Ohm Subwoofers: 8 Ohm

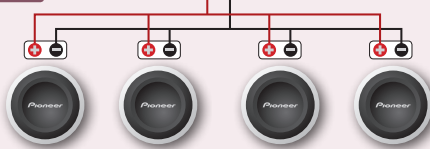**Parallel (॥)**
• 2 Ohm Subwoofers: 1 Ohm
• 4 Ohm Subwoofers: 2 Ohm

**3 SVC**
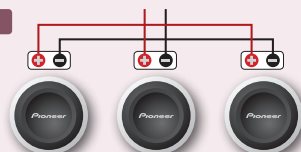
**Parallel (॥)**
• 4 Ohm Subwoofers: 1.33 Ohm

**4 SVC**

**Parallel (॥)**
• 4 Ohm Subwoofers: 1 Ohm

### Dual Voice Coil (DVC)

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

#### Single Subwoofer Connection

**1 DVC**

**Series (+)**
• Dual 2 Ohm Subwoofer: 4 Ohm
• Dual 4 Ohm Subwoofer: 8 Ohm
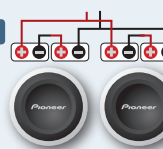
**Parallel (॥)**
• Dual 2 Ohm Subwoofer: 1 Ohm
• Dual 4 Ohm Subwoofer: 2 Ohm

#### Multiple Subwoofer Connection

In theory, there are four main connection patterns (below). In practice; however, you should choose connection method in consideration of the proper balance between amplifier's impedance and subwoofer's combined impedance.
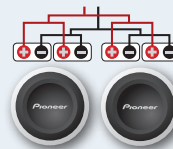
1. All voice coils are in series connection
2. Voice coil is in series connection, and subwoofers are in parallel connection
3. Voice coil is in parallel connection, and subwoofers are in series connection
4. All voice coils are in parallel connection
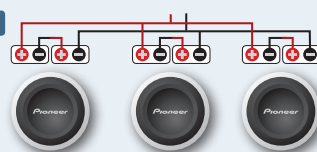
**2 DVC**

**Series (+)-Parallel (॥) Connection**
• 2 Ohm Subwoofers: 2 Ohm
• 4 Ohm Subwoofers: 4 Ohm

**Parallel (॥)-Parallel (॥) Connection**
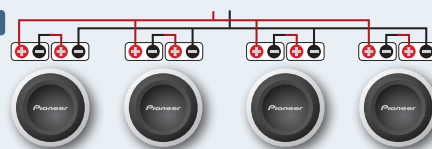• 2 Ohm Subwoofers: 0.5 Ohm
• 4 Ohm Subwoofers: 1 Ohm

**3 DVC**

**Series (+)-Parallel (॥) Connection**
• 2 Ohm Subwoofers: 1.33 Ohm
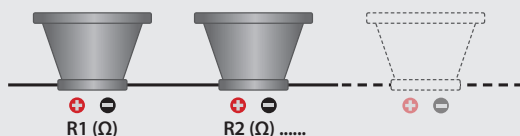• 4 Ohm Subwoofers: 2.67 Ohm

**4 DVC**

**Series (+)-Parallel (॥) Connection**
• 2 Ohm Subwoofers: 1 Ohm
• 4 Ohm Subwoofers: 2 Ohm

### Calculating Impedance

**Series (+) Wiring: The more subwoofers connected within the circuit, the higher the total impedance.**
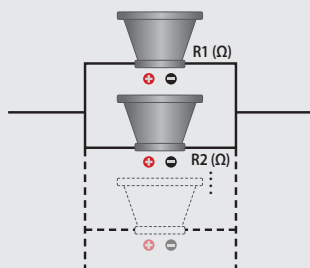
$R_1\,(\Omega)$
$R_2\,(\Omega)$ ......

$$R1\,(\Omega) + R2\,(\Omega) + \cdots\cdots Rn\,(\Omega) = Rt\,(\Omega)$$

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

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

$R1\,(\Omega)$
$R2\,(\Omega)$

$$\cfrac{1}{\cfrac{1}{R1\,(\Omega)} + \cfrac{1}{R2\,(\Omega)} + \cdots \cfrac{1}{Rn\,(\Omega)}} = Rt\,(\Omega)$$

**Example with 2 subwoofers:**

4 Ω subwoofer:
$$\cfrac{1}{\cfrac{1}{4\,\Omega} + \cfrac{1}{4\,\Omega}} = 2\,\Omega$$

2 Ω subwoofer:
$$\cfrac{1}{\cfrac{1}{2\,\Omega} + \cfrac{1}{2\,\Omega}} = 1\,\Omega$$

# SPECIFICATIONS

## Amplifier & Subwoofer Connection Chart

| Voice Coil Connection | Connection Examples | Connection Examples |
|---|---|---|
| **Single Voice Coil** | **4 Subwoofers as 1 Ω Mono** — GM-D9601, 1 Ω, Parallel, TS-W311S4 x 4 (4 Ω, 4 Ω, 4 Ω, 4 Ω) | **4 Subwoofers as 1 Ω Mono** — GM-D8601, 1 Ω, Parallel, TS-SW3002S4 x 4 (4 Ω, 4 Ω, 4 Ω, 4 Ω) |
| | **2 Subwoofers as 2 Ω Mono** — GM-D9601, 2 Ω, Parallel, TS-W311S4 x 2 (4 Ω, 4 Ω) | **1 Subwoofer as 4 Ω Mono** — GM-A3702, 4 Ω, TS-W311S4 x 1 (4 Ω) |
| **Dual Voice Coil** | **2 Subwoofers as 1 Ω Mono** — GM-D8601, 1 Ω, Parallel, Parallel, TS-W311D4 x 2 (2 Ω, 2 Ω) | **2 Subwoofers as 1 Ω Mono** — GM-D9601, 1 Ω, Parallel, Parallel, TS-W3003D4 x 2 (2 Ω, 2 Ω) |
| | **1 Subwoofer as 2 Ω Mono** — GM-D8601, 2 Ω, Parallel, TS-W3003D4 (2 Ω) | **2 Subwoofers as 4 Ω Mono** — GM-A5702, 4 Ω, Parallel, Series, TS-W311D4 x 2 (8 Ω, 8 Ω) |

## Amplifier & Subwoofer Combination Chart

○ : DVC Series Wiring
● : DVC Parallel Wiring
■ : Single Voice Coil
Series: Series Wiring
Para: Parallel Wiring
2pc.: 2 Pieces Use
4pc.: 4 Pieces Use

| | | | | Conventional Subwoofers | | | | | | | | Shallow Subwoofers | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Champion Series PRO | Champion Series | | | | | | | | | |
| | | | | TS-W3003D4 | TS-W311D4 | TS-W311S4 | TS-W261D4 | TS-W261S4 | TS-W311 | TS-W306R | TS-W256R | TS-SW3002S4 | TS-SW2502S4 | TS-SW2002D2 |
| | | | | 600 W | 400 W | 400 W | 350 W | 350 W | 300 W | 350 W | 300 W | 400 W | 300 W | 150 W |
| GM-D9605 | Sub-ch. | 2 Ω | 600 W x 1 | ●(2 Ω) | — | ■(4 Ω) x 2pc. Para. | — | ■(4 Ω) x 2pc. Para. | ■(4 Ω) x 2pc. Para. | ■(4 Ω) x 2pc. Para. | ■(4 Ω) x 2pc. Para. | ■(4 Ω) x 2pc. Para. | ■(4 Ω) x 2pc. Para. | — |
| | | 4 Ω | 350 W x 1 | ○(8 Ω) x 2pc. Para. | ○(8 Ω) x 2pc. Para. | ■(4 Ω) | ○(8 Ω) x 2pc. Para. | ■(4 Ω) | — | ■(4 Ω) | — | ■(4 Ω) | ■(4 Ω) | — |
| GM-D9604 | 4-ch. | 1 Ω | 130 W x 4 | ●(2 Ω) x 2pc. Para. | ●(2 Ω) x 2pc. Para. | ■(4 Ω) x 4pc. Para. | ●(2 Ω) x 2pc. Para. | ■(4 Ω) x 4pc. Para. | ■(4 Ω) x 4pc. Para. | ■(4 Ω) x 4pc. Para. | ■(4 Ω) x 4pc. Para. | ■(4 Ω) x 4pc. Para. | ■(4 Ω) x 4pc. Para. | ●(1 Ω) |
| | | 2 Ω | 200 W x 4 | ●(2 Ω) | ●(2 Ω) | ■(4 Ω) x 2pc. Para. | ●(2 Ω) | ■(4 Ω) x 2pc. Para. | ■(4 Ω) x 2pc. Para. | ■(4 Ω) x 2pc. Para. | ■(4 Ω) x 2pc. Para. | ■(4 Ω) x 2pc. Para. | ■(4 Ω) x 2pc. Para. | ○(4 Ω) x 2pc. Para. |
| | | 4 Ω | 130 W x 4 | ○(8 Ω) x 2pc. Para. | ○(8 Ω) x 2pc. Para. | ■(4 Ω) | ○(8 Ω) x 2pc. Para. | ■(4 Ω) | ■(4 Ω) | ■(4 Ω) | ■(4 Ω) | ■(4 Ω) | ■(4 Ω) | ○(4 Ω) |
| | 2-ch. (Bridge) | 4 Ω | 400 W x 2 | ○(8 Ω) x 2pc. Para. | ○(8 Ω) x 2pc. Para. | ■(4 Ω) | ○(8 Ω) x 2pc. Para. | ■(4 Ω) | — | — | — | ■(4 Ω) | — | — |
| GM-D8604 | 4-ch. | 1 Ω | 125 W x 4 | ●(2 Ω) x 2pc. Para. | ●(2 Ω) x 2pc. Para. | ■(4 Ω) x 4pc. Para. | ●(2 Ω) x 2pc. Para. | ■(4 Ω) x 4pc. Para. | ■(4 Ω) x 4pc. Para. | ■(4 Ω) x 4pc. Para. | ■(4 Ω) x 4pc. Para. | ■(4 Ω) x 4pc. Para. | ■(4 Ω) x 4pc. Para. | ●(1 Ω) |
| | | 2 Ω | 150 W x 4 | ●(2 Ω) | ●(2 Ω) | ■(4 Ω) x 2pc. Para. | ●(2 Ω) | ■(4 Ω) x 2pc. Para. | ■(4 Ω) x 2pc. Para. | ■(4 Ω) x 2pc. Para. | ■(4 Ω) x 2pc. Para. | ■(4 Ω) x 2pc. Para. | ■(4 Ω) x 2pc. Para. | ○(4 Ω) x 2pc. Para. |
| | | 4 Ω | 100 W x 4 | ○(8 Ω) x 2pc. Para. | ○(8 Ω) x 2pc. Para. | ■(4 Ω) | ○(8 Ω) x 2pc. Para. | ■(4 Ω) | ■(4 Ω) | ■(4 Ω) | ■(4 Ω) | ■(4 Ω) | ■(4 Ω) | ○(4 Ω) |
| | 2-ch. (Bridge) | 4 Ω | 300 W x 2 | ○(8 Ω) x 2pc. Para. | ○(8 Ω) x 2pc. Para. | ■(4 Ω) | ○(8 Ω) x 2pc. Para. | ■(4 Ω) | ■(4 Ω) | ■(4 Ω) | ■(4 Ω) | ■(4 Ω) | ■(4 Ω) | — |
| GM-D9601 | 1-ch. | 1 Ω | 1,200 W x 1 | ●(2 Ω) x 2pc. Para. | — | ■(4 Ω) x 4pc. Para. | — | ■(4 Ω) x 4pc. Para. | ■(4 Ω) x 4pc. Para. | ■(4 Ω) x 4pc. Para. | ■(4 Ω) x 4pc. Para. | ■(4 Ω) x 4pc. Para. | ■(4 Ω) x 4pc. Para. | — |
| | | 2 Ω | 800 W x 1 | — | — | ■(4 Ω) x 2pc. Para. | — | — | — | — | — | ■(4 Ω) x 2pc. Para. | — | — |
| | | 4 Ω | 500 W x 1 | ○(8 Ω) x 2pc. Para. | ○(8 Ω) x 2pc. Para. | — | ○(8 Ω) x 2pc. Para. | — | — | — | — | — | — | — |
| GM-D8601 | 1-ch. | 1 Ω | 800 W x 1 | ●(2 Ω) x 2pc. Para. | ●(2 Ω) x 2pc. Para. | ■(4 Ω) x 4pc. Para. | — | ■(4 Ω) x 4pc. Para. | ■(4 Ω) x 4pc. Para. | ■(4 Ω) x 4pc. Para. | ■(4 Ω) x 4pc. Para. | ■(4 Ω) x 4pc. Para. | ■(4 Ω) x 4pc. Para. | — |
| | | 2 Ω | 500 W x 1 | ●(2 Ω) | ●(2 Ω) | ■(4 Ω) x 2pc. Para. | — | ■(4 Ω) x 2pc. Para. | ■(4 Ω) x 2pc. Para. | ■(4 Ω) x 2pc. Para. | ■(4 Ω) x 2pc. Para. | ■(4 Ω) x 2pc. Para. | ■(4 Ω) x 2pc. Para. | — |
| | | 4 Ω | 300 W x 1 | ○(8 Ω) x 2pc. Para. | ○(8 Ω) x 2pc. Para. | ■(4 Ω) | ○(8 Ω) x 2pc. Para. | ■(4 Ω) | ■(4 Ω) | ■(4 Ω) | ■(4 Ω) | ■(4 Ω) | ■(4 Ω) | — |
| GM-A6704 | 4-ch. | 2 Ω | 95 W x 4 | ●(2 Ω) | ●(2 Ω) | ■(4 Ω) x 2pc. Para. | ●(2 Ω) | ■(4 Ω) x 2pc. Para. | ■(4 Ω) x 2pc. Para. | ■(4 Ω) x 2pc. Para. | ■(4 Ω) x 2pc. Para. | ■(4 Ω) x 2pc. Para. | ■(4 Ω) x 2pc. Para. | ○(4 Ω) x 2pc. Para. |
| | | 4 Ω | 60 W x 4 | ○(8 Ω) x 2pc. Para. | ○(8 Ω) x 2pc. Para. | ■(4 Ω) | ○(8 Ω) x 2pc. Para. | ■(4 Ω) | ■(4 Ω) | ■(4 Ω) | ■(4 Ω) | ■(4 Ω) | ■(4 Ω) | ○(4 Ω) |
| | 2-ch. (Bridge) | 4 Ω | 190 W x 2 | ○(8 Ω) x 2pc. Para. | ○(8 Ω) x 2pc. Para. | ■(4 Ω) | ○(8 Ω) x 2pc. Para. | ■(4 Ω) | ■(4 Ω) | ■(4 Ω) | ■(4 Ω) | ■(4 Ω) | ■(4 Ω) | — |
| GM-A4704 | 4-ch. | 2 Ω | 65 W x 4 | ●(2 Ω) | ●(2 Ω) | ■(4 Ω) x 2pc. Para. | ●(2 Ω) | ■(4 Ω) x 2pc. Para. | ■(4 Ω) x 2pc. Para. | ■(4 Ω) x 2pc. Para. | ■(4 Ω) x 2pc. Para. | ■(4 Ω) x 2pc. Para. | ■(4 Ω) x 2pc. Para. | ○(4 Ω) x 2pc. Para. |
| | | 4 Ω | 40 W x 4 | ○(8 Ω) x 2pc. Para. | ○(8 Ω) x 2pc. Para. | ■(4 Ω) | ○(8 Ω) x 2pc. Para. | ■(4 Ω) | ■(4 Ω) | ■(4 Ω) | ■(4 Ω) | ■(4 Ω) | ■(4 Ω) | ○(4 Ω) |
| | 2-ch. (Bridge) | 4 Ω | 130 W x 2 | ○(8 Ω) x 2pc. Para. | ○(8 Ω) x 2pc. Para. | ■(4 Ω) | ○(8 Ω) x 2pc. Para. | ■(4 Ω) | ■(4 Ω) | ■(4 Ω) | ■(4 Ω) | ■(4 Ω) | ■(4 Ω) | — |
| GM-A5702 | 2-ch. | 2 Ω | 240 W x 2 | ●(2 Ω) | ●(2 Ω) | ■(4 Ω) x 2pc. Para. | ●(2 Ω) | ■(4 Ω) x 2pc. Para. | ■(4 Ω) x 2pc. Para. | ■(4 Ω) x 2pc. Para. | ■(4 Ω) x 2pc. Para. | ■(4 Ω) x 2pc. Para. | ■(4 Ω) x 2pc. Para. | ○(4 Ω) x 2pc. Para. |
| | | 4 Ω | 150 W x 2 | ○(8 Ω) x 2pc. Para. | ○(8 Ω) x 2pc. Para. | ■(4 Ω) | ○(8 Ω) x 2pc. Para. | ■(4 Ω) | ■(4 Ω) | ■(4 Ω) | ■(4 Ω) | ■(4 Ω) | ■(4 Ω) | ○(4 Ω) |
| | 1-ch. (Bridge) | 4 Ω | 480 W x 1 | ○(8 Ω) x 2pc. Para. | ○(8 Ω) x 2pc. Para. | — | ○(8 Ω) x 2pc. Para. | — | — | — | — | — | — | — |
| GM-A3702 | 2-ch. | 2 Ω | 95 W x 2 | ●(2 Ω) | ●(2 Ω) | ■(4 Ω) x 2pc. Para. | ●(2 Ω) | ■(4 Ω) x 2pc. Para. | ■(4 Ω) x 2pc. Para. | ■(4 Ω) x 2pc. Para. | ■(4 Ω) x 2pc. Para. | ■(4 Ω) x 2pc. Para. | ■(4 Ω) x 2pc. Para. | ○(4 Ω) x 2pc. Para. |
| | | 4 Ω | 60 W x 2 | ○(8 Ω) x 2pc. Para. | ○(8 Ω) x 2pc. Para. | ■(4 Ω) | ○(8 Ω) x 2pc. Para. | ■(4 Ω) | ■(4 Ω) | ■(4 Ω) | ■(4 Ω) | ■(4 Ω) | ■(4 Ω) | ○(4 Ω) |
| | 1-ch. (Bridge) | 4 Ω | 190 W x 1 | ○(8 Ω) x 2pc. Para. | ○(8 Ω) x 2pc. Para. | ■(4 Ω) | ○(8 Ω) x 2pc. Para. | ■(4 Ω) | ■(4 Ω) | ■(4 Ω) | ■(4 Ω) | ■(4 Ω) | ■(4 Ω) | — |

## Amplifiers Features Comparison

| | PRS-A900 | PRS-D800 | GM-D9605 | GM-D9604 | GM-D9601 | GM-D8604 | GM-D8601 | GM-D1004 | GM-A6704 | GM-A4704 | GM-A5702 | GM-A3702 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Amplifier Class | | Class-FD | Class-FD*1 | Class-FD | Class-D | Class-FD | Class-D | Class-FD | | | | |
| Current Feedback Amplifier | x | | | | | | | | | | | |
| Load Impedance Allowance (Ω) | 2 to 8 | 2 to 8 | 2 to 8 | 1 to 8 | 1 to 8 | 1 to 8 | 1 to 8 | 2 to 8 | 2 to 8 | 2 to 8 | 2 to 8 | 2 to 8 |
| Bridgeable | x | x | x*2 | x | | x | | x*3 | x | x | x | x |
| 4-Layered Circuit Board | | x | | | | | | | | | | |
| L/R Independent Power Supply | x | | | | | | | | | | | |
| L/R Symmetric Layout Circuit | x | | | | | | | | | | | |
| Protection Control System | | | x | x | x | x | x | | | | | |
| MOSFET Output Section | | x | x | x | x | x | x | | | | | |
| PWM Regulated MOSFET | x | x | | | | | | | | | | |
| Balanced Isolator Input Circuit | x | x | x | x | x | x | x | x | x | x | x | x |
| High Grade Bipolar Transister | x | | | | | | | | | | | |
| RCA Inputs | 4-Ch. (Gold-Plated) | 2-Ch. (Gold-Plated) | 6-Ch. | 4-Ch. | 2-Ch. | 4-Ch. | 2-Ch. | 4-Ch. | 4-Ch. | 4-Ch. | 2-Ch. | 2-Ch. |
| RCA Outputs (Pass-Through) | | | | x (A-Ch.) | x | x (A-Ch.) | x | | | | | |
| Speaker Level Input | | | x | x | x | x | x | x | x | x | x | x |
| Automatic Signal Sensing and Turn-On | | | x | x | x | x | x | x | x | x | x | x |
| Hi-Volt Input Level Control (400 mV to 6.5 V) | x L/R independent | x A/B independent | | | | | | | | | | |
| Hi-Volt Input Level Control (300 mV to 6.5 V) | | | | | | | | | x | x | x | x |
| Hi-Volt Input Level Control (200 mV to 6.5 V) | | | x | x | x | x | x | | | | | |
| Block-Type Terminal — Power/Ground Terminals | x*4 (Gold-Plated) | | x*4 | x*4 | x*4 | x*4 | x*4 | | | | | |
| Block-Type Terminal — Speaker Terminals | x*5 (Gold-Plated) | | x*6 | x*6 | x*6 | x*6 | x*6 | | | | | |
| Screw-Type Terminal — Power/Ground Terminals | | x (Ground: Gold-Plated) | | | | | | | x | x | x | x |
| Screw-Type Terminal — Speaker Terminals | | x (Gold-Plated) | | | | | | | x | x | x | x |
| Lock-Type Terminal — Power/Ground/Speaker Terminals | | | | | | | | x | | | | |
| Removable Terminal/Settings Cover | x | x | | | | | | | | | | |
| Crossover Type | | | Variable HPF*7/LPF | Variable HPF/LPF | Variable LPF | Variable HPF/LPF | Variable LPF | HPF/LPF | A-Ch.: Variable HPF/LPF B-Ch.: HPF/LPF | A-Ch.: Variable HPF/LPF B-Ch.: HPF/LPF | Variable LPF | LPF |
| Crossover Frequency | | | 40 Hz to 500 Hz | 40 Hz to 500 Hz | 40 Hz to 240 Hz | 40 Hz to 500 Hz | 40 Hz to 240 Hz | 80 Hz | A-Ch.: HPF (40 Hz to 500 Hz)/LPF (80 Hz) B-Ch.: 80 Hz | A-Ch.: HPF (40 Hz to 500 Hz)/LPF (80 Hz) B-Ch.: 80 Hz | 40 Hz to 500 Hz | 80 Hz |
| Crossover Slope | | | -12 dB/oct. (A-/B-Ch.), -12/-24 dB/oct. (Subwoofer-Ch.) | -12 dB/oct. | -12 dB/oct. | -12 dB/oct. | -12 dB/oct. | -12 dB/oct. | -12 dB/oct. | -12 dB/oct. | -12 dB/oct. | -12 dB/oct. |
| Bass Boost Frequency | | | 50 Hz (Subwoofer-Ch.) | 50 Hz | 50 Hz | 50 Hz | 50 Hz | | 50 Hz | | 50 Hz | |
| Bass Boost Level | | | 0 dB to 18 dB (Subwoofer-Ch.) | 0 dB to 18 dB | 0 dB to 18 dB | 0 dB to 18 dB | 0 dB to 18 dB | | 0/6/12 dB | | 0/6/12 dB | |
| Bass Boost Remote | | | x (Subwoofer-Ch.) | x (B-Ch.) | x | x (B-Ch.) | x | | | | | |

*1. Class-FD output for A-ch. & B-ch. and Class-D output for subwoofer-ch.   *2. Bridgeable for A-ch. and B-ch. only.   *3. For the UC model only. See page 58 for details.   *4. 4 to 8-gauge   *5. 12 to 18-gauge   *6. 8 to 16-gauge
*7. HPF: For A-ch. and B-ch. only.
Note: The "Class-FD" stands for "Full Range Class-D". Incorporating Pioneer-developed Class-D circuit, the Class-FD amplifiers deliver superior performance and sound quality.

## Amplifiers Specifications

| | PRS-A900 | PRS-D800 | GM-D9605 | GM-D9604 | GM-D9601 |
|---|---|---|---|---|---|
| Number of Channels | 4/3/2 | 2/1 | 5/4/3/2 | 4/3/2 | Mono |
| Max. Wattage (4 Ω) | 100 W x 4 | 250 W x 2 | 150 W x 4 (A-/B-Ch.)/700 W x 1 (Subwoofer-Ch.) | 260 W x 4 | 1,000 W x 1 |
| Max. Wattage (2 Ω) | — | — | 200 W x 4 (A-/B-Ch.)/1,200 W x 1 (Subwoofer-Ch.) | 400 W x 4 | 1,600 W x 1 |
| Max. Wattage (1 Ω) | — | — | | 260 W x 4 | 2,400 W x 1 |
| Max. Wattage Bridged (4 Ω) | 200 W x 2 | 600 W x 1 | 400 W x 2* | 800 W x 2 | — |
| Wattage RMS (4 Ω <= 1 % THD+N) | 50 W x 4 | 125 W x 2 | 75 W x 4 (A-/B-Ch.)/350 W x 1 (Subwoofer-Ch.) | 130 W x 4 | 500 W x 1 |
| Wattage RMS (2 Ω <= 1 % THD+N) | 50 W x 4 | 150 W x 2 | 100 W x 4 (A-/B-Ch.)/600 W x 1 (Subwoofer-Ch.) | 200 W x 4 | 800 W x 1 |
| Wattage RMS (1 Ω <= 1 % THD+N) | — | — | | 130 W x 4 | 1,200 W x 1 |
| Wattage RMS Bridged (4 Ω) | 100 W x 2 | 300 W x 1 | 200 W x 2* | 400 W x 2 | |
| Frequency Response | 10 Hz to 100 kHz | 10 Hz to 30 kHz | 10 Hz to 50 kHz (A-/B-Ch.)/10 Hz to 500 Hz (Subwoofer-Ch.) | 10 Hz to 50 kHz | 10 Hz to 240 Hz |
| Total Harmonic Distortion (1 kHz, 4 Ω) | <0.003 % | <0.004 % | <0.05 % (A-/B-Ch.: 1 kHz/Subwoofer-Ch.: 100 Hz) | <0.05 % | <0.5 % (100 Hz) |
| Signal-to-Noise Ratio (IHF-A Weighted) | >108 dB | >105 dB | >94 dB | >95 dB | >100 dB |
| Dimensions (W x H x D) | 371 mm x 65 mm x 282 mm | 255 mm x 50 mm x 104 mm | 315 mm x 60 mm x 200 mm | 315 mm x 60 mm x 200 mm | 315 mm x 60 mm x 200 mm |

| | GM-D8604 | GM-D8601 | GM-D1004 | GM-A6704 | GM-A4704 | GM-A5702 | GM-A3702 |
|---|---|---|---|---|---|---|---|
| Number of Channels | 4/3/2 | Mono | 4/3**/2** | 4/3/2 | 4/3/2 | 2/1 | 2/1 |
| Max. Wattage (4 Ω) | 200 W x 4 | 600 W x 1 | 100 W x 4 | 170 W x 4 | 80 W x 4 | 300 W x 2 | 170 W x 2 |
| Max. Wattage (2 Ω) | 300 W x 4 | 1,000 W x 1 | 100 W x 4 | 250 W x 4 | 130 W x 4 | 500 W x 2 | 250 W x 2 |
| Max. Wattage (1 Ω) | 250 W x 4 | 1,600 W x 1 | — | — | — | — | — |
| Max. Wattage Bridged (4 Ω) | 600 W x 2 | — | 200 W x 2** | 500 W x 2 | 260 W x 2 | 1,000 W x 1 | 500 W x 1 |
| Wattage RMS (4 Ω <= 1 % THD+N) | 100 W x 4 | 300 W x 1 | 45 W x 4 | 60 W x 4 | 40 W x 4 | 150 W x 2 | 60 W x 2 |
| Wattage RMS (2 Ω <= 1 % THD+N) | 150 W x 4 | 500 W x 1 | 45 W x 4 | 95 W x 4 | 65 W x 4 | 240 W x 2 | 95 W x 2 |
| Wattage RMS (1 Ω <= 1 % THD+N) | 125 W x 4 | 800 W x 1 | — | — | — | — | — |
| Wattage RMS Bridged (4 Ω) | 300 W x 2 | | 90 W x 2** | 190 W x 2 | 130 W x 2 | 480 W x 1 | 190 W x 1 |
| Frequency Response | 10 Hz to 50 kHz | 10 Hz to 240 Hz | 10 Hz to 40 kHz | 10 Hz to 70 kHz | 10 Hz to 70 kHz | 10 Hz to 70 kHz | 10 Hz to 70 kHz |
| Total Harmonic Distortion (1 kHz, 4 Ω) | <0.05 % | <0.5 % (100 Hz) | <0.05 % | <0.05 % | <0.05 % | <0.05 % | <0.05 % |
| Signal-to-Noise Ratio (IHF-A Weighted) | >95 dB | >100 dB | >90 dB | >95 dB | 94 dB | >96 dB | >95 dB |
| Dimensions (W x H x D) | 265 mm x 60 mm x 200 mm | 265 mm x 60 mm x 200 mm | 181 mm x 38 mm x 64 mm | 356 mm x 60 mm x 215 mm | 326 mm x 60 mm x 215 mm | 356 mm x 60 mm x 215 mm | 246 mm x 60 mm x 180 mm |

* Bridgeable for A-ch. and B-ch. only.   ** For the UC model only. See page 58 for details.

# SPECIFICATIONS

## Subwoofers Specifications

| | TS-W3003D4 | TS-W311D4 | TS-W311S4 | TS-W261D4 | TS-W261S4 | TS-W311 | TS-W306R |
|---|---|---|---|---|---|---|---|
| Size | 30 cm | 30 cm | 30 cm | 25 cm | 25 cm | 30 cm | 30 cm |
| Max. Music Power (Nominal) | 2,000 W (600 W) | 1,400 W (400 W) | 1,400 W (400 W) | 1,200 W (350 W) | 1,200 W (350 W) | 1,000 W (300 W) | 1,300 W (350 W) |
| Frequency Response | 20 Hz to 80 Hz | 20 Hz to 125 Hz | 20 Hz to 125 Hz | 20 Hz to 125 Hz | 20 Hz to 125 Hz | 20 Hz to 125 Hz | 20 Hz to 125 Hz |
| Sensitivity (In Car/1 W) | 96 dB | 95 dB | 95 dB | 93 dB | 93 dB | 95 dB | 96 dB |
| Impedance | 4 Ω x 2 | 4 Ω x 2 | 4 Ω | 4 Ω x 2 | 4 Ω | 4 Ω | 4 Ω |
| Mounting Depth | 176 mm | 151 mm | 151 mm | 139 mm | 139 mm | 148 mm | 135 mm |
| Cut-Out Dimensions | ø283 mm | ø283 mm | ø283 mm | ø235 mm | ø235 mm | ø278 mm | ø281 mm |
| Recommended Enclosure | 24.1 liters to 49.5 liters | 24.1 liters to 49.5 liters | 24.1 liters to 49.5 liters | 18.4 liters to 35.4 liters | 18.4 liters to 35.4 liters | 24.1 liters to 49.5 liters | 24.1 liters to 49.5 liters |

| | TS-W256R | TS-SW3002S4 | TS-SW2502S4 | TS-SW2002D2 | TS-SWX3002 | TS-SWX2502 | TS-SWX2002 |
|---|---|---|---|---|---|---|---|
| Size | 25 cm | 30 cm | 25 cm | 20 cm | 30 cm | 25 cm | 20 cm |
| Max. Music Power (Nominal) | 1,100 W (300 W) | 1,500 W (400 W) | 1,200 W (300 W) | 600 W (150 W) | 1,500 W (400 W) | 1,200 W (300 W) | 600 W (400 W) |
| Frequency Response | 20 Hz to 160 Hz | 20 Hz to 125 Hz | 20 Hz to 125 Hz | 20 Hz to 200 Hz | 20 Hz to 315 Hz | 20 Hz to 200 Hz | 20 Hz to 250 Hz |
| Sensitivity (In Car/1 W) | 92 dB | 93 dB | 91 dB | 86 dB | 92 dB | 89 dB | 86 dB |
| Impedance | 4 Ω | 4 Ω | 4 Ω | 2 Ω x 2 | 4 Ω | 4 Ω | 2 Ω x 2 |
| Mounting Depth | 122 mm | 86 mm | 78 mm | 67 mm | — | — | — |
| Cut-Out Dimensions | ø230 mm | ø298 mm | ø249 mm | ø179 mm | — | — | — |
| Recommended Enclosure | 18.4 liters to 35.4 liters | 14.2 liters to 28.3 liters | 9.9 liters to 19.8 liters | 4.2 liters to 14.2 liters | — | — | — |

| | TS-WH500A | TS-WX305T | TS-WX305B | TS-WX120A | TS-WX210A | TS-W252PRS |
|---|---|---|---|---|---|---|
| Size | 18 cm x 10 cm x 2 | 30 cm | 30 cm | 20 cm x 13 cm | 20 cm | 25 cm |
| Max. Music Power (Nominal) | 150 W[*1] (50 W[*2]) | 1,300 W (350 W) | 1,300 W (350 W) | 150 W[*1] (50 W[*2]) | 150 W[*1] (50 W[*2]) | 800 W (400 W) |
| Frequency Response | 20 Hz to 200 Hz | 20 Hz to 125 Hz | 20 Hz to 125 Hz | 30 Hz to 160 Hz | 37 Hz to 200 Hz | 20 Hz to 2,400 Hz |
| Sensitivity (In Car/1 W) | 98 dB | 97 dB | 95 dB | 98 dB | 102 dB | 84 dB |
| Impedance | 4 Ω | 4 Ω | 4 Ω | — | — | 4 Ω |
| Mounting Depth | — | — | — | — | — | 178 mm |
| Cut-Out Dimensions | — | — | — | — | — | ø238 mm |
| Recommended Enclosure | — | — | — | — | — | 28.3 liters |

*1. Maximum output power  *2. Nominal output power

## Speakers Specifications

### Component Speakers / TS-D Series

| | TS-C172PRS | TS-C132PRS | TS-S062PRS | TS-D1730C | TS-D1330C | TS-D6902R | TS-D1702R | TS-D1602R | TS-D1302R | TS-D1002R |
|---|---|---|---|---|---|---|---|---|---|---|
| Size | 17 cm 28 mm[*1] | 13 cm 28 mm[*1] | 66 mm | 17 cm 23 mm[*1] | 13 cm 23 mm[*1] | 6" x 9" | 17 cm | 16 cm | 13 cm | 10 cm |
| Max. Music Power (Nominal) | 200 W (50 W) | 150 W (30 W) | 200 W (50 W)[*2] 60 W (15 W)[*3] | 260 W (60 W) | 180 W (35 W) | 360 W (80 W) | 280 W (60 W) | 260 W (60 W) | 180 W (35 W) | 110 W (25 W) |
| Frequency Response | 25 Hz to 35 kHz | 30 Hz to 35 kHz | 48 Hz to 40 kHz | 27 Hz to 44 kHz | 37 Hz to 44 kHz | 28 Hz to 30 kHz | 30 Hz to 32 kHz | 35 Hz to 32 kHz | 35 Hz to 40 kHz | 40 Hz to 40 kHz |
| Sensitivity (1 W/1 m) | 89 dB | 86 dB | 84 dB | 88 dB | 88 dB | 90 dB | 88 dB | 88 dB | 88 dB | 86 dB |
| Impedance | 4 Ω | 4 Ω | 4 Ω | 4 Ω | 4 Ω | 4 Ω | 4 Ω | 4 Ω | 4 Ω | 4 Ω |
| Crossover Frequency | 2,300 Hz | 2,200 Hz | — | 4,500 Hz (with -12 dB) | 4,500 Hz (with -12 dB) | 2,800 Hz | 3,200 Hz | 4,000 Hz | 6,000 Hz | 6,000 Hz |
| Mounting Depth | 67 mm 13.4 mm[*1] | 57.3 mm 13.4 mm[*1] | 32 mm 42.2 mm[*4] | 65 mm 13 mm[*1] | 58 mm 13 mm[*1] | 89 mm | 64.5 mm | 59 mm | 57.3 mm | 46.5 mm |
| Mounting Depth with Mount Adapter | 16 cm: 55 mm | — | — | 45 mm[*5] | — | — | — | — | — | — |
| Cut-Out Dimensions | ø142 mm | ø123 mm | ø64 mm[*4] ø69 mm[*4] | ø144 mm | ø121 mm | 151 mm x 220 mm | ø139 mm | ø128 mm | ø121 mm | ø106 mm |

*1. Tweeter specification  *2. With back chamber, 800 Hz, -12 dB/oct. HPF  *3. Without back chamber, 400 Hz, -12 dB/oct. HPF  *4. With back chamber  *5. With 6" x 9" tweeter bracket

### TS-A Series

| | TS-A1606C | TS-A1306C | TS-A6996S | TS-A6986S | TS-A6976S | TS-A6966S | TS-A1686S | TS-A1676S | TS-A1376S | TS-A6886R | TS-A4676R | TS-A4633I | TS-A2013i | TS-A2503i |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Size | 16 cm 20 mm[*1] | 13 cm 20 mm[*1] | 6" x 9" | 6" x 9" | 6" x 9" | 6" x 9" | 16 cm | 16 cm | 13 cm | 6" x 8" | 4" x 6" | 4" x 6" | 20 cm | 25 cm |
| Max. Music Power (Nominal) | 350 W (60 W) | 300 W (50 W) | 650 W (100 W) | 600 W (100 W) | 550 W (90 W) | 420 W (60 W) | 350 W (60 W) | 320 W (50 W) | 300 W (50 W) | 350 W (60 W) | 200 W (30 W) | 200 W (30 W) | 500 W (80 W) | 420 W (80 W) |
| Frequency Response | 32 Hz to 43 kHz | 42 Hz to 42 kHz | 28 Hz to 38 kHz | 27 Hz to 37 kHz | 27 Hz to 24 kHz | 28 Hz to 36 kHz | 32 Hz to 38 kHz | 32 Hz to 40 kHz | 40 Hz to 39 kHz | 28 Hz to 39 kHz | 35 Hz to 42 kHz | 35 Hz to 42 kHz | 25 Hz to 28 kHz | 20 Hz to 31 kHz |
| Sensitivity (1 W/1 m) | 91 dB | 90 dB | 93 dB | 92 dB | 92 dB | 92 dB | 91 dB | 90 dB | 89 dB | 91 dB | 88 dB | 88 dB | 91 dB | 92 dB |
| Impedance | 4 Ω | 4 Ω | 4 Ω | 4 Ω | 4 Ω | 4 Ω | 4 Ω | 4 Ω | 4 Ω | 4 Ω | 4 Ω | 4 Ω | 4 Ω | 4 Ω |
| Mounting Depth | 54 mm 19 mm[*1] | 52 mm 19 mm[*1] | 85 mm | 84 mm | 84 mm | 71 mm | 54 mm | 44 mm | 53 mm | 61 mm | 43 mm | 46 mm | 89 mm | 115 mm |
| Cut-Out Dimensions | ø144 mm | ø121 mm | 153 mm x 222 mm | 153 mm x 222 mm | 153 mm x 222 mm | 153 mm x 222 mm | ø144 mm | ø128 mm | ø121 mm | 133 mm x 191 mm | 95 mm x 153 mm | 95 mm x 153 mm | ø186 mm | ø236 mm |

*1. Tweeter specification

### TS-R Series / TS-G Series

| | TS-R6951S | TS-R1750S | TS-R1650S | TS-R1350S | TS-G1605C | TS-G1645R | TS-G1345R | TS-G1045R | TS-G1615R | TS-G1315R | TS-G1015R | TS-G6932I | TS-G4645R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Size | 6" x 9" | 17 cm | 16 cm | 13 cm | 16 cm 30 mm[*1] | 16 cm | 13 cm | 10 cm | 16 cm | 13 cm | 10 cm | 6" x 9" | 4" x 6" |
| Max. Music Power (Nominal) | 400 W (50 W) | 250 W (40 W) | 250 W (40 W) | 250 W (35 W) | 280 W (45 W) | 250 W (40 W) | 250 W (35 W) | 210 W (30 W) | 230 W (40 W) | 190 W (30 W) | 300 W (40 W) | 200 W (30 W) | |
| Frequency Response | 31 Hz to 35 kHz | 36 Hz to 31 kHz | 35 Hz to 31 kHz | 44 Hz to 31 kHz | 30 Hz to 28 kHz | 26 Hz to 27 kHz | 34 Hz to 25 kHz | 38 Hz to 29 kHz | 30 Hz to 25 kHz | 33 Hz to 24 kHz | 38 Hz to 26 kHz | 27 Hz to 40 kHz | 37 Hz to 26 kHz |
| Sensitivity (1 W/1 m) | 92 dB | 90 dB | 90 dB | 89 dB | 89 dB | 89 dB | 86 dB | 84 dB | 90 dB | 88 dB | 86 dB | 90 dB | 86 dB |
| Impedance | 4 Ω | 4 Ω | 4 Ω | 4 Ω | 4 Ω | 4 Ω | 4 Ω | 4 Ω | 4 Ω | 4 Ω | 4 Ω | 4 Ω | 4 Ω |
| Mounting Depth | 68 mm | 47 mm | 40 mm | 47 mm | 39 mm | 38 mm | 44 mm | 43 mm | 39 mm | 44 mm | 43 mm | 67 mm | 42 mm |
| Cut-Out Dimensions | 153 mm x 222 mm | ø137 mm | ø128 mm | ø111 mm | ø128 mm | ø128 mm | ø121 mm | ø106 mm | ø128 mm | ø121 mm | ø106 mm | 153 mm x 222 mm | 95 mm x 153 mm |

*1. Tweeter specification

### PRO Series / Champion Series / DXT-X1969UB & DXT-X196UB Speakers / MXT-X396BT Speaker

| | TS-B350PRO | TS-B400PRO | TS-M650PRO | TS-M800PRO | TS-6900PRO | TS-6975 V3 | TS-6965 V3 | TS-1675 V2 | DXT-X1969UB | DXT-X196UB | MXT-X396BT |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Size | 8.7 cm | 10 cm | 17 cm | 20 cm | 6" x 9" | 6" x 9" | 6" x 9" | 16 cm | 6" x 9" | 16 cm | 16 cm |
| Max. Music Power (Nominal) | 250 W (100 W) | 500 W (200 W) | 500 W (110 W) | 700 W (180 W) | 600 W (100 W) | 550 W (80 W) | 450 W (80 W) | 300 W (50 W) | 230 W (30 W) | 200 W (25 W) | 200 W (25 W) |
| Frequency Response | 3,500 Hz to 27 kHz | 2,800 Hz to 27 kHz | 50 Hz to 18 kHz | 40 Hz to 15 kHz | 20 Hz to 40 kHz | 28 Hz to 27 kHz | 23 Hz to 26 kHz | 35 Hz to 20 kHz | 28 Hz to 32 kHz | 31 Hz to 16 kHz | 31 Hz to 16 kHz |
| Sensitivity (1 W/1 m) | 100 dB | 106 dB | 94 dB | 96 dB | 92 dB | 92 dB | 91 dB | 92 dB | 88 dB | 88 dB | 88 dB |
| Impedance | 4 Ω | 4 Ω | 4 Ω | 4 Ω | 4 Ω | 4 Ω | 4 Ω | 4 Ω | 4 Ω | 4 Ω | 4 Ω |
| Mounting Depth | 44 mm | 68 mm | 81 mm | 93 mm | 89 mm | 92 mm | 84 mm | 58 mm | 66.3 mm | 41 mm | 41 mm |
| Cut-Out Dimensions | ø75 mm | ø95 mm | ø148 mm | ø184 mm | 153 mm x 222 mm | 151 mm x 220 mm | 151 mm x 220 mm | ø128 mm | 153 mm x 222 mm | ø128 mm | ø128 mm |

### Other Speakers

| | TS-S20C | TS-S20 | TS-F1634R | TS-F1034R | TS-S250 | TS-T110 | TS-MR2040 | TS-MR1640 | TS-MR1600 |
|---|---|---|---|---|---|---|---|---|---|
| Size | 20 mm | 20 mm | 16 cm | 10 cm | 40 mm | 22 mm | 20 cm | 16 cm | 16 cm |
| Max. Music Power (Nominal) | 270 W (50 W) | 200 W (50 W) | 200 W (25 W) | 150 W (20 W) | 250 W (50 W) | 120 W (40 W) | 200 W (40 W) | 160 W (30 W) | 100 W (25 W) |
| Frequency Response | 2,200 Hz to 32 kHz | 3,000 Hz[*1]/ 1,200 Hz[*2] to 26 kHz | 31 Hz to 16 kHz | 45 Hz to 18 kHz | 6,000 Hz to 40 kHz | 2,500 Hz to 30 kHz | 25 Hz to 30 kHz | 30 Hz to 30 kHz | 30 Hz to 20 kHz |
| Sensitivity (1 W/1 M) | 91 dB | 92 dB | 88 dB | 86 dB | 97 dB | 90 dB | 92 dB | 91 dB | 90 dB |
| Impedance | 6 Ω | 8 Ω | 4 Ω | 4 Ω | 8 Ω | 4 Ω | 4 Ω | 4 Ω | 4 Ω |
| Mounting Depth | — | — | 41 mm | 43 mm | — | — | 75 mm | 56 mm | 56 mm |
| Cut-Out Dimensions | — | — | ø128 mm | ø102 mm | — | — | ø183 mm | ø127 mm | ø127 mm |

*1. With network  *2. Without network

## Subwoofers Thiele/Small Parameters

| | TS-W3003D4 | TS-W311D4 | TS-W311S4 | TS-W261D4 | TS-W261S4 | TS-W311 |
|---|---|---|---|---|---|---|
| Nom.Dia | 30 cm | 30 cm | 30 cm | 25 cm | 25 cm | 30 cm |
| Qts | 0.59 | 1.05 | 0.79 | 1.04 | 0.85 | 1.17 |
| Qms | 11.5 | 13.79 | 14.96 | 15.49 | 14.59 | 9.64 |
| Qes | 0.62 | 1.02 | 0.84 | 1.12 | 0.9 | 1.311 |
| Resonance Frequency | 35.0 Hz | 43.0 Hz | 42.0 Hz | 46.0 Hz | 45.0 Hz | 45.0 Hz |
| Vas [Liters] | 34.6 | 32.7 | 37.5 | 17.7 | 18.6 | 34.1 |
| Vas [ft$^3$] | 1.22 | 1.15 | 1.32 | 0.63 | 0.66 | 1.21 |
| Vd [Liters] | 0.72 | 0.56 | 0.42 | 0.35 | 0.33 | 0.56 |
| Vd [ft$^3$] | 2.54 E-02 | 1.98E-02 | 1.47E-02 | 1.25E-02 | 1.15E-02 | 1.97E-02 |
| Sd [m$^2$] | 5.20 E-02 | 5.20E-02 | 5.20E-02 | 3.50E-02 | 3.50E-02 | 5.06E-02 |
| Sd [ft$^2$] | 0.56 | 0.56 | 0.56 | 0.38 | 0.38 | 0.54 |
| Revc | Dual 2.9 Ω | Dual 2.9 Ω | 3.0 Ω | Dual 3.3 Ω | 3.2 Ω | 3.1 Ω |
| Levc (at 2,000 Hz) | 5.99 mH (8 Ω) 1.53 mH (2 Ω) | 4.85 mH (8 Ω) 1.23 mH (2 Ω) | 2.87 mH | 4.91 mH (8 Ω) 1.26 mH (2 Ω) | 2.92 mH | 1.29 mH |
| Xmax [mm] | 13.8 | 10.8 | 8.0 | 10.1 | 9.3 | 11.0 |
| Xmax [In] | 0.54 | 0.4 | 0.3 | 0.3 | 0.4 | 0.4 |
| Zmax | 112.8 (8 Ω) 24.51 (2 Ω) | 74.19 (8 Ω) 18.6 (2 Ω) | 47.27 | 85.48 (8 Ω) 18.61 (2 Ω) | 47.17 | 21.86 |
| Bl | 22.4 Tm (8 Ω) 11.2 Tm (2 Ω) | 16.2 Tm (8 Ω) 8.2 Tm (2 Ω) | 13.0 Tm | 15.3 Tm (8 Ω) 7.7 Tm (2 Ω) | 11.5 Tm | 9.6 Tm |
| Rms | 4.44 Ns/m | 3.39 Ns/m | 2.88 Ns/m | 2.33 Ns/m | 2.42 Ns/m | 3.89 Ns/m |
| Mms | 257 g | 166 g | 164 g | 123 g | 124 g | 133 g |
| Cms | 8.3 x 10-5 m/N | 7.6 x 10-5 m/N | 8.7 x 10-5 m/N | 9.5 x 10-5 m/N | 9.9 x 10-5 m/N | 9.4 x 10-5 m/N |
| Mg. Wt. | 2,800 g | 2,100 g | 2,100 g | 1,700 g | 1,700 g | 1,240 g |
| Flux Density | 8,712 Gauss | 7,381 Gauss | 6,926 Gauss | 7,177 Gauss | 6,813 Gauss | 8,425 Gauss |
| Hag [mm] | 10 | 10 | 10 | 10 | 10 | 10 |
| Hag [In] | 0.39 | 0.39 | 0.39 | 0.39 | 0.39 | 0.39 |
| Hvc [mm] | 37.6 | 31.6 | 26.0 | 30.2 | 28.6 | 32.0 |
| Hvc [In] | 1.48 | 1.24 | 1.02 | 1.19 | 1.13 | 1.26 |
| VC. Diameter | 55 mm | 48 mm | 48 mm | 40 mm | 40 mm | 48 mm |
| Eff | 0.23 % | 0.23 % | 0.29 % | 0.16 % | 0.17 % | 0.23 % |
| S.P.L. | 95 dB | 95 dB | 95 dB | 93 dB | 93 dB | 95 dB |
| Nominal Power | 600 W | 400 W | 400 W | 350 W | 350 W | 300 W |
| M.M.P. | 2,000 W | 1,400 W | 1,400 W | 1,200 W | 1,200 W | 1,000 W |
| Sp. Displacement [Liter] | 2.71 | 1.67 | 1.67 | 1.22 | 1.22 | 1.75 |
| Sp. Displacement [ft$^3$] | 0.095 | 0.059 | 0.059 | 0.043 | 0.043 | 0.061 |
| Recom. Enclosure [Liter] | 35.38 | 35.38 | 35.38 | 22.64 | 22.64 | 35.38 |
| Recom. Enclosure [ft$^3$] | 1.25 | 1.25 | 1.25 | 0.8 | 0.8 | 1.25 |
| F$_0$ (in Cabinet) | 49.2 | 55.8 | 55.7 | 61.6 | 60.2 | 60.2 |
| Q$_0$ (in Cabinet) | 0.83 | 1.25 | 1.09 | 1.28 | 1.13 | 1.64 |

| | TS-W306R | TS-W256R | TS-SW3002S4 | TS-SW2502S4 | TS-SW2002D2 | TS-W252PRS |
|---|---|---|---|---|---|---|
| Nom.Dia | 30 cm | 25 cm | 30 cm | 25 cm | 20 cm | 25 cm |
| Qts | 0.81 | 0.66 | 0.61 | 0.97 | 0.98 | 0.289 |
| Qms | 15.6 | 17.1 | 13.95 | 12.04 | 5.23 | 8.125 |
| Qes | 0.86 | 0.68 | 0.64 | 1.06 | 1.20 | 0.300 |
| Resonance Frequency | 24.6 Hz | 32.7 Hz | 35.0 Hz | 42.0 Hz | 65.0 Hz | 29.4 Hz |
| Vas [Liters] | 102.1 | 32.2 | 35.4 | 18.5 | 3.8 | 30.66 |
| Vas [ft$^3$] | 3.61 | 1.14 | 1.25 | 0.65 | 0.13 | 1.083 |
| Vd [Liters] | 0.60 | 0.22 | 0.51 | 0.26 | 0.06 | 0.313 |
| Vd [ft$^3$] | 2.12E-02 | 7.64E-03 | 1.80E-02 | 9.16E-03 | 2.00E-03 | 1.33E-01 |
| Sd [m$^2$] | 5.15E-02 | 3.46E-02 | 5.78E-02 | 3.99E-02 | 2.02E-02 | 3.43E-02 |
| Sd [ft$^2$] | 0.55 | 0.37 | 0.62 | 0.43 | 0.22 | 0.369 |
| Revc | 3.6 Ω | 3.6 Ω | 3.0 Ω | 3.0 Ω | Dual 1.5 Ω | 2.5 Ω |
| Levc (at 2,000 Hz) | 1.81 mH | 2.16 mH | 2.27 mH | 1.91 mH | 1.08 mH (4 Ω) 0.27 mH (1 Ω) | 0.506 mH |
| Xmax [mm] | 11.7 | 6.3 | 8.8 | 6.5 | 2.8 | 9.1 |
| Xmax [In] | 0.46 | 0.25 | 0.35 | 0.26 | 0.11 | 0.36 |
| Zmax | 46.8 Ω | 67.8 Ω | 70.37 Ω | 40.99 Ω | 17.12 (4 Ω) 4.53 (1 Ω) | 74.61 Ω |
| Bl | 10.3 Tm | 12.1 Tm | 17 Tm | 12 Tm | 10 Tm (4 Ω) 5 Tm (1 Ω) | 16.150 Tm |
| Rms | 1.53 Ns/m | 1.50 Ns/m | 4.29 Ns/m | 3.79 Ns/m | 7.08 Ns/m | 3.617 Ns/m |
| Mms | 153.9 g | 124.7 g | 243 g | 171 g | 90 g | 158.99 g |
| Cms | 0.27 mm/N | 0.19 mm/N | 8.50E-05 m/N | 8.20E-05 m/N | 6.60E-05 m/N | 1.840E-04 m/N |
| Mg. Wt. | 840 g | 840 g | 2,030 g | 1,030 g | 840 g | 3,040 g |
| Flux Density | 619 mT | 552 mT | 4,500 Gauss | 5,600 Gauss | 6,900 Gauss | 5,100 Gauss |
| Hag [mm] | 8 | 8 | 10 | 10 | 8 | 35 |
| Hag [In] | 0.31 | 0.31 | 0.39 | 0.39 | 0.31 | 1.378 |
| Hvc [mm] | 31.3 | 20.5 | 28 | 23 | 13.6 | 17 |
| Hvc [In] | 1.23 | 0.81 | 1.10 | 0.91 | 0.54 | 0.660 |
| VC. Diameter | 40 mm | 35 mm | 55 mm | 48 mm | 40 mm | 76 mm |
| Eff | 0.17 % | 0.16 % | 0.23 % | 0.13 % | 0.08 % | 0.28 % |
| S.P.L. | 96 dB | 92 dB | 93 dB | 91 dB | 86 dB | 84.0 dB |
| Nominal Power | 350 W | 300 W | 400 W | 300 W | 150 W | 400 W |
| M.M.P. | 1,300 W | 1,100 W | 1,500 W | 1,200 W | 600 W | 800 W |
| Sp. Displacement [Liter] | 1.09 | 0.83 | 1.11 | 0.68 | 0.44 | 2.54 |
| Sp. Displacement [ft$^3$] | 0.038 | 0.029 | 0.039 | 0.024 | 0.016 | 0.090 |
| Recom. Enclosure [Liter] | 35.4 | 22.6 | 22.6 | 17.0 | 14.2 | 28.3 |
| Recom. Enclosure [ft$^3$] | 1.25 | 0.8 | 0.800 | 0.600 | 0.500 | 1.0 |
| F$_0$ (in Cabinet) | 48.5 Hz | 50.9 Hz | 58.0 | 61.0 | 73.0 | 42.4 |
| Q$_0$ (in Cabinet) | 1.60 | 1.02 | 0.97 | 1.40 | 1.10 | 0.417 |

# SPECIFICATIONS

## Subwoofer Enclosures

### SEALED ENCLOSURES

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

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

Disadvantages of a sealed enclosure design include: less efficient than a comparable vented enclosure and limited lower frequency extension.
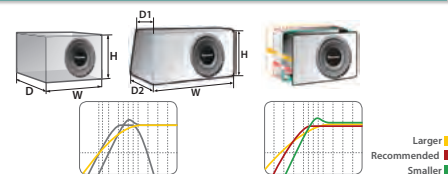
| Recommended Enclosure Volumes and Dimensions* | TS-W3003D4 | TS-W311D4 | TS-W311S4 | TS-W261D4 | TS-W261S4 | TS-W311 |
|---|---|---|---|---|---|---|
| Enclosure Volume (l) | | | | | | |
| Center | 35.4 | 35.4 | 35.4 | 22.6 | 22.6 | 35.4 |
| Box Dimensions: W x H x D (mm) | 396 x 314 x 396 | 396 x 396 x 314 | 396 x 396 x 314 | 351 x 351 x 269 | 351 x 351 x 269 | 396 x 396 x 314 |
| Min. | 24.1 | 24.1 | 24.1 | 18.4 | 18.4 | 24.1 |
| Max. | 49.5 | 49.5 | 49.5 | 35.4 | 35.4 | 49.5 |

| Recommended Enclosure Volumes and Dimensions* | TS-W306R | TS-W256R | TS-SW3002S4 | TS-SW2502S4 | TS-SW2002D2 |
|---|---|---|---|---|---|
| Enclosure Volume (l) | | | | | |
| Center | 35.4 | 22.6 | 22.6 | 17.0 | 14.2 |
| Box Dimensions: W x H x D (mm) | 396 x 396 x 314 | 351 x 351 x 269 | — | — | — |
| Box Dimensions: W x H x D1 x D2 (mm) | — | — | 769 x 357 x 104 x 168 | 714 x 320 x 99 x 156 | 626 x 313 x 108 x 143 |
| Min. | 24.1 | 18.4 | 14.2 | 9.9 | 4.2 |
| Max. | 49.5 | 35.4 | 28.3 | 19.8 | 14.2 |

*\* Measured externally. 19 mm MDF particle board recommended.*

### VENTED ENCLOSURES (BASS REFLEX)

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

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

Disadvantages of a vented enclosure design include: Higher distortion below the tuned frequency of the vent, more complex design and fabrication, larger in size than a sealed enclosure, and less-transient in-vehicle accuracy.
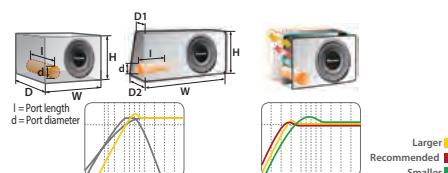
| Recommended Enclosure Volumes , Dimensions* and Port Size | TS-W3003D4 | TS-W311D4 | TS-W311S4 | TS-W261D4 | TS-W261S4 | TS-W311 |
|---|---|---|---|---|---|---|
| Enclosure Volume (l) | | | | | | |
| Center | 42.5 | 42.5 | 42.5 | 31.1 | 31.1 | 42.5 |
| Box Dimensions: W x H x D (mm) | 461 x 373 x 338 | 461 x 373 x 338 | 461 x 373 x 338 | 396 x 353 x 314 | 396 x 353 x 314 | 461 x 373 x 338 |
| Port Size: d x l (mm) | ø76 x 152 | ø76 x 165 | ø76 x 152 | ø76 x 178 | ø76 x 127 | ø76 x 127 |
| Min. | 35.4 | 35.4 | 35.4 | 25.5 | 25.5 | 35.4 |
| Max. | 56.6 | 56.6 | 56.6 | 42.5 | 42.5 | 56.6 |

| Recommended Enclosure Volumes , Dimensions* and Port Size | TS-W306R | TS-W256R | TS-SW3002S4 | TS-SW2502S4 | TS-SW2002D2 |
|---|---|---|---|---|---|
| Enclosure Volume (l) | | | | | |
| Center | 42.5 | 31.1 | 22.6 | 17.0 | 14.2 |
| Box Dimensions: W x H x D (mm) | 461 x 373 x 338 | 396 x 353 x 314 | — | — | — |
| Box Dimensions: W x H x D1 x D2 (mm) | — | — | 769 x 357 x 104 x 168 | 714 x 320 x 99 x 156 | 626 x 313 x 108 x 143 |
| Port Size: d x l (mm) | ø76 x 267 | ø76 x 165 | ø76 x 279 | ø76 x 330 | ø76 x 254 |
| Min. | 35.4 | 25.5 | 18.4 | 14.2 | 7.1 |
| Max. | 56.6 | 42.5 | 28.3 | 19.8 | 14.2 |

*\* Measured externally. 19 mm MDF particle board recommended.*

### BANDPASS ENCLOSURES

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

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

Disadvantages of a Bandpass enclosure design include: decreased frequency response, sluggish frequency response, extreme complexity in design and assembly, larger enclosure size, and decreased power handling.
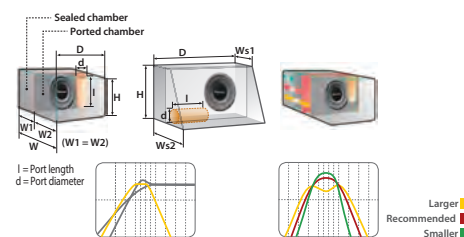
| Recommended Enclosure Volumes , Dimensions* and Port Size | TS-W306R | TS-W256R | TS-SW3002S4 | TS-SW2502S4 | TS-SW2002D2 |
|---|---|---|---|---|---|
| Enclosure Volume (l) | | | | | |
| Center (Sealed Chamber/Ported Chamber) | 25.5/25.5 | 17.0/17.0 | 17.0/17.0 | 12.7/12.7 | 11.3/11.3 |
| Box Dimensions: W x H x D (mm) | 481 x 385 x 385 | 449 x 332 x 332 | — | — | — |
| Box Dimensions: Ws1 x Ws2 x H x D (mm) | — | — | 174 x 314 x 388 x 559 | 193 x 283 x 338 x 509 | 172 x 263 x 313 x 552 |
| Port Size: d x l (mm) | ø76 x 64 | ø76 x 102 | ø76 x 127 | ø76 x 114 | ø76 x 165 |
| Min. (Sealed Chamber/Ported Chamber) | 19.8/19.8 | 12.7/12.7 | 14.2/14.2 | 9.9/9.9 | 7.1/7.1 |
| Max. (Sealed Chamber/Ported Chamber) | 31.1/31.1 | 22.6/22.6 | 22.6/22.6 | 17.0/17.0 | 11.3/11.3 |

### TURBO (High Output Bandpass)

| Recommended Enclosure Volumes , Dimensions* and Port Size | TS-W3003D4 | TS-W311D4 | TS-W311S4 | TS-W261D4 | TS-W261S4 | TS-W311 |
|---|---|---|---|---|---|---|
| Enclosure Volume (l) | | | | | | |
| Low (Sealed Chamber/Ported Chamber) | 16/98 | 16/98 | 16/98 | 12/85 | 12/85 | 16/98 |
| Mid (Sealed Chamber/Ported Chamber) | 16/88 | 16/88 | 16/88 | 12/75 | 12/75 | 16/88 |
| High (Sealed Chamber/Ported Chamber) | 16/78 | 16/78 | 16/78 | 12/65 | 12/65 | 16/78 |
| Box Dimensions: W x H x D (mm) | 438 x 488 x 638 | 438 x 488 x 638 | 438 x 488 x 638 | 411 x 478 x 586 | 411 x 478 x 586 | 438 x 488 x 638 |
| Port Size: w x h (mm) | 400 x 150 | 400 x 150 | 400 x 150 | 373 x 150 | 373 x 150 | 400 x 150 |

*\* Measured externally. 19 mm MDF particle board recommended.*

Enclosure for TURBO (High Output Bandpass)