Pioneer

Operating Instructions

ELITE

audio/video multi-channel receiver

VSX-31

VSX-30

IMPORTANT

![lightning flash symbol]

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION:
TO PREVENT THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

![exclamation point symbol]

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

D3-4-2-1-1_A1_En

IMPORTANT SAFETY INSTRUCTIONS

1) Read these instructions.
2) Keep these instructions.
3) Heed all warnings.
4) Follow all instructions.
5) Do not use this apparatus near water.
6) Clean only with dry cloth.
7) Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9) Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10) Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11) Only use attachments/accessories specified by the manufacturer.
12) Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

![cart tip-over warning symbol]

13) Unplug this apparatus during lightning storms or when unused for long periods of time.
14) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

D3-7-13-69_En

VENTILATION CAUTION
When installing this unit, make sure to leave space around the unit for ventilation to improve heat radiation (at least 40 cm at top, 10 cm at rear, and 20 cm at each side).

WARNING
Slots and openings in the cabinet are provided for ventilation to ensure reliable operation of the product, and to protect it from overheating. To prevent fire hazard, the openings should never be blocked or covered with items (such as newspapers, table-cloths, curtains) or by operating the equipment on thick carpet or a bed.

D3-4-2-1-7b*_A1_En

Operating Environment
Operating environment temperature and humidity:
+5 °C to +35 °C (+41 °F to +95 °F); less than 85 %RH (cooling vents not blocked)
Do not install this unit in a poorly ventilated area, or in locations exposed to high humidity or direct sunlight (or strong artificial light)

D3-4-2-1-7c*_A1_En

WARNING
To prevent a fire hazard, do not place any naked flame sources (such as a lighted candle) on the equipment.

D3-4-2-1-7a_A1_En

CAUTION
The ⏻**STANDBY/ON** switch on this unit will not completely shut off all power from the AC outlet. Since the power cord serves as the main disconnect device for the unit, you will need to unplug it from the AC outlet to shut down all power. Therefore, make sure the unit has been installed so that the power cord can be easily unplugged from the AC outlet in case of an accident. To avoid fire hazard, the power cord should also be unplugged from the AC outlet when left unused for a long period of time (for example, when on vacation).

D3-4-2-2-2a*_A1_En

Caution
To prevent fire hazard, the Class 2 Wiring Cable should be used for connection with speaker, and should be routed away from hazards to avoid damage to the insulation of the cable.

D3-7-13-67*_A1_En

Thank you for buying this Pioneer product. Please read through these operating instructions so you will know how to operate your model properly. After you have finished reading the instructions, put them away in a safe place for future reference.

Contents

06 Listening to your system

07 Control with HDMI function

08 Using other functions

09 Controlling the rest of your system

10 The Advanced MCACC menu

11 The System Setup and Other Setup menus

12 Additional information

Flow of settings on the receiver

The unit is a full-fledged AV receiver equipped with an abundance of functions and terminals. It can be used easily after following the procedure below to make the connections and settings.

The colors of the steps indicate the following:

Required setting item

Setting to be made as necessary

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1 Before you start
- Checking what's in the box (page 8)
- Loading the batteries (page 8)

⬇

2 Determining the speakers' application (page 17)
- 9.1 channel surround system (Front height)
- 9.1 channel surround system (Front wide)
- 7.1 channel surround system & Speaker B connection
- 5.1 channel surround system & Front Bi-amping connection (High quality surround)
- 5.1 channel surround system & ZONE 2 connection (Multi Zone)
- Some tips for improving sound quality (page 19)

⬇

3 Connecting the speakers
- Connecting the speakers (page 20)
- Installing your speaker system (page 21)
- Bi-amping your speakers (page 22)

⬇

4 Connecting the components
- About the audio connection (page 24)
- About the video converter (page 24)
- Connecting your TV and playback components (page 25)
- Connecting AM/FM antennas (page 31)
- Plugging in the receiver (page 40)

⬇

5 Power On

⬇

6 Changing the OSD display language (OSD Language) (page 41)

⬇

7 MCACC speaker settings
- Automatically conducting optimum sound tuning (Auto MCACC (page 41)

⬇

8 The Input Setup menu (page 44)
(When using connections other than the recommended connections)

⬇

9 Basic playback (page 46)

⬇

10 Adjusting the sound and picture quality as desired
- Using the various listening modes
- Better sound using Phase Control (page 66)
- Measuring the all EQ type (SYMMETRY/ALL CH ADJ/FRONT ALIGN) (page 91)
- Changing the channel level while listening (*Tip* on page 107)
- Switching on/off the Acoustic Calibration EQ, Sound retriever or Dialog Enhancement (page 72)
- Setting the PQLS function (page 70)
- Setting the Audio options (Tone, Loudness or Sound delay, etc.) (page 72)
- Setting the Video options (page 75)

⬇

11 Other optional adjustments and settings
- HDMI Setup (page 68)
- The Advanced MCACC menu (page 90)
- The System Setup and Other Setup menus (page 104)

⬇

12 Making maximum use of the remote control
- Operating multiple receivers (page 81)
- Setting the remote to control other components (page 81)
- Programming signals from other remote controls (page 82)

Chapter 1:
Before you start

Checking what's in the box

Please check that you've received the following supplied accessories:

- Setup microphone (cable: 5 m (16.4 ft.))
- Remote control unit
- AAA size IEC R03 dry cell batteries (to confirm system operation) x2
- AM loop antenna
- FM wire antenna
- iPod cable
- Power cord
- Warranty card
- These operating instructions

Installing the receiver

- When installing this unit, make sure to put it on a level and stable surface.

Don't install it on the following places:
– on a color TV (the screen may distort)
– near a cassette deck (or close to a device that gives off a magnetic field). This may interfere with the sound.
– in direct sunlight
– in damp or wet areas
– in extremely hot or cold areas
– in places where there is vibration or other movement
– in places that are very dusty
– in places that have hot fumes or oils (such as a kitchen)

- Do not touch this receiver's bottom panel while the power is on or just after it is turned off. The bottom panel becomes hot when the power is on (or right after it is turned off) and could cause burns.

Loading the batteries

The batteries included with the unit are to check initial operations; they may not last over a long period. We recommend using alkaline batteries that have a longer life.

⚠ **CAUTION**

Incorrect use of batteries may result in such hazards as leakage and bursting. Observe the following precautions:

- Never use new and old batteries together.
- Insert the plus and minus sides of the batteries properly according to the marks in the battery case.
- Batteries with the same shape may have different voltages. Do not use different batteries together.
- When disposing of used batteries, please comply with governmental regulations or environmental public instruction's rules that apply in your country or area.
- **WARNING**
  Do not use or store batteries in direct sunlight or other excessively hot place, such as inside a car or near a heater. This can cause batteries to leak, overheat, explode or catch fire. It can also reduce the life or performance of batteries.

(Symbol examples for batteries)
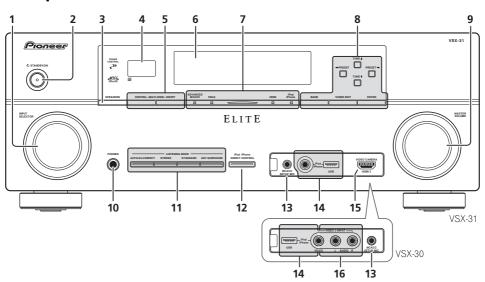
These symbols are only valid in the European Union.

Pb

K058c_A1_En

Chapter 2:
Controls and displays

Front panel

VSX-31

VSX-30

1 INPUT SELECTOR dial
Select an input function.

2 ⏻ STANDBY/ON
Switches the receiver between on and standby.

3 SPEAKERS
See *Switching the speaker terminals* on page 77.

4 Remote sensor
Receives the signals from the remote control (see *Operating range of remote control unit* on page 14).

5 MULTI-ZONE controls
If you've made MULTI-ZONE connections (see *MULTI-ZONE setup* on page 32) use these controls to control the sub zone from the main zone (see *Using the MULTI-ZONE controls* on page 77).

6 Character display
See *Display* on page 11.

7 Indicators
ADVANCED MCACC – Lights when **EQ** is set to **ON** in the **AUDIO PARAMETER** menu.

PQLS – Lights when the PQLS feature is active (page 70).

HDMI – Blinks when connecting an HDMI-equipped component; lights when the component is connected (page 25).

iPod/iPhone – Lights to indicate iPod/ iPhone is connected (page 47).

8 Tuner controls
BAND – Switches between the AM and FM radio bands (page 52).

TUNER EDIT – Use with **TUNE ↑/↓**, **PRESET ←/→** and **ENTER** to memorize and name stations for recall (page 52).

TUNE ↑/↓ – Find radio frequencies (page 52).

PRESET ←/→ – Find preset stations (page 52).

9 MASTER VOLUME dial

10 PHONES jack
Connect the headphones. When the headphones are connected, there is no sound output from the speakers.

11 Listening mode buttons
AUTO/ALC/DIRECT – Switches between Auto Surround (page 61), Auto Level Control mode and Stream Direct mode (page 64).

STEREO – Switches between stereo playback and Front Stage Surround Advance modes (page 64).

STANDARD – Press for Standard decoding and to switch between the various ⅅⅅ Pro Logic IIx and Neo:6 options (page 61).

ADV SURROUND – Switch between the various surround modes (page 63).

12 iPod iPhone DIRECT CONTROL
Change the receiver's input to the **iPod** and enable iPod operations on the iPod (page 48).

13 MCACC SETUP MIC jack
Connect the supplied microphone (page 41).
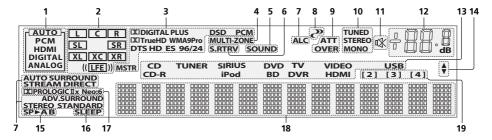
14 iPod/iPhone/USB terminals
Connect your Apple iPod as an audio and video source, or connect a USB device for audio and photo playback (page 36, 37).

15 *VSX-31 only:* **HDMI input connector**
Use for connection to compatible HDMI device (Video camera, etc.)(page 35).

16 *VSX-30 only:* **VIDEO 2 INPUT terminals**
Use to connect your portable equipment such as camcorders, video games and portable audio/video equipment (page 35).

Display

1 SIGNAL indicators

Light to indicate the currently selected input signal. **AUTO** lights when the receiver is set to select the input signal automatically (page 65).

2 Program format indicators

Light to indicate the channels to which digital signals are being input.

L/R – Left front/Right front channel

C – Center channel

SL/SR – Left surround/Right surround channel

LFE – Low frequency effects channel (the **(( ))** indicators light when an LFE signal is being input)

XL/**XR** – Two channels other than the ones above

XC – Either one channel other than the ones above, the mono surround channel or matrix encode flag

3 Digital format indicators

Light when a signal encoded in the corresponding format is detected.

⃞⃞ DIGITAL – Lights with Dolby Digital decoding.
⃞⃞ DIGITAL PLUS – Lights with Dolby Digital Plus decoding.
⃞⃞ TrueHD – Lights with Dolby TrueHD decoding.
DTS – Lights with DTS decoding.
DTS HD – Lights with DTS-HD decoding.
96/24 – Lights with DTS 96/24 decoding.
WMA9 Pro – Lights to indicate that a WMA9 Pro signal is being decoded.
DSD PCM – Light during DSD (Direct Stream Digital) to PCM conversion with SACDs.
PCM – Lights during playback of PCM signals.
MSTR – Lights during playback of DTS-HD Master Audio signal.

4 MULTI-ZONE

Lights when the MULTI-ZONE feature is active (page 77).

5 SOUND

Lights when any of the Midnight, Loudness or tone controls feature is selected (page 72).
Lights when Dialog Enhancement is switched on.

6 S.RTRV

Lights when the Sound Retriever function is active (page 73).

7 Listening mode indicators

AUTO SURROUND – Lights when the Auto Surround feature is switched on (page 61).

ALC – Lights when the ALC (Auto level control) mode is selected (page 64).

STREAM DIRECT – Lights when Direct/ Pure Direct is selected (page 64).

ADV.SURROUND – Lights when one of the Advanced Surround modes has been selected (page 63).

STEREO – Lights when stereo listening is switched on (page 63).

STANDARD – Lights when one of the Standard Surround modes is switched on (page 61).

8 ↻ (PHASE CONTROL)

Lights when Phase Control is switched on (page 66).

9 Analog signal indicators
Light to indicate reducing the level of an analog signal (page 79).

10 Tuner indicators
TUNED – Lights when a broadcast is being received.

STEREO – Lights when a stereo FM broadcast is being received in auto stereo mode.

MONO – Lights when the mono mode is set using **MPX**.

11 ⬛️
Lights when the sound is muted (page 14).

12 Master volume level
Shows the overall volume level.
"**---**" indicates the minimum level, and "**+12dB**" indicates the maximum level.

13 Input function indicators
Light to indicate the input function you have selected.

14 Scroll indicators
Light when there are more selectable items when making the various settings.

15 Speaker indicators
Indicates the speaker terminal, **A** and/or **B**, to which audio signal output is currently set (page 77).

16 SLEEP
Lights when the receiver is in sleep mode (page 79).

17 Matrix decoding format indicators
⬛️PRO LOGIC IIx – This lights to indicate ⬛️ Pro Logic II / ⬛️ Pro Logic IIx decoding (page 61).

Neo:6 – When one of the Neo:6 modes of the receiver is on, this lights to indicate Neo:6 processing (page 61).

18 Character display
Displays various system information.
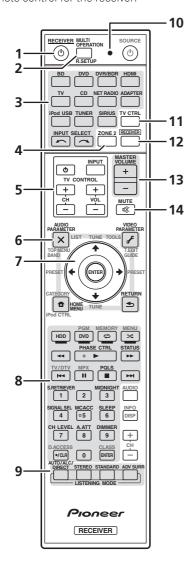
19 Remote control mode indicator
Lights to indicate the receiver's remote control mode setting. (Not displayed when set to **1**.) (page 81)

Remote control

This section explains how to operate the remote control for the receiver.

The remote has been conveniently color-coded according to component control using the following system:

- **White** – Receiver control, TV control
- **Blue** – Other controls (See page 47, 49, 52, 54, 56, 58 and 87.)

1   ⏻ RECEIVER
This switches between standby and on for this receiver.

2   MULTI OPERATION – Use to perform multi operations (page 85).

   R.SETUP – Use to input the preset code when making remote control settings and to set the remote control mode (page 81).

3   Input function buttons
Press to select control of other components (page 81).

4   ZONE 2
Switch to perform operations in the sub zone (page 78).

5   TV CONTROL buttons
These buttons are dedicated to control the TV assigned to the **TV CTRL** button.

   ⏻ – Turn on/off the power of the TV.

   INPUT – Select the TV input signal.

   CH +/– – Select channels.

   VOL +/– – Adjust the volume on your TV.

6   Receiver controls
Press **RECEIVER** first to access:

   AUDIO PARAMETER – Use to access the Audio options (page 72).

   VIDEO PARAMETER – Use to access the Video options (page 75).

   HOME MENU – Use to access the Home Menu (pages 41, 44, 68, 90, 104 and 110).

   RETURN – Press to confirm and exit the current menu screen.

7 ↑/↓/←/→, ENTER
Use the arrow buttons when setting up your surround sound system (page 90) and the Audio or Video options (page 72 or 75).

8 Receiver controls
Press **RECEIVER** first to access:

PHASE CTRL – Switch on/off Phase Control (page 66).

STATUS – Check selected receiver settings (page 79).

PQLS – Select the PQLS setting (page 70).

S.RETRIEVER – Press to restore CD quality sound to compressed audio sources (page 73).

MIDNIGHT – Switches to Midnight or Loudness listening (page 72).

SIGNAL SEL – Select an input signal (page 65).

MCACC – Switch between MCACC presets (page 65).

SLEEP – Use to put the receiver in sleep mode and select the amount of time before sleep (page 79).

CH LEVEL – Press repeatedly to select a channel, then use ←/→ to adjust the level (page 107).

A.ATT – Attenuates (lowers) the level of an analog input signal to prevent distortion (page 79).

DIMMER – Dims or brightens the display (page 79).

9 LISTENING MODE controls
AUTO/ALC/DIRECT – Switches between Auto Surround (page 61), Auto Level Control mode and Stream Direct mode (page 64).

STEREO – Switches between stereo playback and Front Stage Surround Advance modes (page 64).

STANDARD – Press for Standard decoding and to switch between the various □□ Pro Logic IIx and Neo:6 options (page 61).

ADV SURR – Switch between the various surround modes (page 63).

10 Remote control LED
Lights when a command is sent from the remote control (page 81).

11 TV CTRL
Set the preset code of your TV's manufacturer when controlling TV (page 82).

12 RECEIVER
Switches the remote to control the receiver (used to select the white commands (**SIGNAL SEL**, etc.)).

Switch to perform operations in the main zone. Also use to set up surround sound.

13 MASTER VOLUME +/–
Set the listening volume.
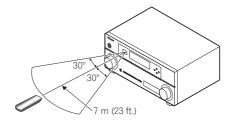
14 MUTE
Mutes the sound or restores the sound if it has been muted (adjusting the volume also restores the sound).

Operating range of remote control unit
The remote control may not work properly if:

- There are obstacles between the remote control and the receiver's remote sensor.
- Direct sunlight or fluorescent light is shining onto the remote sensor.
- The receiver is located near a device that is emitting infrared rays.
- The receiver is operated simultaneously with another infrared remote control unit.

30°
30°
7 m (23 ft.)
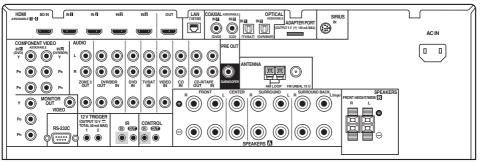
Chapter 3:
Connecting your equipment

This receiver provides you with many connection possibilities, but it doesn't have to be difficult. This page explains the kinds of components you can connect to make up your home theater system.
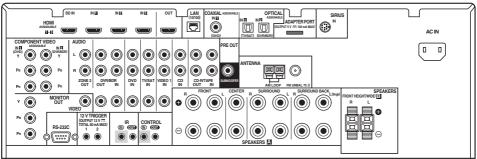
Important

• Illustration shows the VSX-31, however connections for the VSX-30 are the same except where noted.

Rear panel

VSX-31

VSX-30

Note

• The RS-232C terminal is exclusively for the installer.

⚠ CAUTION

• Before making or changing the connections, switch off the power and disconnect the power cord from the power outlet. Plugging in should be the final step.

🔧 Important

• The input functions below are assigned by default to the receiver's different input terminals. Refer to *The Input Setup menu* on page 44 to change the assignments if other connections are used.

Input function	Input Terminals		
	Digital	**HDMI**	**Component**
DVD	**COAX-1**		**IN 1**
BD		(**BD**)	
TV/SAT	**OPT-1**		
DVR/BDR	**OPT-2**		**IN 2**
HDMI 1		(**HDMI-1**)	
HDMI 2		(**HDMI-2**)	
HDMI 3		(**HDMI-3**)	
HDMI 4[a]		(**HDMI-4**)	
HDMI 5[a] (front panel)		(**HDMI-5**)	
CD	**COAX-2**[a]		

a. VSX-31 only

Determining the speakers' application

This unit permits you to build various surround systems, in accordance with the number of speakers you have.
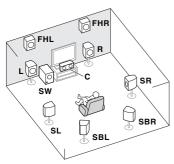
- Be sure to connect speakers to the front left and right channels (**L** and **R**).
- It is also possible to only connect one of the surround back speakers (**SB**) or neither.

Choose one from Plans [A] to [E] below.

[A] 9.1 channel surround system (Front height)

Default setting

- **Speaker System setting: Normal(SB/FH)**
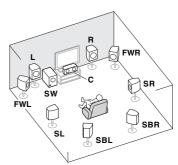
A 9.1 ch surround system connects the left and right front speakers (**L**/**R**), the center speaker (**C**), the left and right front height speakers (**FHL**/**FHR**), the left and right surround speakers (**SL**/**SR**), the left and right surround back speakers (**SBL**/**SBR**), and the subwoofer (**SW**).

This surround system produces a more true-to-life sound from above.

[B] 9.1 channel surround system (Front wide)

- **Speaker System setting: Normal(SB/FW)**
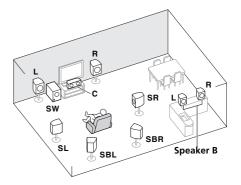
This plan replaces the left and right front height speakers shown in [A] with the left and right front wide speakers (**FWL**/**FWR**).

This surround system produces a true-to-life sound over a wider area.

[C] 7.1 channel surround system & Speaker B connection

- **Speaker System setting: Speaker B**
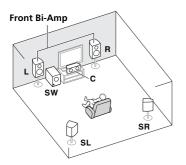
With these connections you can simultaneously enjoy 5.1-channel surround sound in the main zone with stereo playback of the same sound on the B speakers. The same connections also allow for 7.1-channel surround sound in the main zone when not using the B speakers.

[D] 5.1 channel surround system & Front Bi-amping connection (High quality surround)

• **Speaker System setting: Front Bi-Amp**
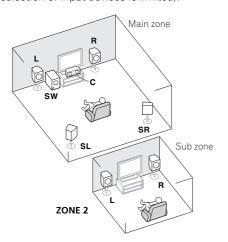
Bi-amping connection of the front speakers for high sound quality with 5.1-channel surround sound.

[E] 5.1 channel surround system & ZONE 2 connection (Multi Zone)

• **Speaker System setting: ZONE 2**

With these connections you can simultaneously enjoy 5.1-channel surround sound in the main zone with stereo playback on another component in ZONE 2 (The selection of input devices is limited).

⚠️ Important

• The **Speaker System** setting must be made if you use any of the connections shown above other than [A] (see *Speaker system setting* on page 105).

• Sound does not come through simultaneously from the front height, front wide, speaker B and surround back speakers. Output speakers are different depending on the input signal or listening mode.
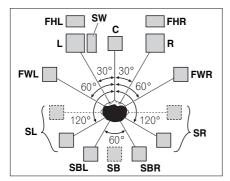
Other speaker connections

• Your favorite speaker connections can be selected even if you have fewer than 5.1 speakers (except front left/right speakers).

• When not connecting a subwoofer, connect speakers with low frequency reproduction capabilities to the front channel. (The subwoofer's low frequency component is played from the front speakers, so the speakers could be damaged.)

• **After connecting, be sure to conduct the Auto MCACC (speaker environment setting) procedure.**
  See *Automatically conducting optimum sound tuning (Auto MCACC* on page 41.

Placing the speakers

Refer to the chart below for placement of the speakers you intend to connect.

- Place the surround speakers at 120º from the center. If you, (1) use the surround back speaker, and, (2) don't use the front height speakers / front wide speakers, we recommend placing the surround speaker right beside you.
- If you intend to connect only one surround back speaker, place it directly behind you.
- Place the left and right front height speakers at least 1 m (3.3 ft.) directly above the left and right front speakers.

Some tips for improving sound quality

Where you put your speakers in the room has a big effect on the quality of the sound. The following guidelines should help you to get the best sound from your system.

- The subwoofer can be placed on the floor. Ideally, the other speakers should be at about ear-level when you're listening to them. Putting the speakers on the floor (except the subwoofer), or mounting them very high on a wall is not recommended.
- For the best stereo effect, place the front speakers 2 m to 3 m (6 ft. to 9 ft.) apart, at equal distance from the TV.
- If you're going to place speakers around your CRT TV, use shielded speakers or place the speakers at a sufficient distance from your CRT TV.
- If you're using a center speaker, place the front speakers at a wider angle. If not, place them at a narrower angle.
- Place the center speaker above or below the TV so that the sound of the center channel is localized at the TV screen. Also, make sure the center speaker does not cross the line formed by the leading edge of the front left and right speakers.
- It is best to angle the speakers towards the listening position. The angle depends on the size of the room. Use less of an angle for bigger rooms.
- Surround and surround back speakers should be positioned 60 cm to 90 cm (2 ft. to 3 ft.) higher than your ears and tilted slightly downward. Make sure the speakers don't face each other. For DVD-Audio, the speakers should be more directly behind the listener than for home theater playback.
- Try not to place the surround speakers farther away from the listening position than the front and center speakers. Doing so can weaken the surround sound effect.

Connecting the speakers

Each speaker connection on the receiver comprises a positive (+) and negative (–) terminal. Make sure to match these up with the terminals on the speakers themselves.
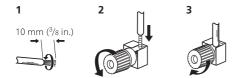
⚠ CAUTION

• These speaker terminals carry **HAZARDOUS LIVE voltage**. To prevent the risk of electric shock when connecting or disconnecting the speaker cables, disconnect the power cord before touching any uninsulated parts.

• Make sure that all the bare speaker wire is twisted together and inserted fully into the speaker terminal. If any of the bare speaker wire touches the back panel it may cause the power to cut off as a safety measure.

Bare wire connections

A-Speaker terminals:

1 **Twist exposed wire strands together.**
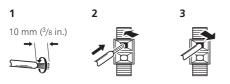
2 **Loosen terminal and insert exposed wire.**

3 **Tighten terminal.**

1   **2**   **3**

10 mm (3/8 in.)

B-Speaker terminals:

1 **Twist exposed wire strands together.**

2 **Push open the tabs and insert exposed wire.**

3 **Release the tabs.**

1   **2**   **3**

10 mm (3/8 in.)

Banana plug connections

(A-Speaker terminals only)

If you want to use speaker cables terminated with banana plugs, screw the speaker terminal fully shut, then plug the banana plug into the end of the speaker terminal.

🔧 Important

• Please refer to the manual that came with your speakers for details on how to connect the other end of the speaker cables to your speakers.

• Use an RCA cable to connect the subwoofer. It is not possible to connect using speaker cables.
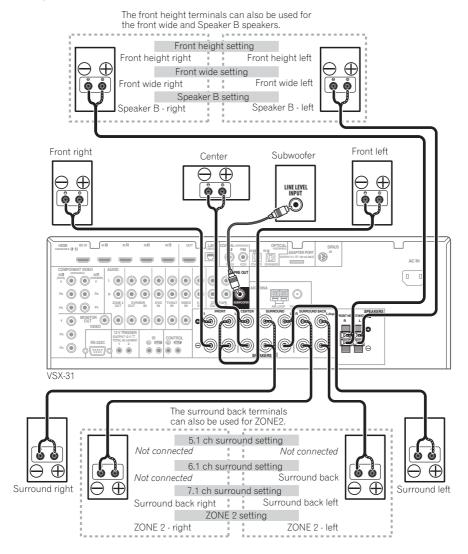
⚠ CAUTION
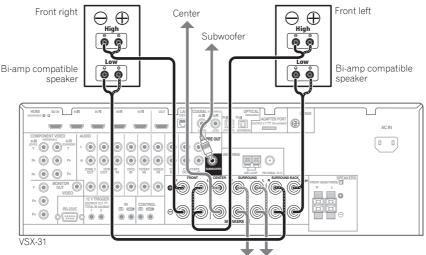
• Make sure that all speakers are securely installed. This not only improves sound quality, but also reduces the risk of damage or injury resulting from speakers being knocked over or falling in the event of external shocks such as earthquakes.

Installing your speaker system

At the very least, front left and right speakers only are necessary. Note that your main surround speakers should always be connected as a pair, but you can connect just one surround back speaker if you like (it must be connected to the left surround back terminal).

The front height terminals can also be used for the front wide and Speaker B speakers.

Front height setting
Front height right — Front height left
Front wide setting
Front wide right — Front wide left
Speaker B setting
Speaker B - right — Speaker B - left

Front right   Center   Subwoofer   Front left

LINE LEVEL INPUT

VSX-31

The surround back terminals can also be used for ZONE2.

5.1 ch surround setting
Not connected — *Not connected*
6.1 ch surround setting
Not connected — Surround back
7.1 ch surround setting
Surround back right — Surround back left
ZONE 2 setting
ZONE 2 - right — ZONE 2 - left

Surround right   Surround left

Bi-amping your speakers

Front right   Center   Front left
Subwoofer
Bi-amp compatible speaker   Bi-amp compatible speaker

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Surround right   Surround left

Bi-amping is when you connect the high frequency driver and low frequency driver of your speakers to different amplifiers for better crossover performance. Your speakers must be bi-ampable to do this (having separate terminals for high and low) and the sound improvement will depend on the kind of speakers you're using.

⚠ CAUTION
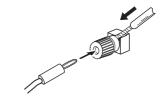
- Most speakers with both **High** and **Low** terminals have two metal plates that connect the **High** to the **Low** terminals. These must be removed when you are bi-amping the speakers or you could severely damage the amplifier. See your speaker manual for more information.

- If your speakers have a removable crossover network, make sure you do not remove it for bi-amping. Doing so may damage your speakers.

Bi-wiring your speakers

Your speakers can also be bi-wired if they support bi-amping.

- With these connections, the **Speaker System** setting makes no difference.

- **To bi-wire a speaker, connect two speaker cords to the speaker terminal on the receiver.** Using a banana plug for the second connection is recommended.

⚠ CAUTION

- Don't connect different speakers from the same terminal in this way.

- When bi-wiring as well, heed the cautions for bi-amping shown at the left.

Selecting the Speaker system

The front height terminals can be used for front wide and Speaker B connections, in addition to for the front height speakers. Also, the surround back terminals can be used for bi-amping and ZONE 2 connections, in addition to for the surround back speakers. Make this setting according to the application.

Front height setup

Default setting

1   Connect a pair of speakers to the front height speaker terminals.
See *Connecting the speakers* on page 20.

2   If necessary, select 'Normal(SB/FH)' from the Speaker System menu.
See *Speaker system setting* on page 105 to do this.

Front wide setup

1   Connect a pair of speakers to the front height speaker terminals.
See *Connecting the speakers* on page 20.

2   Select 'Normal(SB/FW)' from the Speaker System menu.
See *Speaker system setting* on page 105 to do this.

Speaker B setup

You can listen to stereo playback in another room.

1   Connect a pair of speakers to the front height speaker terminals.
See *Connecting the speakers* on page 20.

2   Select 'Speaker B' from the Speaker System menu.
See *Speaker system setting* on page 105 to do this.

Bi-Amping setup

Bi-amping connection of the front speakers for high sound quality with 5.1-channel surround sound.

1   Connect a Bi-amp compatible speakers to the front and surround back speaker terminals.
See *Bi-amping your speakers* on page 22.

2   Select 'Front Bi-Amp' from the Speaker System menu.
See *Speaker system setting* on page 105 to do this.

ZONE 2 setup

With these connections you can simultaneously enjoy 5.1-channel surround sound in the main zone with stereo playback on another component in ZONE 2.

1   Connect a pair of speakers to the surround back speaker terminals.
See *Connecting the speakers* on page 20.
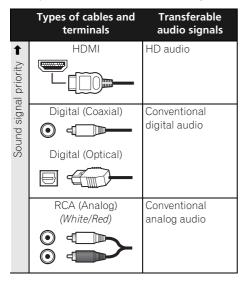
2   Select 'ZONE 2' from the Speaker System menu.
See *Speaker system setting* on page 105 to do this.

About the audio connection

There are several types of audio input and output terminals on this receiver. The receiver selects the first available signal in the following order when you choose **AUTO** as the input signal:

	Types of cables and terminals	Transferable audio signals
↑ Sound signal priority	HDMI	HD audio
	Digital (Coaxial)	Conventional digital audio
	Digital (Optical)	
	RCA (Analog) *(White/Red)*	Conventional analog audio

- With an HDMI cable, video and audio signals can be transferred in high quality over a single cable.
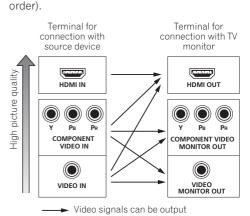
⚠ CAUTION

- When connecting optical cables, be careful when inserting the plug not to damage the shutter protecting the optical socket.

- When storing optical cable, coil loosely. The cable may be damaged if bent around sharp corners.

About the video converter

The video converter ensures that all video sources are output through all of the **MONITOR OUT** jacks. The only exception is HDMI: since this resolution cannot be downsampled, you must connect your monitor/TV to the receiver's HDMI video outputs when connecting this video source.[1]

If several video components are assigned to the same input function (see *The Input Setup menu* on page 44), the converter gives priority to HDMI, component, then composite (in that order).

Video signals can be output

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📝 **Note**
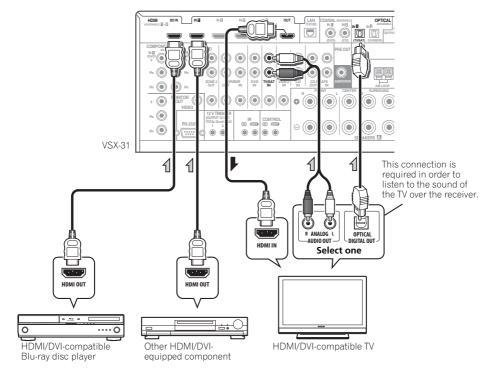
1 • If the video signal does not appear on your TV, try adjusting the resolution settings on your component or display. Note that some components (such as video game units) have resolutions that may not be converted. In this case, try switching Digital Video Conversion (in *Setting the Video options* on page 75) **OFF**.

• The signal input resolutions that can be converted from the component video input for the HDMI output are 480i/576i, 480p/576p, 720p and 1080i. 1080p signal cannot be converted.

• Only signals with an input resolution of 480i/576i can be converted from the component video input for the composite **MONITOR OUT** terminals.

Connecting your TV and playback components

Connecting using HDMI

If you have an HDMI or DVI (with HDCP) equipped component (**BD**: Blu-ray disc player, etc.), you can connect it to this receiver using a commercially available HDMI cable.

If the TV and playback components support the **Control** with HDMI function, the convenient **Control** with HDMI functions can be used (see *Control with HDMI function* on page 67).

VSX-31

This connection is required in order to listen to the sound of the TV over the receiver.

Select one

HDMI OUT

HDMI OUT

HDMI IN

R ANALOG L — AUDIO OUT —

OPTICAL DIGITAL OUT —

HDMI/DVI-compatible Blu-ray disc player

Other HDMI/DVI-equipped component

HDMI/DVI-compatible TV

- For input components, connections other than HDMI connections are also possible (see *Connecting your DVD player with no HDMI output* on page 27).
- If you want to listen to the sound of the TV over the receiver, connect the receiver and TV with audio cables.

About HDMI[1]

The HDMI connection transfers uncompressed digital video, as well as almost every kind of digital audio that the connected component is compatible with, including DVD-Video, DVD-Audio, SACD, Dolby Digital Plus, Dolby TrueHD, DTS-HD Master Audio (see below for limitations), Video CD/Super VCD and CD. See *About the video converter* on page 24 for more on HDMI compatibility.

This receiver incorporates High-Definition Multimedia Interface (HDMI®) technology.

This receiver supports the functions described below through HDMI connections.[2]

- Digital transfer of uncompressed video (contents protected by HDCP (1080p/24, 1080p/60, etc.))
- 3D signal transfer[3]
- Deep Color signal transfer[3]
- x.v.Color signal transfer[3]
- Input of multi-channel linear PCM digital audio signals (192 kHz or less) for up to 8 channels

- Input of the following digital audio formats:[4]
  – Dolby Digital, Dolby Digital Plus, DTS, High bitrate audio (Dolby TrueHD, DTS-HD Master Audio, DTS-HD High Resolution Audio), DVD-Audio, CD, SACD (DSD signal), Video CD, Super VCD
- Synchronized operation with components using the **Control** with HDMI function (see *Control with HDMI function* on page 67).

HDMI, the HDMI Logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing, LLC in the United States and other countries.
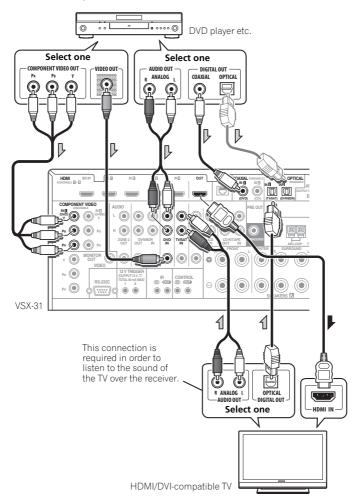
"x.v.Color" and x.v.Color logo are trademarks of Sony Corporation.

✎ Note

1 • An HDMI connection can only be made with DVI-equipped components compatible with both DVI and High Bandwidth Digital Content Protection (HDCP). If you choose to connect to a DVI connector, you will need a separate adaptor (DVI→HDMI) to do so. A DVI connection, however, does not support audio signals. Consult your local audio dealer for more information.
 • If you connect a component that is not compatible with HDCP, an **HDCP ERROR** message is displayed on the front panel display. Some components that are compatible with HDCP still cause this message to be displayed, but so long as there is no problem with displaying video this is not a malfunction.
 • Depending on the component you have connected, using a DVI connection may result in unreliable signal transfers.
 • This receiver supports SACD, Dolby Digital Plus, Dolby TrueHD and DTS-HD Master Audio. To take advantage of these formats, however, make sure that the component connected to this receiver also supports the corresponding format.
2 • Use a High Speed HDMI® cable. If an HDMI cable other than a High Speed HDMI® cable is used, it may not work properly.
 • When an HDMI cable with a built-in equalizer is connected, it may not operate properly.
3 Signal transfer is only possible when connected to a compatible component.
4 • HDMI format digital audio transmissions require a longer time to be recognized. Due to this, interruption in the audio may occur when switching between audio formats or beginning playback.
 • Turning on/off the device connected to this unit's HDMI OUT terminal during playback, or disconnecting/connecting the HDMI cable during playback, may cause noise or interrupted audio.

Connecting your DVD player with no HDMI output

This diagram shows connections of a TV (with HDMI input) and DVD player (or other playback component with no HDMI output) to the receiver.
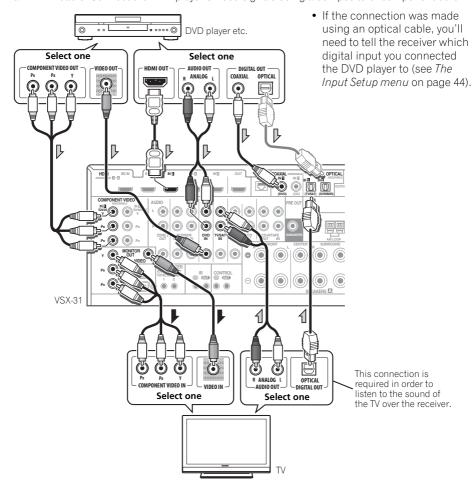
DVD player etc.

HDMI/DVI-compatible TV

This connection is required in order to listen to the sound of the TV over the receiver.

VSX-31

- If you want to listen to the sound of the TV over the receiver, connect the receiver and TV with audio cables.
- If the connection was made using an optical cable, you'll need to tell the receiver which digital input you connected the DVD player to (see *The Input Setup menu* on page 44).

Connecting your TV with no HDMI input

This diagram shows connections of a TV (with no HDMI input) and DVD player (or other playback component) to the receiver.

* With these connections, the picture is not output to the TV even if the DVD player is connected with an HDMI cable. Connect the DVD player's video signals using a composite or component cord.

* If the connection was made using an optical cable, you'll need to tell the receiver which digital input you connected the DVD player to (see *The Input Setup menu* on page 44).

This connection is required in order to listen to the sound of the TV over the receiver.
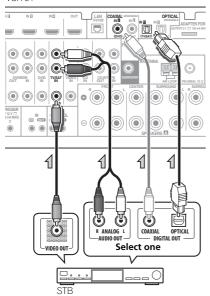
* Connect using an HDMI cable to listen to HD audio on the receiver. Do not use an HDMI cable to input video signals.
Depending on the video component, it may not be possible to output signals connected by HDMI and other methods simultaneously, and it may be necessary to make output settings. Please refer to the operating instructions supplied with your component for more information.

Connecting a satellite/cable receiver or other set-top box

Satellite and cable receivers, and terrestrial digital TV tuners are all examples of so-called 'set-top boxes'.

VSX-31
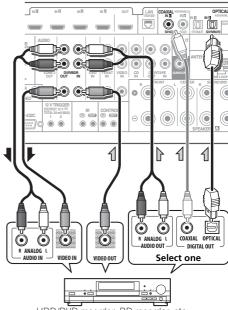
STB

• If the connection was made using a coaxial cable, you'll need to tell the receiver which digital input you connected the set-top box to (see *The Input Setup menu* on page 44).

Connecting an HDD/DVD recorder, BD recorder and other video sources

This receiver has two sets of audio/video inputs and outputs suitable for connecting analog or digital video devices, including HDD/DVD recorders and BD recorders.

VSX-31
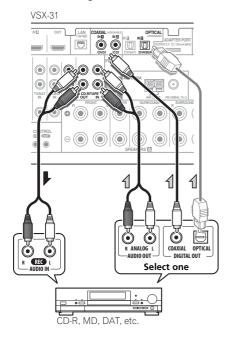
HDD/DVD recorder, BD recorder, etc.

• If the connection was made using a coaxial cable, you'll need to tell the receiver which digital input you connected the recorder to (see *The Input Setup menu* on page 44).

• In order to record, you must connect the analog audio cables (the digital connection is for playback only).

Connecting other audio components

This receiver has both digital and analog inputs, allowing you to connect audio components for playback.

One of these inputs have corresponding outputs for use with analog audio recorders.

VSX-31

CD-R, MD, DAT, etc.

• If the connection was made using an optical cable, you'll need to tell the receiver which digital input you connected the component to (see *The Input Setup menu* on page 44).

• If your turntable has line-level outputs (i.e., it has a built-in phono pre-amp), connect it to the **CD** inputs instead.

• If you're connecting a recorder, connect the analog audio outputs to the analog audio inputs on the recorder.

About the WMA9 Pro decoder
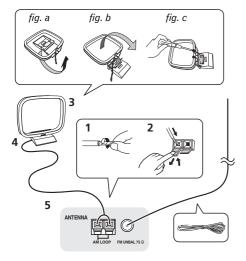
This unit has an on-board Windows Media™ Audio 9 Professional[1] (WMA9 Pro) decoder, so it is possible to playback WMA9 Pro-encoded audio using HDMI, coaxial or optical digital connection when connected to a WMA9 Pro-compatible player. However, the connected DVD player, set-top box, etc. must be able to output WMA9 Pro format audio signals through a coaxial or optical digital output.

📝 **Note**

1 • *Windows Media and the Windows logo are trademarks or registered trademarks of Microsoft Corporation in the United States and/or other countries.*
 • With WMA9 Pro, sound problems may occur depending on your computer system. Note that WMA9 Pro 96 kHz sources will be downsampled to 48 kHz.

Connecting AM/FM antennas

Connect the AM loop antenna and the FM wire antenna as shown below. To improve reception and sound quality, connect external antennas (see *Connecting external antennas* below).

fig. a   fig. b   fig. c

1   Pull off the protective shields of both AM antenna wires.

2   Push open the tabs, then insert one wire fully into each terminal, then release the tabs to secure the AM antenna wires.

3   Fix the AM loop antenna to the attached stand.
To fix the stand to the antenna, bend in the direction indicated by the arrow (*fig. a*) then clip the loop onto the stand (*fig. b*).

  • If you plan to mount the AM antenna to a wall or other surface, secure the stand with screws (*fig. c*) before clipping the loop to the stand. Make sure the reception is clear.
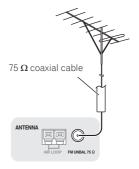
4   Place the AM antenna on a flat surface and in a direction giving the best reception.

5   Connect the FM wire antenna into the FM antenna socket.
For best results, extend the FM antenna fully and fix to a wall or door frame. Don't drape loosely or leave coiled up.
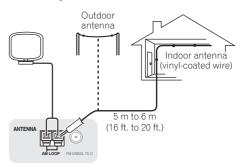
Connecting external antennas

To improve FM reception connect an external FM antenna to **FM UNBAL 75** Ω.

75 Ω coaxial cable

To improve AM reception, connect a 5 m to 6 m (16 ft. to 20 ft.) length of vinyl-coated wire to the **AM LOOP** terminals without disconnecting the supplied AM loop antenna.

For the best possible reception, suspend horizontally outdoors.

Outdoor antenna

Indoor antenna (vinyl-coated wire)

5 m to 6 m (16 ft. to 20 ft.)

MULTI-ZONE setup

This receiver can power up to two independent systems in separate rooms after you have made the proper MULTI-ZONE connections.

Different sources can be playing in two zones at the same time or, depending on your needs, the same source can also be used. The main and sub zone have independent power (the main zone power can be off while sub zone is on) and the sub zone can be controlled by the remote or front panel controls.

Making MULTI-ZONE connections

It is possible to make these connections if you have a separate speakers and TV monitor[1] for the sub zone (**ZONE 2**). You will also need a separate amplifier if you are not using the *MULTI-ZONE setup using speaker terminals (ZONE 2)* on page 33 for the sub zone.

MULTI-ZONE listening options

The following table shows the signals that can be output to ZONE 2:

Sub Zone	Input functions available
ZONE 2	DVD, TV/SAT, DVR/BDR, VIDEO[a], VIDEO1/2[b], INTERNET RADIO[a], iPod/USB[a], CD, CD-R/TAPE, TUNER, ADAPTER PORT, SIRIUS
	(Outputs analog audio and composite video.)
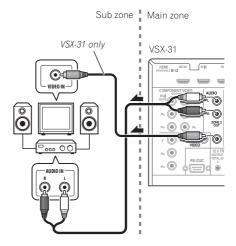
a. VSX-31 only.
b. VSX-30 only.

Basic MULTI-ZONE setup (ZONE 2)
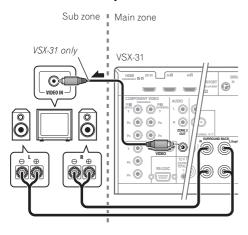
1   Connect a separate amplifier to the AUDIO ZONE 2 OUT jacks and a TV monitor[1] to the VIDEO ZONE 2 OUT jack, both on this receiver.

2   Connect a pair of speakers to the sub zone amplifier.

Sub zone | Main zone

VSX-31 only | VSX-31

Note
1 VSX-30 model cannot connect the TV monitor for sub zone.

MULTI-ZONE setup using speaker terminals (ZONE 2)
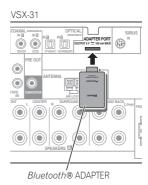
You must select **ZONE 2** in *Speaker system setting* on page 105 to use this setup.

1   Connect a pair of speakers to the surround back speaker terminals on this receiver.

2   *VSX-31 only:* **Connect a TV monitor to the VIDEO ZONE 2 OUT jacks on this receiver.**

Connecting Optional *Bluetooth* ADAPTER

When the *Bluetooth* ADAPTER (Pioneer Model No. AS-BT100) is connected to this receiver, a product equipped with *Bluetooth* wireless technology (portable cell phone, digital music player, etc.) can be used to listen to music wirelessly.[1]

Bluetooth® ADAPTER

•   **Switch the receiver into standby and connect *Bluetooth* ADAPTER to the ADAPTER PORT.**
    • For instructions on playing the contents of *Bluetooth* wireless technology device, see *Bluetooth® ADAPTER for Wireless Enjoyment of Music* on page 54.

Important
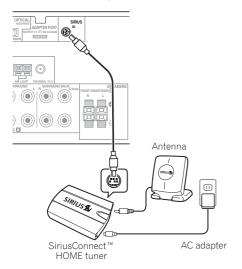
• Do not move the receiver with the *Bluetooth* ADAPTER connected. Doing so could cause damage or faulty contact.

Note
1 • The *Bluetooth* wireless technology enabled device must supports A2DP profiles.
  • Pioneer does not guarantee proper connection and operation of this unit with all *Bluetooth* wireless technology enabled devices.

Connecting a SiriusConnect™ Tuner

To receive SIRIUS Satellite Radio broadcasts, you will need to activate your SiriusConnect™ tuner.

Antenna

SiriusConnect™ HOME tuner

AC adapter
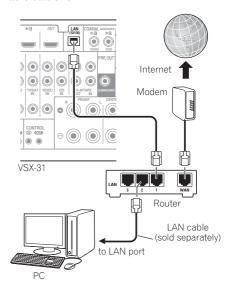
You will also need to connect the antenna and AC adapter to the SiriusConnect™ tuner.

• For instructions on playing the SIRIUS Radio, see *Listening to Satellite Radio* on page 58.

Connecting to the network through LAN interface

By connecting this receiver to the network via the LAN terminal, you can listen to Internet radio stations.[1]

Internet

Modem

VSX-31

Router

LAN cable (sold separately)

to LAN port

PC

Connect the LAN terminal on this receiver to the LAN terminal on your router (with or without the built-in DHCP server function) with a straight LAN cable (CAT 5 or higher).

Turn on the DHCP server function of your router. In case your router does not have the built-in DHCP server function, it is necessary to set up the network manually. For details, see *Network Setup menu* on page 108.

LAN terminal specifications

LAN terminal . . . . .Ethernet jack 10BASE-T/100BASE-TX

📝 **Note**
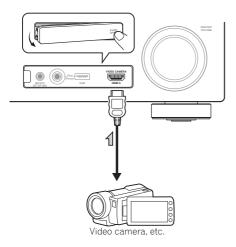
1 To listen to Internet radio stations, you must sign a contract with an ISP (Internet Service Provider) beforehand.

Connecting an HDMI-equipped component to the front panel input

(VSX-31 only)
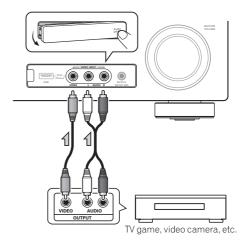
There is an HDMI input terminal on the front panel. High quality pictures can be viewed via the receiver simply by connecting an HDMI-equipped video camera with a single HDMI cable. HDMI-equipped components other than video cameras can also be connected to this terminal.

Video camera, etc.

Connecting to the front panel video terminal

(VSX-30 only)

Front video connections are accessed via the **INPUT SELECTOR** dial (front panel) or **INPUT SELECT** buttons (remote control). There are standard audio/video jacks. Hook them up the same way you made the rear panel connections.

TV game, video camera, etc.
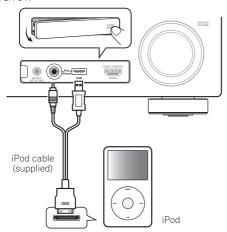
Connecting an iPod
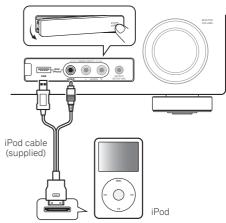
This receiver has a dedicated iPod terminal that will allow you to control playback of audio content from your iPod using the controls of this receiver.

• **Switch the receiver into standby then use the supplied iPod cable to connect your iPod to the iPod/iPhone/USB terminal on the front panel of this receiver.**

• It is also possible to connect using the cable included with the iPod, but in this case it is not possible to view pictures via the receiver.

• For the cable connection, also refer to the operating instructions for your iPod.

VSX-31:

iPod cable (supplied)

iPod

VSX-30:

iPod cable (supplied)

iPod
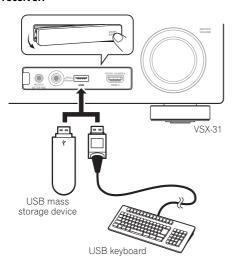
Connecting a USB device

It is possible to play audio and photo files by connecting USB devices to this receiver. It is also possible to connect a USB keyboard (US-international layout) to the receiver to enter text in the following GUI screens.

- Change the input name in the **Input Setup** menu (page 45).

- Add names to radio station presets (page 53).

- Enter Internet radio station URLs (page 56).

• **Switch the receiver into standby then connect your USB device to the iPod/iPhone/ USB terminal on the front panel of this receiver.[1]**

USB mass
storage device

USB keyboard

Connecting a USB device for Advanced MCACC output
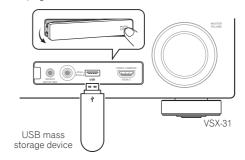
When using Auto MCACC (page 91) or Acoustic Calibration EQ Professional (page 97) to calibrate the reverb characteristics of your listening room, the 3D graphs of the reverb characteristics in your listening room (before and after calibration) can be checked on a computer screen.

The various MCACC parameters can also be checked on the computer. MCACC data and parameters are transferred from this receiver to a USB device and by connecting the USB device to a computer, the data is imported via the MCACC software in the computer.

The MCACC software to output the results is available from the support area of the Pioneer website (http://www.pioneerelectronics.com/ PUSA/Home+Entertainment+Custom+Install). Instructions for using the software are also available here. If you have any questions regarding, please contact the Customer Support Division of Pioneer.

See the documentation provided with the Advanced MCACC PC Display Application Software for more information.

- For the USB device connection and operations, see *Output MCACC data* on page 101.[2]

USB mass
storage device

📝 **Note**

1 This receiver does not support a USB hub.
2 The various parameters and the reverb characteristics data used for display on the computer are not cleared when the power is turned off (see *Output MCACC data* on page 101).
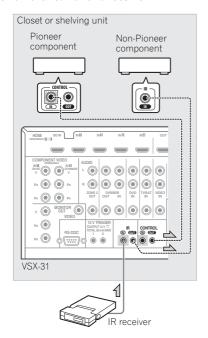
Connecting an IR receiver

If you keep your stereo components in a closed cabinet or shelving unit, or you wish to use the sub zone remote control in another zone, you can use an optional IR receiver (such as a Niles or Xantech unit) to control your system instead of the remote sensor on the front panel of this receiver.[1]

1   Connect the IR receiver sensor to the IR IN jack on the rear of this receiver.

2   Connect the IR IN jack of another component to the IR OUT jack on the rear of this receiver to link it to the IR receiver.
Please see the manual supplied with your IR receiver for the type of cable necessary for the connection.

- If you want to link a Pioneer component to the IR receiver, see *Operating other Pioneer components with this unit's sensor* below to connect to the **CONTROL** jacks instead of the **IR OUT** jack.

Closet or shelving unit

Pioneer component

Non-Pioneer component

VSX-31

IR receiver

📝 **Note**

1 • Remote operation may not be possible if direct light from a strong fluorescent lamp is shining on the IR receiver remote sensor window.

• Note that other manufacturers may not use the IR terminology. Refer to the manual that came with your component to check for IR compatibility.

• If using two remote controls (at the same time), the IR receiver's remote sensor takes priority over the remote sensor on the front panel.

Operating other Pioneer components with this unit's sensor

Many Pioneer components have **SR CONTROL** jacks which can be used to link components together so that you can use just the remote sensor of one component. When you use a remote control, the control signal is passed along the chain to the appropriate component.[1]

⚙ Important
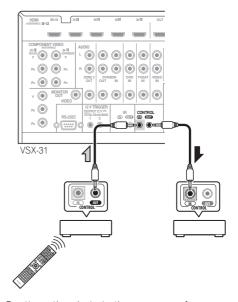
• Note that if you use this feature, *make sure that you also have at least one set of analog audio, video or HDMI jacks connected* to another component for grounding purposes.

1 Decide which component you want to use the remote sensor of.
When you want to control any component in the chain, this is the remote sensor at which you'll point the corresponding remote control.

2 Connect the CONTROL OUT jack of that component to the CONTROL IN jack of another Pioneer component.
Use a cable with a mono mini-plug on each end for the connection.

VSX-31

Continue the chain in the same way for as many components as you have.
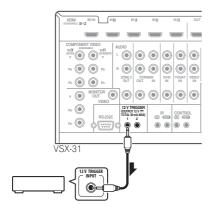
📝 Note
1 • If you want to control all your components using this receiver's remote control, see *Setting the remote to control other components* on page 81.
 • If you have connected a remote control to the **CONTROL IN** jack (using a mini-plug cable), you won't be able to control this unit using the remote sensor.

39
En

Switching components on and off using the 12 volt trigger

You can connect components in your system (such as a screen or projector) to this receiver so that they switch on or off using 12 volt triggers when you select an input function. However, you must specify which input functions switch on the trigger using the *The Input Setup menu* on page 44. Note that this will only work with components that have a standby mode.

VSX-31

• **Connect the 12 V TRIGGER jack of this receiver to the 12 V trigger of another component.**
Use a cable with a mono mini-plug on each end for the connection.

After you've specified the input functions that will switch on the trigger, you'll be able to switch the component on or off just by pressing the input function(s) you've set on page 45.

It is also possible to have the component switch not when the input function is switched, but when **HDMI OUT** is switched. For details, see *HDMI Setup* on page 68.

Plugging in the receiver

Only plug in after you have connected all your components to this receiver, including the speakers.

1 Plug the supplied power cord into the AC IN socket on the back of the receiver.

2 Plug the other end into a power outlet.[1]

⚠ CAUTION

• Handle the power cord by the plug part. Do not pull out the plug by tugging the cord, and never touch the power cord when your hands are wet, as this could cause a short circuit or electric shock. Do not place the unit, a piece of furniture, or other object on the power cord or pinch the cord in any other way. Never make a knot in the cord or tie it with other cables. The power cords should be routed so that they are not likely to be stepped on. A damaged power cord can cause a fire or give you an electric shock. Check the power cord once in a while. If you find it damaged, ask your nearest Pioneer authorized independent service company for a replacement.

• Do not use any power cord other than the one supplied with this unit.

• Do not use the supplied power cord for any purpose other than that described below.

• The receiver should be disconnected by removing the mains plug from the wall socket when not in regular use, e.g., when on vacation.

📝 **Note**

1 After this receiver is connected to an AC outlet, a 2 second to 10 second HDMI initialization process begins. You cannot carry out any operations during this process. The **HDMI** indicator in the front panel display blinks during this process, and you can turn on this receiver once it has stopped blinking. When you set the **Control** to **OFF**, you can skip this process. For details about the **Control** with HDMI function, see *Control with HDMI function* on page 67.

Chapter 4:
Basic Setup
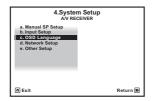
Changing the OSD display language (OSD Language)

The language used on the Graphical User Interface (GUI) screen can be changed.

• The explanations in these operating instructions are for when English is selected for the GUI screen.

1 Switch on the receiver and your TV.

2 Press RECEIVER on the remote control, then press HOME MENU.
A GUI screen appears on your TV. Use ↑/↓/
←/→ and **ENTER** to navigate through the screens and select menu items. Press **RETURN** to exit the current menu.

3 Select 'System Setup' from the Home Menu.

4 Select 'OSD Language' from the System Setup menu.

```
                4.System Setup
                  A/V RECEIVER

     a. Manual SP Setup
     b. Input Setup
     c. OSD Language
     d. Network Setup
     e. Other Setup




  Exit                        Return
```

5 Select the desired language.
• **English**
• **French**
• **German**
• **Italian**
• **Spanish**
• **Dutch**
• **Russian**

6 Select 'OK' to change the language.
The setting is completed and the **System Setup** menu reappears automatically.

Automatically conducting optimum sound tuning (Auto MCACC

The Auto MCACC Setup measures the acoustic characteristics of your listening area, taking into account ambient noise, speaker connection and speaker size, and tests for both channel delay and channel level. After you have set up the microphone provided with your system, the receiver uses the information from a series of test tones to optimize the speaker settings and equalization for your particular room.

Make sure you do this before moving on to *Playing a source* on page 46.

🔧 Important

• Make sure the microphone and speakers are not moved during the Auto MCACC Setup.

• Using the Auto MCACC Setup will overwrite any existing settings for the MCACC preset you select.

• Before using the Auto MCACC Setup, the headphones should be disconnected.

⚠ CAUTION

• The test tones used in the Auto MCACC Setup are output at high volume.
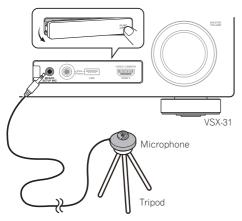
THX®

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1   Switch on the receiver and your TV.
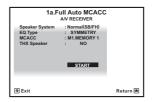
2   Connect the microphone to the MCACC SETUP MIC jack on the front panel.
Make sure there are no obstacles between the speakers and the microphone.

VSX-31

Microphone

Tripod

If you have a tripod, use it to place the microphone so that it's about ear level at your normal listening position. If you do not have a tripod, use some other object to install the microphone.[1]

The Full Auto MCACC display appears once the microphone is connected.[2]

1a.Full Auto MCACC
A/V RECEIVER

Speaker System	: Normal(SB/FH)
EQ Type	: SYMMETRY
MCACC	: M1.MEMORY 1
THX Speaker	: NO

START

Exit   Return

3   Select the parameters you want to set.[3]
If the speakers are connected using any setup other than the Front height setup, be sure to set **Speaker System** before the Auto MCACC Setup. See *Speaker system setting* on page 105.

- **Speaker System**[4] – Select your speaker system setting.

- **EQ Type** – This determines how the frequency balance is adjusted.

- **MCACC** – The six MCACC presets are used for storing surround sound settings for different listening positions. Simply choose an unused preset for now (you can rename it later in *Data Management* on page 102).

- **THX Speaker** – Select **YES** if you are using THX speakers (set all speakers to **SMALL**), otherwise leave it set to **NO**.

📝 **Note**

1 Install the microphone on a stable floor. Placing the microphone on any of the following surfaces may make accurate measurement impossible:
  • Sofas or other soft surfaces.
  • High places such as tabletops and sofa tops.
2 If you leave the GUI screen for over five minutes, the screen saver will appear.
3 • When data measurement is taken, the reverb characteristics data (both before- and after-calibration) that this receiver had been storing will be overwritten. If you want to save the reverb characteristics data before measuring, connect a USB memory device to this receiver and transfer the data.
  • When measurement is taken of reverb characteristics data other than **SYMMETRY**, the data are not measured after the correction. If you will need to measure after correcting data, take the measurement using the EQ Professional menu in the Manual MCACC setup (page 97).
4 If you are planning on bi-amping your front speakers, or setting up a separate speaker system in another room, read through *Speaker system setting* on page 105 and make sure to connect your speakers as necessary before continuing to step 4.

4   Press RECEIVER and then select START.

5   Follow the instructions on-screen.
Make sure the microphone is connected, and if you're using a subwoofer, make sure it is switched on and set to a comfortable volume level.
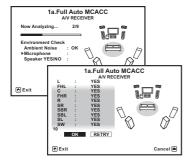
6   Wait for the test tones to finish, then confirm the speaker configuration in the GUI screen.
A progress report is displayed on-screen while the receiver outputs test tones to determine the speakers present in your setup. Try to be as quiet as possible while it's doing this.[1]

If no operations are performed for 10 seconds while the speaker configuration check screen is being displayed, the Auto MCACC Setup will resume automatically. In this case, you don't need to select '**OK**' and press **ENTER** in step 7.

- With error messages (such as **Too much ambient noise!** or **Check microphone.**), select **RETRY** after checking for ambient noise (see *Problems when using the Auto MCACC Setup* on page 44) and verifying the mic connection. If there doesn't seem to be a problem, you can simply select **GO NEXT** and continue.

The configuration shown on-screen should reflect the actual speakers you have.

- If you see an **ERR** message (or the speaker configuration displayed isn't correct), there may be a problem with the speaker connection.
  If selecting **RETRY** doesn't work, turn off the power and check the speaker connections. If there doesn't seem to be a problem, you can simply use ↑/↓ to select the speaker and ←/→ to change the setting and continue.

- If **Reverse Phase** is displayed, the speaker's wiring (+ and –) may be inverted. Check the speaker connections.[2]
  – If the connections were wrong, turn off the power, disconnect the power cord, then reconnect properly. After this, perform the Full Auto MCACC procedure again.
  – If the connections were right, select **GO NEXT** and continue.

7   Make sure 'OK' is selected, then press ENTER.
A progress report is displayed on-screen while the receiver outputs more test tones to determine the optimum receiver settings for Channel Level, Speaker Distance, Standing Wave and Acoustic Cal EQ.

Again, try to be as quiet as possible while this is happening. It may take 3 to 10 minutes.

8   The Auto MCACC Setup procedure is completed and the Home Menu menu reappears automatically.[3]
Be sure to disconnect the microphone from this receiver upon completion of the Auto MCACC Setup.

Note
1 Do not adjust the volume during the test tones. This may result in incorrect speaker settings.
2 If the speaker is not pointed to the microphone (listening position) or when using speakers that affect the phase (dipole speakers, reflective speakers, etc.), **Reverse Phase** may be displayed even if the speakers are properly connected.
3 You can also choose to view the settings from the **MCACC Data Check** screen. See *Checking MCACC Data* on page 100 for more on this.

The settings made in the Auto MCACC Setup should give you excellent surround sound from your system, but it is also possible to adjust these settings manually using *The Advanced MCACC menu* on page 90 or *The System Setup and Other Setup menus* on page 104.[1]

Problems when using the Auto MCACC Setup

If the room environment is not optimal for the Auto MCACC Setup (too much background noise, echo off the walls, obstacles blocking the speakers from the microphone) the final settings may be incorrect. Check for household appliances (air conditioner, fridge, fan, etc.), that may be affecting the environment and switch them off if necessary. If there are any instructions showing in the front panel display, please follow them.

- Some older TVs may interfere with the operation of the microphone. If this seems to be happening, switch off the TV when doing the Auto MCACC Setup.

The Input Setup menu
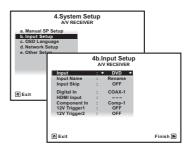
You only need to make settings in the **Input Setup** menu if you didn't hook up your digital equipment according to the default settings (see *Input function default and possible settings* on page 45). In this case, you need to tell the receiver what equipment is hooked up to which terminal so the buttons on the remote control correspond to the components you've connected.

1 Switch on the receiver and your TV.
Use ⏻ **RECEIVER** to switch on.

2 Press RECEIVER on the remote control, then press HOME MENU.
A Graphical User Interface (GUI) screen appears on your TV. Use ↑/↓/←/→ and **ENTER** to navigate through the screens and select menu items. Press **RETURN** to confirm and exit the current menu.

3 Select 'System Setup' from the Home Menu.

4 Select 'Input Setup' from the System Setup menu.

5 Select the input function that you want to set up.
The default names correspond with the names next to the terminals on the rear panel (such as **DVD**) which, in turn, correspond with the names on the remote control.

6 Select the input(s) to which you've connected your component.
For example, if your DVD player only has an optical output, you will need to change the **DVD** input function's **Digital In** setting from **COAX-1** (default) to the optical input you've connected it to.The numbering (**OPT-1** to **2**) corresponds with the numbers beside the inputs on the back of the receiver.

📝 **Note**
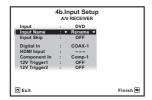
1 • Depending on the characteristics of your room, sometimes identical speakers with cone sizes of around 12 cm (5 inches) will end up with different size settings. You can correct the setting manually using the *Manual speaker setup* on page 104.
• The subwoofer distance setting may be farther than the actual distance from the listening position. This setting should be accurate (taking delay and room characteristics into account) and generally does not need to be changed.
• If Auto MCACC Setup measurement results are incorrect due to the interaction of the speakers and viewing environment, we recommend adjusting the settings manually.

- If your component is connected via a component video cable to an input terminal other than the default, you must tell the receiver which input terminal your component is connected to, or else you may see the composite video signals instead of the component video signals.[1]

7 When you're finished, proceed to the settings for other inputs.

There are optional settings in addition to the assignment of the input jacks:

- **Input Name** – You can choose to rename the input function for easier identification. Select **Rename** to do so, or **Default** to return to the system default.

- **Input Skip** – When set to **ON**, that input is skipped when selecting the input using **INPUT SELECT** or the front panel **INPUT SELECTOR** dial. (**DVD** and other inputs can be still be selected directly with the input function buttons.)

- **12V Trigger1/2** – After connecting a component to one of the 12 volt triggers (see *Switching components on and off using the 12 volt trigger* on page 40), select **MAIN**, **ZONE 2** or **OFF** for the corresponding trigger setting to switch it on automatically along with the (main or sub) zone specified.

```
          4b.Input Setup
          A/V RECEIVER

   Input         :      DVD
   Input Name    : ←  Rename  →
   Input Skip    :      OFF

   Digital In    :     COAX-1
   HDMI Input    :      – – –
   Component In  :     Comp-1
   12V Trigger1  :      OFF
   12V Trigger2  :      OFF


 ⓧ Exit                 Finish ▣
```

8 When you're finished, press RETURN.

You will return to the **System Setup** menu.

Input function default and possible settings

The terminals on the receiver generally correspond to the name of one of the input functions. If you have connected components to this receiver differently from (or in addition to) the defaults below, see *The Input Setup menu* on page 44 to tell the receiver how you've connected up. The dots (●) indicate possible assignments.

Input function	Input Terminals		
	Digital	**HDMI**	**Component**
DVD	COAX-1	●[a]	IN 1
BD	(**BD**)		
TV/SAT	OPT-1	●[a]	●
DVR/BDR	OPT-2	●[a]	IN 2
VIDEO[b]/ VIDEO 1[c]	●	●[a]	●
VIDEO 2[c]			
HDMI 1	●	(**HDMI-1**)	
HDMI 2		(**HDMI-2**)	
HDMI 3		(**HDMI-3**)	
HDMI 4[b]		(**HDMI-4**)	
HDMI 5[b] (front panel)		(**HDMI-5**)	
INTERNET RADIO			
iPod/USB			
CD	COAX-2[b]		
CD-R/TAPE	●		
TUNER			
ADAPTER PORT			
SIRIUS	●		

a. With **Control** set to **ON** in the HDMI Setup, assignments cannot be made (see *Control with HDMI function* on page 67).
b. VSX-31 only
c. VSX-30 only

📝 **Note**

1 For high-definition video (using component video connections), or when digital video conversion is switched off (in *Setting the Video options* on page 75), you must connect your TV to this receiver using the same type of video cable as you used to connect your video component.

Chapter 5:
Basic playback

Playing a source

Here are the basic instructions for playing a source (such as a DVD disc) with your home theater system.

1   Switch on your system components and receiver.
Start by switching on the playback component (for example a DVD player), your TV[1] and subwoofer (if you have one), then the receiver (press ⏻ **RECEIVER**).

• Make sure the setup microphone is disconnected.

2   Select the input function you want to play.
You can use the input function buttons on the remote control, **INPUT SELECT**, or the front panel **INPUT SELECTOR** dial.[2]

3   Press RECEIVER , then press AUTO/ALC/ DIRECT (AUTO SURR/ALC/STREAM DIRECT) to select 'AUTO SURROUND' and start playback of the source.[3]
If you're playing a Dolby Digital or DTS surround sound DVD disc, you should hear surround sound. If you are playing a stereo source, you will only hear sound from the front left/right speakers in the default listening mode.

• See also *Listening to your system* on page 61 for information on different ways of listening to sources.

It is possible to check on the front panel display whether or not multi-channel playback is being performed properly.

When using a surround back speaker, **PLIIx MOVIE** is displayed when playing Dolby Digital signals, and **DTS+Neo:6** is displayed when playing DTS 5.1-channel signals.

If the display does not correspond to the input signal and listening mode, check the connections and settings.

4   Use the volume control to adjust the volume level.
Turn down the volume of your TV so that all sound is coming from the speakers connected to this receiver.

📝 **Note**

1 Make sure that the TV's video input is set to this receiver (for example, if you connected this receiver to the **VIDEO** jacks on your TV, make sure that the **VIDEO** input is now selected).
2 If you need to manually switch the input signal type press **SIGNAL SEL** (page 65).
3 • You may need to check the digital audio output settings on your DVD player or digital satellite receiver.
  • Depending on your DVD player or source discs, you may only get digital 2 channel stereo and analog sound. In this case, the receiver must be set to a multichannel listening mode (see *Listening in surround sound* on page 61 if you need to do this) if you want multichannel surround sound.

Playing a source with HDMI connection

• **Use INPUT SELECT to select the HDMI input you've connected to (for example, HDMI 1).**
You can also perform the same operation by using the **INPUT SELECTOR** dial on the front panel or by pressing **HDMI** on the remote control repeatedly.

- Set the HDMI parameter in *Setting the Audio options* on page 72 to **THROUGH** if you want to hear HDMI audio output from your TV (no sound will be heard from this receiver).

- If the video signal does not appear on your TV, try adjusting the resolution settings on your component or display. Note that some components (such as video game units) have resolutions that may not be converted. In this case, use an analog video connection.

Playing an iPod

This receiver has the **iPod/iPhone/USB** terminal that will allow you to control playback of audio content from your iPod using the controls of this receiver.[1]

1 Switch on the receiver and your TV.
See *Connecting an iPod* on page 36.

- It is also possible to operate the iPod on the iPod itself, without using the TV screen. For details, see *Switching the iPod controls* on page 48.

2 Press iPod USB on the remote control to switch the receiver to the iPod/USB.
Loading appears in the GUI screen while the receiver verifies the connection and retrieves data from the iPod.

When the display shows the **iPod** top menu you're ready to playback from the iPod.[2]

Playing back files stored on an iPod

To navigate songs on your iPod, you can take advantage of the GUI screen of your TV connected to this receiver.[3] You can also control all operations for music in the front panel display of this receiver.

📝 **Note**

1 • This system is compatible with the audio and video of the iPod nano (audio only for the iPod nano 1G/2G), iPod fifth generation (audio only), iPod classic, iPod touch and iPhone. However, some of the functions may be restricted for some models. The system is not compatible with the iPod shuffle.

• Compatibility may vary depending on the software version of your iPod and iPhone. Please be sure to use the latest available software version.

• iPod and iPhone are licensed for reproduction of non-copyrighted materials or materials the user is legally permitted to reproduce.

• Features such as the equalizer cannot be controlled using this receiver, and we recommend switching the equalizer off before connecting.

• Pioneer cannot under any circumstances accept responsibility for any direct or indirect loss arising from any inconvenience or loss of recorded material resulting from the iPod failure.

2 • The controls of your iPod will be inoperable when connected to this receiver.

• *VSX-31 only:* The sub zone OSD screen shows the same content as the main zone GUI screen. Note, however, that characters other than alphanumeric letters and numbers cannot be displayed and will be replaced by **#**.

• *VSX-30 only:* iPod/USB function cannot be selected for the MULTI-ZONE feature (page 77).

3 • Note that characters that cannot be displayed on this receiver are displayed as **#**.

• This feature is not available for photos on your iPod. To display photos, switch iPod operation to the iPod (see *Switching the iPod controls* on page 48).

Finding what you want to play

When your iPod is connected to this receiver, you can browse songs stored on your iPod by playlist, artist name, album name, song name, genre or composer, similar to using your iPod directly.

1 Use ↑/↓ to select 'Music' from the iPod top menu.

2 Use ↑/↓ to select a category, then press ENTER to browse that category.
- To return to the previous level any time, press **RETURN**.

3 Use ↑/↓ to browse the selected category (e.g., albums).
- Use ←/→ to move to previous/next levels.

4 Continue browsing until you arrive at what you want to play, then press ▶ to start playback.[1]

🔧 Tip

- You can play all of the songs in a particular category by selecting the **All** item at the top of each category list. For example, you can play all the songs by a particular artist.

Basic playback controls

This receiver's remote control buttons can be used for basic playback of files stored on an iPod.[2]

- Press **iPod USB** to switch the remote control to the iPod/USB operation mode.

Switching the iPod controls[3]

You can switch over the iPod controls between the iPod and the receiver.

1 Press iPod CTRL to switch the iPod controls.
This enables operation and display on your iPod, and this receiver's remote control and GUI screen become inactive.

2 Press iPod CTRL again to switch back to the receiver controls.

🔧 Tip

- Change the receiver's input to the iPod in one action by pressing the **iPod iPhone DIRECT CONTROL** button on the front panel to enable **iPod** operations on the iPod.

📝 **Note**

1 If you're in the song category, you can also press **ENTER** to start playback.
2 During Audiobook playback, press ↑/↓ to switch the playback speed: Faster ↔ Normal ↔ Slower
3 You cannot use this function, when an iPod of fifth generation or iPod nano of first generation is connected.

Playing a USB device

It is possible to play files[1] using the USB interface on the front of this receiver.

1   Switch on the receiver and your TV.
See *Connecting a USB device* on page 37.[2]

2   Press iPod USB on the remote control to switch the receiver to the iPod/USB.[3]
Loading appears in the GUI screen as this receiver starts recognizing the USB device connected.[4] When the display shows the **USB Top** menu you're ready to play from the USB device.

🐾 Important

If an **Over Current** message lights in the display, the power requirements of the USB device are too high for this receiver. Try following the points below:

- Switch the receiver off, then on again.
- Reconnect the USB device with the receiver switched off.
- Use a dedicated AC adapter (supplied with the device) for USB power.

If this doesn't remedy the problem, it is likely your USB device is incompatible.

Playing back audio files stored on a USB memory device
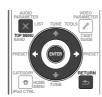
The maximum number of levels that you can select in Step 2 (below) is 8. Also, you can display and play back up to 30 000 folders and files within a USB memory device.[5]

1   Use ↑/↓ to select 'Music' from the USB Top menu.

2   Use ↑/↓ to select a folder, then press ENTER to browse that folder.
- To return to the previous level any time, press **RETURN**.

3   Continue browsing until you arrive at what you want to play, then press ► to start playback.[6]

Basic playback controls

This receiver's remote control buttons can be used for basic playback of files stored on USB memory devices.

- Press **iPod USB** to switch the remote control to the iPod/USB operation mode.

Note
1 • Compatible USB devices include external magnetic hard drives, portable flash memory drives (particularly key drives) and digital audio players (MP3 players) of format FAT12/16/32. It is not possible to connect this unit to a personal computer for USB playback.
 • Pioneer cannot guarantee compatibility (operation and/or bus power) with all USB mass storage devices and assumes no responsibility for any loss of data that may occur when connected to this receiver.
2 Make sure the receiver is in standby when disconnecting the USB device.
3 The iPod/USB function cannot be selected in the main zone when the Internet radio function is selected in the sub zone. Also, the iPod/USB function cannot be selected in the sub zone when the Internet radio function is selected in the main zone.
4 When a USB memory device with a large capacity is connected, it may take some time to read all the contents.
5 Note that characters that cannot be displayed on this receiver are displayed as **#**.
6 • If the file selected cannot be played back, this receiver automatically skips to the next file playable.
 • When the file currently being played back has no title assigned to it, the file name is displayed in the GUI screen instead; when neither the album name nor the artist name is present, the row is displayed as a blank space.
 • *VSX-31 only:* iPod/USB function cannot be selected for the MULTI-ZONE feature (page 77).
 • Playback stops when the last song in a USB memory device is played back to the end.
 • Copyrighted audio files cannot be played back on this receiver.
 • DRM-protected audio files cannot be played back on this receiver.

Playing back photo files stored on a USB memory device[1]

1 Use ↑/↓ to select 'Photos' from the USB Top menu.

2 Use ↑/↓ to select a folder, then press ENTER to browse that folder.
• To return to the previous level any time, press **RETURN**.

3 Continue browsing until you arrive at what you want to play, then press ► to start playback.[2]
The selected content is displayed in full screen and a slideshow starts.

After a slideshow launches, pressing **ENTER** toggles between play and pause (only when **Theme** on the Slideshow Setup is set to **Normal (OFF)**).

Basic playback controls

Button(s)	What it does
ENTER, ►	Starts displaying a photo and playing a slideshow.
RETURN, ←	Stops the Player and returns to the previous menu.
◄◄[a]	Displays the previous photo content.
►►[a]	Displays the next photo content.
‖[a]	Pauses/unpauses the slideshow.
DISP[a]	Displays the photo information.

a. You can only use this button when **Theme** on the Slideshow Setup is set to **Normal (OFF)**.

Slideshow Setup
Make the various settings for playing slideshows of photo files here.

1 Use ↑/↓ to select 'Slideshow Setup' from the USB Top menu.

2 Select the setting you want.
• **Theme** – Add various effects to the slideshow.
• **Interval** – Set the interval for switching the photos. This may not be available depending on the **Theme** setting.
• **BGM** – Play music files stored on the USB device while displaying photos.
• **Music Select** – Select the folder containing the music files to be played when **BGM** is set to **ON**.

3 When you're finished, press RETURN.
You will return to the **USB Top** menu.

📝 **Note**
1 Photo files cannot be played in the sub zone.
2 If the slideshow is left in the pause mode for five minutes, the list screen reappears.

About playable file formats

The USB function of this receiver supports the following file formats. Note that some file formats are not available for playback although they are listed as playable file formats.

Music files

Category	Extension	Stream		
MP3[a]	.mp3	MPEG-1, 2, 2.5 Audio Layer-3	Sampling frequency	8 kHz to 48 kHz
			Quantization bitrate	16 bit
			Channel	2 ch
			Bitrate	8 kbps to 320 kbps
			VBR/CBR	Supported/Supported
WAV	.wav	LPCM	Sampling frequency	32 kHz, 44.1 kHz, 48 kHz
			Quantization bitrate	8 bit, 16 bit
			Channel	2 ch, Monaural
WMA	.wma	WMA8/9[b]	Sampling frequency	8 kHz to 48 kHz
			Quantization bitrate	16 bit
			Channel	2 ch
			Bitrate	8 kbps to 320 kbps
			VBR/CBR	Supported/Supported

a. *"MPEG Layer-3 audio decoding technology licensed from Fraunhofer IIS and Thomson multimedia."*
b. Files encoded using Windows Media Codec 9 may be playable but some parts of the specification are not supported; specifically, Pro, Lossless, Voice.

Photo files

Category	Extension		
JPEG	.jpg .jpeg .jpe .jif	Format	Meeting the following conditions: • Baseline JPEG format (including files recorded in Exif/DCF format) • Y:Cb:Cr - 4:4:4, 4:2:2 or 4:2:0
	.jfif	Resolution	30 to 8184 pixels vertical, 40 to 8184 pixels horizontal

Listening to the radio

The following steps show you how to tune in to FM and AM radio broadcasts using the automatic (search) and manual (step) tuning functions. If you already know the frequency of the station you want, see *Tuning directly to a station* below. Once you are tuned to a station you can memorize the frequency for recall later—see *Saving station presets* below for more on how to do this.

1   Press TUNER to select the tuner.

2   Use BAND to change the band (FM or AM), if necessary.
Each press switches the band between FM and AM.

3   Tune to a station.
There are three ways to do this:

> **Automatic tuning** – To search for stations in the currently selected band, press and hold **TUNE ↑/↓** for about a second. The receiver will start searching for the next station, stopping when it has found one. Repeat to search for other stations.

> **Manual tuning** – To change the frequency one step at a time, press **TUNE ↑/↓**.

> **High speed tuning** – Press and hold **TUNE ↑/↓** for high speed tuning. Release the button at the frequency you want.

Improving FM sound

If the **TUNED** or **STEREO** indicator doesn't light when tuning to an FM station because the signal is weak, press **MPX** to switch the receiver into mono reception mode. This should improve the sound quality and allow you to enjoy the broadcast.

Using Neural Surround

This feature uses Neural Surround™ technologies to achieve optimal surround sound from FM radio.

- While listening to FM radio, press **AUTO/ALC/DIRECT** for Neural Surround listening.

See *Auto Surround, ALC and Stream Direct with different input signal formats* on page 126 for more on this.

The **NEURAL SURROUND** mode can be selected also with **STANDARD**.

Tuning directly to a station

Sometimes, you'll already know the frequency of the station you want to listen to. In this case, you can simply enter the frequency directly using the number buttons on the remote control.

1   Press TUNER to select the tuner.

2   Use BAND to change the band (FM or AM), if necessary.
Each press switches the band between FM and AM.

3   Press D.ACCESS (Direct Access).

4   Use the number buttons to enter the frequency of the radio station.
For example, to tune to **106.00** (FM), press **1**, **0**, **6**, **0**, **0**.

If you make a mistake halfway through, press **D.ACCESS** twice to cancel the frequency and start over.

Saving station presets

If you often listen to a particular radio station, it's convenient to have the receiver store the frequency for easy recall whenever you want to listen to that station. This saves the effort of manually tuning in each time. This receiver can memorize up to 63 stations, stored in seven banks, or classes (A to G) of 9 stations each. When saving an FM frequency, the **MPX** setting (see above) is also stored.

1   Tune to a station you want to memorize.
See *Listening to the radio* above for more on this.

2 Press T.EDIT (TUNER EDIT).
The display shows **PRESET MEMORY**, then a blinking memory class.

3 Press CLASS to select one of the seven classes, then press PRESET ←/→ to select the station preset you want.
You can also use the number buttons to select a station preset.

4 Press ENTER.
After pressing **ENTER**, the preset class and number stop blinking and the receiver stores the station.

Naming station presets
For easier identification, you can name your station presets.

1 Choose the station preset you want to name.
See *Listening to station presets* below for how to do this.

2 Press T.EDIT (TUNER EDIT).
The display shows **PRESET NAME**, then a blinking cursor at the first character position.

3 Input the name you want.
Choose from the following characters for a name up to eight characters long.

> **ABCDEFGHIJKLMNOPQRSTUVWXYZ**
>
> **abcdefghijklmnopqrstuvwxyz**
>
> **0123456789**
>
> **!"#$%&'()*+,–./:;<=>?@[\ ]^_{|} ˜** [space]

Use ↑/↓ to select a character, ←/→ to set the position, and **ENTER** to confirm your selection.

🔧 Tip
- To erase a station name, simply repeat steps 1 to 3 and input eight spaces instead of a name.
- Once you have named a station preset, you can press **DISP** when listening to a station to switch the display between name and frequency.

Listening to station presets
You will need to have some presets stored to do this. See *Saving station presets* on page 52 if you haven't done this already.

1 Press TUNER to select the tuner.

2 Press CLASS to select the class in which the station is stored.
Press repeatedly to cycle through classes A to G.

3 Press PRESET ←/→ to select the station preset you want.
- You can also use the number buttons on the remote control to recall the station preset.

Bluetooth® ADAPTER for Wireless Enjoyment of Music

Bluetooth wireless technology enabled device: cell phone

Bluetooth wireless technology enabled device: Digital music player

Device not equipped with *Bluetooth* wireless technology: Digital music player
+
Bluetooth audio transmitter (sold commercially)

□ + □

Music data

Bluetooth® ADAPTER

This receiver

Remote control operation

Wireless music play

When the *Bluetooth* ADAPTER (Pioneer Model No. AS-BT100) is connected to this unit, a product equipped with *Bluetooth* wireless technology (portable cell phone, digital music player, etc.) can be used to listen to music wirelessly. Also, by using a commercially available transmitter supporting *Bluetooth* wireless technology, you can listen to music on a device not equipped with *Bluetooth* wireless technology. The AS-BT100 model supports SCMS-T contents protection, so music can also be enjoyed on devices equipped with SCMS-T type *Bluetooth* wireless technology.

Remote control operation

The remote control supplied with this unit allows you to play and stop media, and perform other operations.[1]

Pairing the *Bluetooth* ADAPTER and *Bluetooth* wireless technology device

"Pairing" must be done before you start playback of *Bluetooth* wireless technology content using the *Bluetooth* ADAPTER. Make sure to perform pairing the first time you operate the system or any time pairing data is cleared. The pairing step is necessary to register the *Bluetooth* wireless technology device to enable *Bluetooth* communications.[2] For more details, see also the operating instructions of your *Bluetooth* wireless technology device.

1 Press RECEIVER , then press HOME MENU.

2 Select 'System Setup', then press ENTER.

3 Select 'Other Setup', then press ENTER.

4 Select 'Pairing Bluetooth Device', then press ENTER.

📝 **Note**

1 • It must be necessary that the *Bluetooth* wireless technology enabled device supports AVRCP profiles.
  • Remote control operations cannot be guaranteed for all *Bluetooth* wireless technology enabled devices.
2 • Pairing is required when you first use the *Bluetooth* wireless technology device and *Bluetooth* ADAPTER.
  • To enable *Bluetooth* communication, pairing should be done with both your system and *Bluetooth* wireless technology device.

5 Select the 'Passcode' setting you want.
Select the same passcode as the *Bluetooth* wireless technology device you wish to connect.

- **0000**/**1234**/**8888** – Select the passcode from these options. These are the passcodes that can be used in most cases.
- **Others** – Select to use a passcode other than those mentioned above.

6 If you selected Others in step 5, enter the passcode.
Use ↑/↓ to select a number and ←/→ to move the cursor.

7 Follow the instructions displayed on the GUI screen to conduct pairing with the *Bluetooth* wireless technology device.
Switch on the *Bluetooth* wireless technology device that you want to make pair, place it near the receiver and set it to the pairing mode.

8 Check to see that the *Bluetooth* ADAPTER is detected by the *Bluetooth* wireless technology device.
When the Bluetooth wireless technology device is connected:

CONNECTED appears in the receiver display.[1]

When the Bluetooth wireless technology device is not connected:

Go back to the passcode setting in step 5. In this case, perform the connection operation from the *Bluetooth* wireless technology device.

9 From the *Bluetooth* wireless technology device list, select *Bluetooth* ADAPTER and enter the Passcode selected in step 5.[2]

Listening to music contents of a *Bluetooth* wireless technology device with your system

1 Press ADAPTER on the remote control to switch the receiver to ADAPTER PORT input.[3]

2 Perform the connection operation from the side of the *Bluetooth* wireless technology device to the *Bluetooth* ADAPTER.

3 Start playback of music contents stored on the *Bluetooth* wireless technology device.
This receiver's remote control buttons can be used for basic playback of files stored on *Bluetooth* wireless technology devices.[4]

The *Bluetooth*® word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. and any use of such marks by Pioneer Corporation is under license. Other trademarks and trade names are those of their respective owners.

Note
1 The system can display alphanumeric characters only. Other characters may not be displayed correctly.
2 The passcode may in some cases be referred to as "passkey" or PIN code.
3 When the *Bluetooth* ADAPTER is not plugged into the **ADAPTER PORT**, **NO ADAPTER** will be displayed if **ADAPTER PORT** input is selected.
4 • *Bluetooth* wireless technology device should be compatible with AVRCP profile.
• Depending on the *Bluetooth* wireless technology device you use, operation may differ from what is shown in the remote control buttons.

Listening to Internet radio stations

Internet radio is an audio broadcasting service transmitted via the Internet.[1] There are a large number of Internet radio stations broadcasting a variety of services from every corner of the world. Some are hosted, managed, and broadcast by private individuals while others are by the corresponding traditional terrestrial radio stations or radio networks. Whereas terrestrial, or OTA (over-the-air), radio stations are geographically restricted on the range of radio waves broadcast from a transmitter through the air, Internet radio stations are accessible from anywhere in the world, as long as there is a connection to the Internet, as services are not transmitted through the air but are delivered over the World Wide Web. On this receiver you can select Internet radio stations by genre as well as by region.

✋ Important

- Before listening to Internet radio, you need to program the Internet radio stations you wish to listen to onto this unit (see *Programming the Internet radio stations* below for how to program). Though the Internet radio stations are programmed in this receiver before it leaves the factory, the link may have expired. In that case, preset the stations again yourself.

1   Press NET RADIO to switch to the Internet radio input.[2]
The Internet Radio list screen is displayed.

2   Use ↑/↓ to select the Internet radio station to play back, and then press ENTER.
Press ↑/↓ to scroll up and down the list and select the desired item. When you press **ENTER**, playback starts with the playback screen being displayed for the selected item. Depending on the Internet line conditions, the sound may not be smooth when playing Internet radio. To return to the list screen, press **RETURN**.[3]

Programming the Internet radio stations

By programming the Internet radio stations you wish to listen to onto this receiver, you will be able to select those Internet radio stations. You can program up to 24 stations.

There are two methods of programming: one lets you use the GUI screen on this receiver; the other lets you connect your computer and use that screen.

Programming with the GUI screen

1   Press TOP MENU when the Internet Radio station list is displayed.
The Internet Radio Setup screen is displayed.

2   Use ↑/↓ to select the Internet Radio station list screen you wish to edit, and then press ENTER.

📝 **Note**

1 • To listen to Internet radio stations, you must have high-speed broadband Internet access. With a 56 K or ISDN modem, you may not enjoy the full benefits of Internet radio.
  • The port number varies depending on the Internet radio station. Check the firewall settings.
  • Broadcasts may be stopped or interrupted depending on the Internet radio station. In this case, you cannot listen to a radio station selected from the list of Internet radio stations.
  • *VSX-30 only:* INTERNET RADIO function cannot be selected for the MULTI-ZONE feature (page 77).
2 The Internet radio function cannot be selected in the main zone when the iPod/USB function is selected in the sub zone. Also, the Internet radio function cannot be selected in the sub zone when the iPod/USB function is selected in the main zone.
3 When the list screen is displayed from the playback screen, the playback screen reappears automatically if no operation is performed for 10 seconds while the list screen is displayed.

3 Use ←/→ to select "Edit".
- If you select **"Delete"**, information regarding the Internet radio stations programmed into the currently selected memory will be deleted.

4 Enter the URL of the Internet radio station you wish to program.[1]
Use ↑/↓ to select a letter and ←/→ to move the cursor.

- A URL containing up to 192 letters can be entered.

5 Enter the title of the Internet radio station.
Use ↑/↓ to select a letter and ←/→ to move the cursor.

- A title containing up to 22 letters can be entered.

Programming on the computer screen
You can enter the Internet radio list on the screen of a computer that is connected to the same LAN as this receiver, and send the list to this unit.

The computer needs to be connected in advance to the network of this receiver and set up.

1 Turn on the computer and launch the Internet browser.

2 In the address bar on the browser, enter the IP address assigned to this receiver.
For example, if the IP address of this receiver is "192.168.0.2", enter "http://192.168.0.2/".

- This receiver's IP address can be found in the 'IP address, Proxy' menu (page 108).

When the connection is made with the receiver, the following programming screen will be displayed.

3 Enter the title and URL of the Internet radio station you wish to program, then press 'Update'.
The entered information will be transmitted to the receiver.

The connection to the URL designated from the computer will be confirmed:

If connection is successful, '**Connection OK**' will be displayed on screen, and the selected Internet radio station will begin playing via this receiver.

If the connection failed, '**Connection NG**' will be displayed. Check to see if the URL you entered is correct.

Important

- '**Connection OK**' and '**Connection NG**' are only displayed when this receiver is set to the Internet radio function.

- When entering the title and URL of Internet radio station, do not press '**Update**' while you are connected to other stations (i.e., labelled as "**Connecting...**").

Note
1 The URL can also be entered by connecting a USB keyboard (see *Connecting a USB device* on page 37).

Listening to Satellite Radio

To listen to Satellite Radio, you'll need to connect a SIRIUS Satellite Radio tuner (sold separately) to your Sirius-Ready receiver. SIRIUS Satellite Radio is available to residents of the US (except Alaska and Hawaii) and Canada.

Satellite Radio delivers a variety of commercial-free music from categories ranging from Pop, Rock, Country, R&B, Dance, Jazz, Classical and many more plus coverage of all the top professional and college sports including play by play games from select leagues and teams. Additional programming includes expert sports talk, uncensored entertainment, comedy, family programming, local traffic and weather and news from your most trusted sources.

Once you've purchased a SIRIUS tuner you'll need to activate it and subscribe to begin enjoying the service. Easy to follow installation and setup instructions are provided with the SIRIUS tuner. There are a variety of programming packages available, including the option of adding "The Best of XM" programming to the SIRIUS service. The "Best of XM" service is not available to SIRIUS Canada subscribers at this time. Please check with SIRIUS Canada for any updates using the numbers and web address below.

Family friendly packages are also available to restrict channels featuring content that may be inappropriate for children.

To subscribe to SIRIUS, U.S. and Canadian customers can call 1-888-539-SIRI (1-888-539-7474) or visit sirius.com (US) or siriuscanada.ca (Canada).

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* **Press SIRIUS to switch to the SIRIUS input.[1]**

For best reception, you may need to move the SiriusConnect™ tuner antenna near a window (refer to the manual for the SiriusConnect™ Home tuner for antenna placement recommendations).

* If after pressing **SIRIUS** the display shows **Antenna Error**, try disconnecting the antenna and reconnecting.[2] If the display shows **Check Sirius Tuner**, check the connection of the AC adapter and this receiver to the SiriusConnect™ tuner.

Listening to SIRIUS Radio

After connecting, you will be able to use this receiver to select channels and navigate categories using the GUI screen.[3]

Selecting channels and browsing by genre

From the SIRIUS Channel Guide, you can browse SIRIUS Radio channels in the order that they appear, or you can narrow your channel search by genre.

📝 **Note**

1 • In order to activate your radio subscription, you will need the SIRIUS ID (SID) which uniquely identifies your tuner. The SID may be found on a sticker located on the packaging, or on the bottom of the tuner itself. The label will have a printed 12-digit SID number. When you have located the SID, write it down in the space provided near the end of this manual. Contact SIRIUS on the internet at: https://activate.siriusradio.com

• Follow the prompts to activate your subscription, or you can also call SIRIUS toll-free at 1-888-539-SIRIUS (1-888-539-7474).

• Select **0** (**SIRIUS ID**) from the GUI screen to check the Radio ID of the SIRIUS Connect tuner (see *Selecting channels and browsing by genre* below).

2 You can check the strength of reception in *Using the SIRIUS Menu* on page 60.

3 It's easiest if you have your TV switched on to take advantage of the GUI screens. You can, however, use just the front panel display to do everything if you prefer.

- **Press ⬆/⬇ to enter the SIRIUS Channel Guide, then navigate through the channels one at time with ⬆/⬇, then press ENTER to listen to the SIRIUS radio broadcast.**
  - To browse by genre, first press **CATEGORY**, use ⬆/⬇ to select a genre, then press **ENTER**.
  - To cancel and exit any time, press **RETURN**.

⚙ Tip
- You can select channels directly by pressing **D.ACCESS**, then the three-digit channel number.
- You can press **DISP** to change SIRIUS Radio information in the front panel display.
- The currently selected channel is automatically chosen (without pressing **ENTER**) after 10 seconds.

Saving channel presets
This receiver can memorize up to 63 channels, stored in seven banks, or classes (A to G) of 9 channels each.

1 Select the channel you want to memorize.
See *Selecting channels and browsing by genre* on page 58.

2 Press T.EDIT.
The display shows a blinking memory class.

3 Press CLASS to select one of the seven classes, then press ⬅/➡ to select the channel preset you want.
You can also use the number buttons to select a preset.

4 Press ENTER.
After pressing **ENTER**, the preset class and number stop blinking and the receiver stores the SIRIUS channel.

⚙ Tip
- You can also press **MEMORY** during reception display to save the information of up to five songs. See *Using the SIRIUS Menu* below to recall this information.[1]

Listening to channel presets

1 Press CLASS to select the class in which the channel is stored.
Press repeatedly to cycle through classes A to G.

2 Press ⬅/➡ to select the channel preset you want.
- You can also use the number buttons on the remote control to recall the channel preset.

📝 **Note**
1 You can reset the Channel presets, Memory, Channel Skip/Add, Parental Lock and Password settings in *Resetting the system* on page 80.

Using the SIRIUS Menu

The SIRIUS Menu provides additional SIRIUS Radio features.

1 Press TOP MENU.

2 Use ↑/↓ to select a menu item, then press ENTER.

Choose from the following menu items:

- **Channel Skip/Add** – Use ↑/↓ and **ENTER** to select channels you would like to remove/restore from/to the channel guide.
- **Parental Lock** – Use ↑/↓ and **ENTER** to select channels you would like to place under parental lock. Channels put under parental lock are not displayed in the Channel Guide, but may be accessed by directly inputting their channel number and providing the parental lock password.
- **Antenna Aiming** – Check the strength of satellite and terrestrial reception.
- **Memory Recall** – Use ↑/↓ to browse your saved song information (see *Tip* above).
- **Password Set** – Set the parental lock password.

3 When you're finished press TOP MENU to return to the reception display.

Chapter 6:
Listening to your system

🖐 Important

• The listening modes and many features described in this section may not be available depending on the current source, settings and status of the receiver.

Auto playback

There are many ways to listen back to sources using this receiver, but the simplest, most direct listening option is the Auto Surround feature. The receiver automatically detects what kind of source you're playing and selects multichannel or stereo playback as necessary.[1]

• **While listening to a source, press RECEIVER , then press AUTO/ALC/DIRECT[2] for auto playback of a source.**
AUTO SURROUND shows briefly in the display before showing the decoding or playback format. Check the digital format indicators in the front panel display to see how the source is being processed.

- If the source is Dolby Digital, DTS, or Dolby Surround encoded, the proper decoding format will automatically be selected and shows in the display.

- When listening to the FM radio, the Neural Surround feature is selected automatically (see *Using Neural Surround* on page 52 for more on this).

- When listening to the **ADAPTER PORT** input, the **SOUND RETRIEVER AIR** feature is selected automatically (see *Listening in stereo* on page 63 for more on this).

ALC – In the Auto level control (ALC) mode, this receiver equalizes playback sound levels.

☀ Tip

• When **ALC** is selected, the effect level can be adjusted using the **EFFECT** parameter in *Setting the Audio options* on page 72.

Listening in surround sound

Using this receiver, you can listen to any source in surround sound. However, the options available will depend on your speaker setup and the type of source you're listening to.

Standard surround sound

The following modes provide basic surround sound for stereo and multichannel sources.[3]

• **While listening to a source, press RECEIVER , then press STANDARD.[4]**
If necessary, press repeatedly to select a listening mode.

📝 **Note**

1 Stereo surround (matrix) formats are decoded accordingly using **Neo:6 CINEMA** or **DD Pro Logic IIx MOVIE** (see *Listening in surround sound* above for more on these decoding formats).
2 • For more options using this button, see *Using Stream Direct* on page 64.
 • The AUTO SURROUND mode cannot be selected when the **HDMI** audio output parameter is set to **THROUGH** in *Setting the Audio options* on page 72.
3 In modes that give 6.1 channel sound, the same signal is heard from both surround back speakers.
4 The STANDARD listening mode cannot be selected when the **HDMI** audio output parameter is set to **THROUGH** in *Setting the Audio options* on page 72.

- If the source is Dolby Digital, DTS, or Dolby Surround encoded, the proper decoding format will automatically be selected and shows in the display.[1]

With two channel sources, you can select from:

- **DꞋꞋ Pro Logic IIx MOVIE** – Up to 7.1 channel (surround back) sound, especially suited to movie sources

- **DꞋꞋ Pro Logic IIx MUSIC** – Up to 7.1 channel (surround back) sound, especially suited to music sources[2]

- **DꞋꞋ Pro Logic IIx GAME** – Up to 7.1 channel (surround back) sound, especially suited to video games

- **DꞋꞋ Pro Logic** – 4.1 channel surround sound (sound from the surround speakers is mono)

- **DꞋꞋ Pro Logic IIz HEIGHT** – Up to 7.1 channel (front height) sound[3]

- **WIDE SURROUND MOVIE** – Up to 7.1 channel (front wide) sound, especially suited to movie sources[4]

- **WIDE SURROUND MUSIC** – Up to 7.1 channel (front wide) sound, especially suited to music sources[4]

- **Neo:6 CINEMA** – Up to 7.1 channel (surround back) sound, especially suited to movie sources[5]

- **Neo:6 MUSIC** – Up to 7.1 channel (surround back) sound, especially suited to music sources[5]

- **NEURAL SURR** – Up to 7.1 channel (surround back) sound, especially suited to music sources[6]

With multichannel sources, if you have connected surround back, front height or front wide speakers, you can select (according to format):

- **DꞋꞋ Pro Logic IIx MOVIE** – See above

- **DꞋꞋ Pro Logic IIx MUSIC** – See above

- **Dolby Digital EX** – Creates surround back channel sound for 5.1 channel sources and provides pure decoding for 6.1 channel sources (like Dolby Digital Surround EX)

- **DTS-ES** – Allows you to hear 6.1 channel playback with DTS-ES encoded sources

- **DTS Neo:6** – Allows you to hear 6.1 channel playback with DTS encoded sources

- **DꞋꞋ Pro Logic IIz HEIGHT** – See above[3]

- **WIDE SURROUND MOVIE** – See above[4]

- **WIDE SURROUND MUSIC** – See above[4]

- Straight Decode – Plays back without the effects above.

Note

1 If the surround back speakers are not connected or **V.SB** is switched **OFF**, **DꞋꞋ Pro Logic IIx** becomes **DꞋꞋ Pro Logic II** (5.1 channel sound).

2 When listening to 2-channel sources in Dolby Pro Logic IIx Music mode, there are three further parameters you can adjust: **C.WIDTH**, **DIMENSION** and **PANORAMA**. See *Setting the Audio options* on page 72 to adjust them.

3 • This mode can only be selected when **Speaker System** is set to **Normal(SB/FH)**.
  • When listening in **DꞋꞋ Pro Logic IIz HEIGHT** mode, you can also adjust the **HEIGHT GAIN** effect (see *Setting the Audio options* on page 72).

4 This mode can only be selected when **Speaker System** is set to **Normal(SB/FW)**.

5 When listening to 2-channel sources in Neo:6 Cinema or Neo:6 Music mode, you can also adjust the center image effect (see *Setting the Audio options* on page 72).

6 **NEURAL SURR** can be selected for 2-channel signals for which the input signal is PCM (48 kHz or less), Dolby Digital, DTS or analog 2-channel sources.

Using the Advanced surround effects

The Advanced surround effects can be used for a variety of additional surround sound effects. Most Advanced Surround modes are designed to be used with film soundtracks, but some modes are also suited for music sources. Try different settings with various soundtracks to see which you like.

• **Press** RECEIVER **, then press ADV SURR (ADV SURROUND) repeatedly to select a listening mode.**[1]

- • **ACTION** – Designed for action movies with dynamic soundtracks
- • **DRAMA** – Designed for movies with lots of dialog
- • **SCI-FI** – Designed for science fiction with lots of special effects
- • **MONO FILM** – Creates surround sound from mono soundtracks
- • **ENT.SHOW** – Suitable for musical sources
- • **EXPANDED** – Creates an extra wide stereo field[2]
- • **TV SURROUND** – Provides surround sound for both mono and stereo TV sources
- • **ADVANCED GAME** – Suitable for video games
- • **SPORTS** – Suitable for sports programs
- • **CLASSICAL** – Gives a large concert hall-type sound
- • **ROCK/POP** – Creates a live concert sound for rock and/or pop music
- • **UNPLUGGED** – Suitable for acoustic music sources

- • **EXT.STEREO** – Gives multichannel sound to a stereo source, using all of your speakers
- • **PHONES SURR** – When listening through headphones, you can still get the effect of overall surround.

⚙ Tip

• When an Advanced Surround listening mode is selected, the effect level can be adjusted using the **EFFECT** parameter in *Setting the Audio options* on page 72.

Listening in stereo

When you select **STEREO**, you will hear the source through just the front left and right speakers (and possibly your subwoofer depending on your speaker settings). Multichannel sources are downmixed to stereo.

• **While listening to a source, press** RECEIVER **, then press STEREO for stereo playback.**[3]

Press repeatedly to switch between:

- • **STEREO** – The audio is heard with your sound settings and you can still use the audio options.
- • **F.S.SURR FOCUS** – See *Using Front Stage Surround Advance* on page 64 for more on this.
- • **F.S.SURR WIDE** – See *Using Front Stage Surround Advance* on page 64 for more on this.
- • **SOUND RETRIEVER AIR**[4] – Suitable for listening to the sound from a *Bluetooth* wireless technology device.

📝 Note

1 If you press **ADV SURR** when the headphones are connected, the **PHONES SURR** mode will automatically be selected.

2 Use with Dolby Pro Logic for a stereo surround effect (stereo field is wider than Standard modes with Dolby Digital sources).

3 • The STEREO, F.S.SURR FOCUS and F.S.S WIDE mode cannot be selected when the **HDMI** audio output parameter is set to **THROUGH** in *Setting the Audio options* on page 72.
  • When headphones are plugged in, the F.S.SURR FOCUS and F.S.SURR WIDE are cannot be selected.

4 The **SOUND RETRIEVER AIR** listening mode can only selected when the **ADAPTER PORT** input.

Using Front Stage Surround Advance

The Front Stage Surround Advance function allows you to create natural surround sound effects using just the front speakers and the subwoofer.

• **While listening to a source, press RECEIVER , then press STEREO to select Front Stage Surround Advance modes.**

• **STEREO** – See *Listening in stereo* on page 63 for more on this.

• **F.S.SURR FOCUS** – Use to provide a rich surround sound effect directed to the center of where the front left and right speakers sound projection area converges.

• **F.S.SURR WIDE** – Use to provide a surround sound effect to a wider area than **FOCUS** mode.[1]

FOCUS position (Recommended)	**WIDE** position
Front left speaker Front right speaker	Front left speaker Front right speaker

Using Stream Direct

Use the Stream Direct modes when you want to hear the truest possible reproduction of a source. All unnecessary signal processing is bypassed, and you're left with the pure analog or digital sound source.

• **While listening to a source, press RECEIVER , then press AUTO/ALC/DIRECT to select the mode you want.[2]**

Check the digital format indicators in the front panel display to see how the source is being processed.

• **AUTO SURROUND** – See *Auto playback* on page 61.

• **ALC** – Listening in Auto level control mode (page 61).

• **DIRECT** – Plays back sound from the source with the least modification next to **PURE DIRECT**. With **DIRECT**, the only modifications added to **PURE DIRECT** playback are calibration of the sound field by the MCACC system and the Phase Control effect.

• **PURE DIRECT** – Plays back unmodified sound from source with only minimal digital treatment. No sound is output from the Speaker B in this mode.

☼ Tip

• When an ALC mode is selected, the effect level can be adjusted using the **EFFECT** parameter in *Setting the Audio options* on page 72.

📝 **Note**

1 When using **F.S.SURR WIDE**, a better effect can be obtained if the **Full Auto MCACC** procedure under **Advanced MCACC** is performed. For more on this, refer to *Automatically conducting optimum sound tuning (Auto MCACC* on page 41.

2 When headphones are plugged in, the AUTO SURROUND and DIRECT are cannot be selected.

Selecting MCACC presets

- Default setting: **MEMORY 1**

If you have calibrated your system for different listening positions[1], you can switch between settings to suit the kind of source you're listening to and where you're sitting (for example, watching movies from a sofa, or playing a video game close to the TV).

- **While listening to a source, press RECEIVER , then press MCACC.**

Press repeatedly to select one of the six MCACC presets[2]. See *Data Management* on page 102 to check and manage your current settings.

Choosing the input signal

On this receiver, it is possible to switch the input signals for the different inputs as described below.[3]

- **Press RECEIVER , then press SIGNAL SEL to select the input signal corresponding to the source component.**

Each press cycles through the options as follows:

- **AUTO** – The receiver selects the first available signal in the following order: **HDMI**; **DIGITAL**; **ANALOG**.
- **ANALOG** – Selects an analog signal.
- **DIGITAL** – Selects an optical or coaxial digital signal.
- **HDMI** – Selects an HDMI signal.[4]
- **PCM** – For PCM input signals.[5] The receiver selects the first available signal in the following order: **HDMI**; **DIGITAL**.

HDMI is not assigned by default. To select an HDMI signal, conduct the input setup procedure (see *The Input Setup menu* on page 44).

When set to **DIGITAL**, **HDMI** or **AUTO** (only selected **DIGITAL** or **HDMI**), the indicators light according to the signal being decoded (see *Display* on page 11).

Note

1 Different presets might also have separate calibration settings for the same listening position, depending on how you're using your system. These presets can be set in *Automatically conducting optimum sound tuning (Auto MCACC* on page 41 or *Automatic MCACC (Expert)* on page 91, either of which you should have already completed.
2 • These settings have no effect when headphones are connected.
 • You can also press ←/→ to select the MCACC preset.
3 • This receiver can only play back Dolby Digital, PCM (32 kHz to 192 kHz), DTS (including DTS 96/24) and WMA9 Pro digital signal formats. The compatible signals via the HDMI terminals are: Dolby Digital, DTS, WMA9 Pro, PCM (32 kHz to 192 kHz), Dolby TrueHD, Dolby Digital Plus, DTS-EXPRESS, DTS-HD Master Audio and SACD.
 • You may get digital noise when an LD, CD, DVD or BD player compatible with DTS is playing an analog signal. To prevent noise, make the proper digital connections (page 30) and set the signal input to **DIGITAL**.
 • Some DVD players don't output DTS signals. For more details, refer to the instruction manual supplied with your DVD player.
4 When the **HDMI** audio output parameter is set to **THROUGH**, the sound will be heard through your TV, not from this receiver.
5 • This is useful if you find there is a slight delay before **AUTO** recognizes the PCM signal on a CD, for instance.
 • When **PCM** is selected, noise may be output during playback of non-PCM sources. Please select another input signal if this is a problem.

Better sound using Phase Control

This receiver's Phase Control feature uses phase correction measures to make sure your sound source arrives at the listening position in phase, preventing unwanted distortion and/or coloring of the sound.

Phase Control technology provides coherent sound reproduction through the use of phase matching[1] for an optimal sound image. The default setting is on and we recommend leaving Phase Control switched on for all sound sources.

• **Press RECEIVER , then press PHASE CTRL (PHASE CONTROL) to switch on phase correction.**
The **PHASE CONTROL** indicator on the front panel lights.

📝 **Note**

1 • Phase matching is a very important factor in achieving proper sound reproduction. If two waveforms are 'in phase', they crest and trough together, resulting in increased amplitude, clarity and presence of the sound signal. If a crest of a wave meets a trough, then the sound will be 'out of phase' and an unreliable sound image will be produced.
• The **PHASE CONTROL** feature is available even when the headphones are plugged in.
• If your subwoofer has a phase control switch, set it to the plus (+) sign (or 0°). However, the effect you can actually feel when **PHASE CONTROL** is set to **ON** on this receiver depends on the type of your subwoofer. Set your subwoofer to maximize the effect. It is also recommended you try changing the orientation or the place of your subwoofer.
• Set the built-in lowpass filter switch of your subwoofer to off. If this cannot be done on your subwoofer, set the cutoff frequency to a higher value.
• If the speaker distance is not properly set, you may not have a maximized **PHASE CONTROL** effect.
• The **PHASE CONTROL** mode cannot be set to **ON** in the following cases:
– When the **PURE DIRECT** mode is switched on.
– When the HDMI audio output parameter is set to **THROUGH** in *Setting the Audio options* on page 72.

Chapter 7:
Control with HDMI function

Synchronized operations below with a **Control** with HDMI-compatible Pioneer TV or Blu-ray disc player or with a component of another make that supports the **Control** with HDMI functions are possible when the component is connected to the receiver using an HDMI cable.

• The receiver's volume can be set and the sound can be muted using the TV's remote control.

• The receiver's input switches over automatically when the TV's channel is changed or a **Control** with HDMI-compatible component is played.

• The receiver's power is also set to standby, when the TV's power is set to standby.

Important

• With Pioneer devices, **Control** with HDMI functions are referred to as "KURO LINK".

• You cannot use this function with components that do not support **Control** with HDMI.

• We do not guarantee this receiver will work with Pioneer **Control** with HDMI-compatible components or components of other makes that support the **Control** with HDMI function. We do not guarantee that all synchronized operations will work with components of other makes that support the **Control** with HDMI function.

• Use a High Speed HDMI® cable when you want to use the **Control** with HDMI function. The **Control** with HDMI function may not work properly if a different type of HDMI cable is used.

• For details about concrete operations, settings, etc., refer to also the operating instructions for each component.

Making Control with HDMI connections

You can use synchronized operation for a connected TV and up to six (*VSX-31 model:* BD, HDMI 1 to 5 (front panel))/four (*VSX-30 model:* BD, HDMI 1 to 3) other components.

Be sure to connect the TV's audio cable to the audio input of this unit.

For details, see *Connecting your TV and playback components* on page 25.

Important
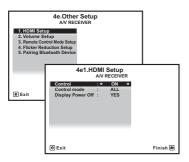
• When connecting this system or changing connections, be sure to switch the power off and disconnect the power cord from the wall socket.
After completing all connections, connect the power cords to the wall socket.

• After this receiver is connected to an AC outlet, a 2 second to 10 second HDMI initialization process begins. You cannot carry out any operations during initialization. The HDMI indicator on the display unit blinks during initialization, and you can turn this receiver on once it has stopped blinking.

• To get the most out of this function, we recommend that you connect your HDMI component not to a TV but rather directly to the HDMI terminal on this receiver.

• While the receiver is equipped with six (*VSX-31 model:* BD, HDMI 1 to 5 (front panel))/four (*VSX-30 model:* BD, HDMI 1 to 3) HDMI inputs, the **Control** with HDMI function can only be used with up to three DVD or Blu-ray disc players or up to three DVD or Blu-ray disc recorders.

HDMI Setup

You must adjust the settings of this receiver as well as the connected **Control** with HDMI-compatible components in order to make use of the **Control** with HDMI function. For more information see the operating instructions for each component.

1   Press `RECEIVER` , then press HOME MENU.

2   Select 'System Setup', then press ENTER.

3   Select 'Other Setup', then press ENTER.

```
           4e.Other Setup
              A/V RECEIVER

  1. HDMI Setup
  2. Volume Setup
  3. Remote Control Mode Setup
  4. Flicker Reduction Setup
  5. Pairing Bluetooth Device

 ⌂ Exit
```

```
            4e1.HDMI Setup
               A/V RECEIVER

   Control          : ◀  ON  ▶
   Control mode     :     ALL
   Display Power Off :    YES




  ⌂ Exit                   Finish ▣
```

4   Select 'HDMI Setup', then press ENTER.

5   Select the 'Control' setting you want.
Choose whether to set this unit's **Control** with HDMI function **ON** or **OFF**. You will need to set it to **ON** to use the **Control** with HDMI function.

When using a component that does not support the **Control** with HDMI function, set this to **OFF**.

- **ON** – Enables the **Control** with HDMI function. When this unit's power is turned off and you have a supported source begin playback while using the **Control** with HDMI function, the audio and video outputs from the HDMI connection are output from the TV.

- **OFF** – The **Control** with HDMI is disabled. Synchronized operations cannot be used. When this unit's power is turned off, audio and video of sources connected via HDMI are not output.

6   Select the 'Control Mode' setting you want.
Choose whether you want to enable HDMI for all linked functions or the PQLS function only. However, Display Power Off will activate the settings set forth in step 7 below.

- **ALL** – Enabled for all linked functions.

- **PQLS** – Enabled only for the PQLS function. When **PQLS** is selected, link functions other than the PQLS function may not work properly. If you wish to use all link functions, select **ALL**.

7   Select the 'Display Power Off' setting you want.
If the TV's power is turned off while using the **Control** with HDMI function, the receiver's power is also turned off (all power off function). This function can be disabled.

- **YES** – The all power off function is enabled. The receiver's power turns off together with the TV's power.
  This function only works when the input for a component connected to the receiver by **Control** with HDMI is selected or when watching the TV.

- **NO** – The all power off function is disabled. The receiver's power is not affected when the TV's power is turned off.

8   When you're finished, press HOME MENU.
You will return to the **Home Menu**.

Before using synchronization

Once you have finished all connections and settings, you must:

1   Put all components into standby mode.

2   Turn the power on for all components, with the power for the TV being turned on last.

3   Choose the HDMI input to which the TV is connected to this receiver, and see if video output from connected components displays properly on the screen or not.

4   Check whether the components connected to all HDMI inputs are properly displayed.

About synchronized operations

The **Control** with HDMI-compatible component connected to the receiver operates in sync as described below.

- From the menu screen of the **Control** with HDMI-compatible TV, set audio to be played through this receiver, and the receiver will switch to the synchronized amp mode.

- When in the synchronized amp mode, you can adjust the receiver's volume or mute the sound using the TV's remote control.

- When in the synchronized amp mode, the synchronized amp mode is canceled when the receiver's power is turned off. To turn the synchronized amp mode back on, set audio to be played through the receiver from the TV's menu screen, etc. This receiver will power up and switch to the synchronized amp mode.

- When the synchronized amp mode is canceled, the receiver's power turns off if you were viewing an HDMI input or a TV program on the TV.

- When in the synchronized amp mode, the synchronized amp mode is canceled if an operation that produces sound from the TV is performed from the TV's menu screen, etc.

- When the TV's power is set to standby, the receiver's power is also set to standby. (Only when the input for a component connected to the receiver by HDMI connection is selected or when watching the TV.)

- The receiver's input switches automatically when the **Control** with HDMI-compatible component is played.

- The receiver's input switches automatically when the TV's channel is switched.

- The synchronized amp mode remains in effect even if the receiver's input is switched to a component other than one connected by HDMI.

The operations below can also be used on Pioneer **Control** with HDMI-compatible TVs.

- When the receiver's volume is adjusted or the sound is muted, the volume status is displayed on the TV's screen.

- When the OSD language is switched on the TV, the receiver's language setting also switches accordingly.

About connections with a product of a different brand that supports the Control with HDMI function

The synchronized operations below can be used when the receiver's **Control** with HDMI function is connected to a TV of a brand other than Pioneer that supports the **Control** with HDMI function. (Depending on the TV, however, some of the **Control** with HDMI functions may not work.)

• When the TV's power is set to standby, the receiver's power is also set to standby. (Only when the input for a component connected to the receiver by HDMI connection is selected or when watching the TV.)

• The sound of TV programs or an external input connected to the TV can also be output from the speakers connected to the receiver. (This requires connection of an optical digital cable, etc., in addition to the HDMI cable.)

The synchronized operations below can be used when the receiver's **Control** with HDMI function is connected to a player or recorder of a brand other than Pioneer that supports the **Control** with HDMI function.

• When playback starts on the player or recorder, the receiver's input switches to the HDMI input to which that component is connected.

See the Pioneer website for the latest information on the models of non-Pioneer brands and products that support the **Control** with HDMI function.

Setting the PQLS function

PQLS (Precision Quartz Lock System) is a digital audio signal transfer control technology using the **Control** with HDMI function. It offers higher-quality audio playback by controlling audio signals from the receiver to a PQLS compatible player, etc. This enables removing jitter that has a negative effect on the quality of the sound and is generated upon transmission.

This receiver supports the "PQLS 2 ch Audio" that is only activated when playing an audio CD (CD-DA).

This function is activated when **Control** is set to **ON**.[1]

• **Press RECEIVER , then press PQLS to select the PQLS setting.**

The setting is displayed on the front panel display.

• **PQLS AUTO** – PQLS is enabled. A precision quartz controller in this receiver eliminates distortion caused by timing errors (jitter), giving you the best possible digital-to-analog conversion from audio CD sources when you use the HDMI interface. This is valid as an HDMI function for PQLS-compatible players.

• **PQLS OFF** – PQLS is disabled.

📝 **Note**

1 • If a listening mode other than **AUTO SURROUND**, **ALC**, **DIRECT**, **PURE DIRECT** or **STEREO** is selected while the PQLS effect is enabled, the PQLS effect is disabled.
• When this receiver is connected by HDMI cable to a Pioneer player that is compatible with the PQLS function via HDMI connection and a CD is played or HDMI reauthentication is performed (the **HDMI** indicator blinks), the PQLS effect is enabled and the listening mode is set to **AUTO SURROUND** if a listening mode other than **AUTO SURROUND**, **ALC**, **DIRECT**, **PURE DIRECT** or **STEREO** is selected.

Cautions on the Control with HDMI function

- Connect the TV directly to this receiver. Interrupting a direct connection with other amps or an AV converter (such as an HDMI switch) can cause operational errors.

- Only connect components (Blu-ray disc player, etc.) you intend to use as a source to the HDMI input of this receiver. Interrupting a direct connection with other amps or an AV converter (such as an HDMI switch) can cause operational errors.

- When **Control** is set to **ON**, the HDMI Input in *The Input Setup menu* on page 44 is automatically set to **OFF**.

- When the receiver's **Control** is turned **ON**, even if the receiver's power is in the standby mode, it is possible to output the audio and video signals from a player via HDMI to the TV without producing sound from the receiver, but only when a **Control** with HDMI-compatible component (Blu-ray disc player, etc.) and compatible TV are connected. In this case, the receiver's power turns on and the power and **HDMI** indicators light.

Chapter 8:
Using other functions

Setting the Audio options

There are a number of additional sound settings you can make using the **AUDIO PARAMETER** menu. The defaults, if not stated, are listed in bold.

❗ Important

• Note that if a setting doesn't appear in the **AUDIO PARAMETER** menu, it is unavailable due to the current source, settings and status of the receiver.

1   Press RECEIVER , then press AUDIO PARAMETER.

2   Use ⬆/⬇ to select the setting you want to adjust.
Depending on the current status/mode of the receiver, certain options may not be able to be selected. Check the table below for notes on this.

3   Use ⬅/➡ to set as necessary.
See the table below for the options available for each setting.

4   Press RETURN to confirm and exit the menu.

Setting	What it does	Option(s)
MCACC (MCACC preset)	Selects your favorite MCACC preset memory when multiple preset memories are saved. When an MCACC preset memory has been renamed, the given name is displayed.	M1. MEMORY 1 to M6. MEMORY 6 Default: **M1. MEMORY 1**
EQ (Acoustic Calibration EQ)	Switches on/off the effects of EQ Pro.	**ON** *OFF*[a]
S-WAVE (Standing Wave)	Switches on/off the effects of Standing Wave Control.	**ON** *OFF*
DELAY (Sound Delay)	Some monitors have a slight delay when showing video, so the soundtrack will be slightly out of sync with the picture. By adding a bit of delay, you can adjust the sound to match the presentation of the video.	0.0 to 10.0 (frames) *1 second = 30 frames (NTSC)* Default: **0.0**
MIDNIGHT	Allows you to hear effective surround sound of movies at low volumes.	**MID/LDN OFF** *MIDNIGHT ON*
LOUDNESS	Used to get good bass and treble from music sources at low volumes.	*LOUDNESS ON*
TONE[b] (Tone Control)	Applies the treble and bass tone controls to a source, or bypasses them completely.	**BYPASS** *ON*
BASS[c]	Adjusts the amount of bass.	–6 to +6 (dB) Default: **0** (dB)

Setting	What it does	Option(s)
TREBLE[c]	Adjusts the amount of treble.	–6 to +6 (dB)
		Default: **0** (dB)
S.RTRV (Sound Retriever)	With the Sound Retriever function, DSP processing is used to compensate for the loss of audio data upon compression, improving the sound's sense of density and modulation.	**OFF**[d]
		ON
DNR (Digital Noise Reduction)	May improve the quality of sound in a noisy source (for example, video tape with lots of background noise) when switched on.	**OFF**
		ON
DIALOG E (Dialog Enhancement)	Localizes dialog in the center channel to make it stand out from other background sounds in a TV or movie soundtrack. By moving from UP1 through UP2 and UP3 up to UP4, you can make the sound source seem to relocate upwards.	**OFF**
		FLAT
		UP1/UP2/UP3/UP4[e]
DUAL (Dual Mono)	Specifies how dual mono encoded Dolby Digital soundtracks should be played. Dual mono is not widely used, but is sometimes necessary when two languages need to be sent to separate channels.	**CH1** – Channel 1 is heard only
		CH2 – Channel 2 is heard only
		CH1 CH2 – Both channels heard from front speakers
DRC (Dynamic Range Control)	Adjusts the level of dynamic range for movie soundtracks optimized for Dolby Digital, DTS, Dolby Digital Plus, Dolby TrueHD, DTS-HD and DTS-HD Master Audio (you may need to use this feature when listening to surround sound at low volumes).	**AUTO**[f]
		MAX
		MID
		OFF
LFE (LFE Attenuate)	Some audio sources include ultra-low bass tones. Set the LFE attenuator as necessary to prevent the ultra-low bass tones from distorting the sound from the speakers. The LFE is not limited when set to 0 dB, which is the recommended value. When set to –5 dB, –10 dB, –15 dB or –20 dB, the LFE is limited by the respective degree. When OFF is selected, no sound is output from the LFE channel.	**0dB**/ –5dB/ –10dB/ –15dB/ –20dB
		OFF
SACD GAIN[g]	Brings out detail in SACDs by maximizing the dynamic range (during digital processing).	**0** (dB)
		+6 (dB)
HDMI[h] (HDMI Audio)	Specifies the routing of the HDMI audio signal out of this receiver (*amp*) or *through* to a TV. When THROUGH is selected, no sound is output from this receiver.	**AMP**
		THROUGH
A. DELAY (Auto delay)	This feature automatically corrects the audio-to-video delay between components connected with an HDMI cable. The audio delay time is set depending on the operational status of the display connected with an HDMI cable. The video delay time is automatically adjusted according to the audio delay time.[i]	**OFF**
		ON

Setting	What it does	Option(s)
C. WIDTH[j] (Center Width) (Applicable only when using a center speaker)	Provides a better blend of the front speakers by spreading the center channel between the front right and left speakers, making it sound wider (higher settings) or narrower (lower settings).	0 to 7 Default: **3**
DIMENSION[j]	Adjusts the depth of the surround sound balance from front to back, making the sound more distant (minus settings), or more forward (positive settings).	–3 to +3 Default: **0**
PANORAMA[j]	Extends the front stereo image to include the surround speakers for a 'wraparound' effect.	**OFF** *ON*
C. IMAGE[k] (Center Image) (Applicable only when using a center speaker)	Adjusts the center image to create a wider stereo effect with vocals. Adjust the effect from **0** (all center channel sent to front right and left speakers) to **10** (center channel sent to the center speaker only).	0 to 10 Defaults: Neo:6 MUSIC: **3** Neo:6 CINEMA: **10**
EFFECT	Sets the effect level for the currently selected Advanced Surround or ALC mode (each mode can be set separately).	10 to 90 Defaults: **50** (**90** for **EXT.STEREO** only)
H.GAIN (Height Gain)	Adjusts the output from the front height speaker when listening in **DOLBY PLIIz HEIGHT** mode. If set to **HIGH**, the sound from the top will be more emphasized.	*LOW* **MID** *HIGH*
V.SB (Virtual Surround Back)	When you're not using surround back speakers, selecting this mode allows you to hear a virtual surround back channel through your surround speakers. You can choose to listen to sources with no surround back channel information, or if the material sounds better in the format (for example, 5.1) for which it was originally encoded, you can have the receiver only apply this effect to 6.1 encoded sources like Dolby Digital EX or DTS-ES.[l]	**OFF** *ON*
V.HEIGHT (Virtual Height)	When you're not using front height speakers, selecting this mode allows you to hear a virtual height channel through your front speakers.[m]	**OFF** *ON*

a. When **EQ OFF** is selected, the MCACC indicator does not light.
b. This setting is only displayed when the listening mode is Stereo, Auto surround (STEREO) or SOUND RETRIEVER AIR.
c. The adjustment can be made only when **TONE** is set to **ON**.
d. With the **iPod/USB**, **INTERNET RADIO** or **ADAPTER PORT** input function, by default **S.RTRV** is set to **ON**.
e. UP1 to UP4 can be selected only when the front height speaker is connected. The presence or absence of effects depends on the listening mode.
f. The initially set **AUTO** is only available for Dolby TrueHD signals. Select **MAX** or **MID** for signals other than Dolby TrueHD.
g. You shouldn't have any problems using this with most SACD discs, but if the sound distorts, it is best to switch the gain setting back to **0** dB.
h. •The HDMI Audio setting cannot be switched while performing synchronized amp mode operations.
   • The synchronized amp mode must be turned on in order to play the receiver's HDMI audio and video input signals from the TV with the receiver's power in the standby mode. See *About synchronized operations* on page 69.

i. This feature is only available when the connected display supports the automatic audio/video synchronizing capability ('lipsync') for HDMI. If you find the automatically set delay time unsuitable, set **A. DELAY** to **OFF** and adjust the delay time manually. For more details about the lipsync feature of your display, contact the manufacturer directly.

j. Only when listening to 2-channel sources in Dolby Pro Logic IIx Music/Dolby Pro Logic II Music mode.

k. Only when listening to 2-channel sources in Neo:6 MUSIC/CINEMA mode.

l. • You can't use the Virtual Surround Back mode when the headphones are connected to this receiver or when any of the stereo, Front Stage Surround Advance or Stream Direct modes is selected.
 • You can only use the Virtual Surround Back mode if the surround speakers are on and the **SB** setting is set to **NO** or if **Front Bi-Amp** or **ZONE 2** is selected at Speaker System.
 • The Virtual Surround Back mode cannot be applied to sources that do not have surround channel information (only when listening in some formats of Dolby TrueHD, DTS-HD or DTS Express mode).

m. • You can't use the Virtual Front Height mode when the headphones are connected to this receiver or when any of the stereo, Front Stage Surround Advance or Stream Direct modes is selected.
 • You can only use the Virtual Front Height mode if the surround speakers are on.
 • The Virtual Front Height mode cannot be applied to sources that do not have surround channel information (only when listening in some formats of Dolby TrueHD, DTS-HD or DTS Express mode).

Setting the Video options

There are a number of additional picture settings you can make using the **VIDEO PARAMETER** menu. The defaults, if not stated, are listed in bold.

🛈 Important

• Note that if an option cannot be selected on the **VIDEO PARAMETER** menu, it is unavailable due to the current source, setting and status of the receiver.

1   Press RECEIVER , then press VIDEO PARAMETER.

2   Use ↑/↓ to select the setting you want to adjust.
Depending on the current status/mode of the receiver, certain options may not be able to be selected. Check the table below for notes on this.

3   Use ←/→ to set as necessary.
See the table below for the options available for each setting.[1]

4   Press RETURN to confirm and exit the menu.

Setting	What it does	Option(s)
V. CONV[a] (Digital Video Conversion)	Converts video signals for output from the **MONITOR OUT** jacks (including **HDMI OUT** connector) for all video types (see page 24).	**ON**
		OFF
RES[b] (Resolution)	Specifies the output resolution of the video signal (when video input signals are output at the **HDMI OUT** connector, select this according to the resolution of your monitor and the images you wish to watch).	**AUTO**
		PURE
		480p/576p
		720p
		1080i
		1080p

✐ Note
1 • All of the setting items can be set for each input function.
 • Setting items other than **V. CONV** can only be selected when **V. CONV** is set to **ON**.

Setting	What it does	Option(s)
ASP[c] (Aspect)	Specifies the aspect ratio when analog video input signals are output at the HDMI output. Make your desired settings while checking each setting on your display (if the image doesn't match your monitor type, cropping or black bands appear).	**THROUGH**
		NORMAL
PCINEMA[d,e,f] (PureCinema)	This setting optimizes the picture for film material when the video output is set to progressive. Usually set to **AUTO**; but try switching to **OFF** if the picture appears unnatural. Additionally, certain PAL movie videos (576i, 25 frames/second STB video output or DVD disc playback, etc.) that contain film progressive material cannot be recognized as such by this receiver. In such instances, if you choose **ON**, PureCinema mode is activated.	**AUTO**
		ON
		OFF
P.MOTION[d,f] (Progressive Motion)	Adjusts the motion and still picture quality when video output is set to progressive.	–4 to +4 Default: **0**
YNR[d]	Adjusts the amount of noise reduction (NR) applied to the Y (brightness) component.	0 to +8 Default: **0**
DETAIL[d]	Adjusts how sharp edges appear.	–4 to +4 Default: **0**
SHARP[d,g] (Sharpness)	Adjusts the sharpness of the high-frequency (detailed) elements in the picture.	–4 to +4 Default: **0**
BRIGHT[d] (Brightness)	Adjusts the overall brightness.	–6 to +6 Default: **0**
CONTRAST[d]	Adjusts the contrast between light and dark.	–6 to +6 Default: **0**
HUE[d,h]	Adjusts the red/green balance.	–6 to +6 Default: **0**
CHROMA[d] (Chroma Level)	Adjusts saturation from dull to bright.	–6 to +6 Default: **0**

a. If the video picture deteriorates when this settings is switched **ON**, switch it **OFF**.
b. • When set to a resolution with which the TV (monitor) is not compatible, no picture is output. Also, in some cases no picture will be output due to copyright protection signals. In this case, change the setting.
 • When **AUTO** is selected, the resolution is selected automatically according to the capacity of the TV (monitor) connected by HDMI. When **PURE** is selected, the signals are output with the same resolution as when input (see *About the video converter* on page 24).
 • When a display is connected by HDMI, if this is set to something other than **PURE** and 480i/576i analog signals are input, 480p/576p signals are output from the component output terminals.
 • The **AUTO** setting is not displayed for HDMI inputs.
c. • If the image doesn't match your monitor type, adjust the aspect ratio on the source component or on the monitor.
 • This cannot be set when the resolution is set to **PURE**.
 • The **NORMAL** setting is only displayed when 480i/p or 576i/p analog video signals are being input.
d. This setting is only displayed when 480i or 576i analog video signals are being input.
e. If the picture does not display properly when **ON** is selected, select **AUTO** or **OFF**.
f. This setting is valid for component outputs and HDMI output.
g. This setting is not valid for HDMI output.
h. This setting is not displayed for component inputs.

Switching the speaker terminals

If you selected **Speaker B** at *Speaker system setting* on page 105, you can switch between speakers using the **SPEAKERS** button. If you selected **Normal(SB/FH)**, **Normal(SB/FW)**, **Front Bi-Amp** or **ZONE 2**, the button will simply switch your main speaker terminals on or off. The options below are for the **Speaker B** setting only.[1]

• **Use SPEAKERS on the front panel to select a speaker terminal setting.**

As mentioned above, if you have selected **Normal(SB/FH)** or **Normal(SB/FW)**, the button will simply switch your main speaker terminals (A) on or off.

Press repeatedly to choose a speaker terminal option:

• **SP▶A** – Sound is output from the A-speaker terminals (up to 7 channels (including surround back channels), depending on the source).

• **SP▶B** – Sound is output from the two speakers connected to the B-speaker terminals. Multichannel sources will not be heard.

• **SP▶AB** – Sound is output from the A-speaker terminals (up to 5 channels, depending on the source), the two speakers connected to the B-speaker terminal, and the subwoofer. The sound from B-speaker terminals will be the same as the sound from the A-speaker terminals (multichannel sources will be downmixed to 2 channels).

• **SP▶** (off) – No sound is output from the speakers.

Using the MULTI-ZONE controls

The following steps use the front panel controls to adjust the sub zone volume and select sources. See *MULTI-ZONE remote controls* on page 78.

1 Press MULTI-ZONE ON/OFF on the front panel.

Each press selects a MULTI-ZONE option:

• **ZONE 2 ON** – Switches the MULTI-ZONE feature on

• **MULTI ZONE OFF** – Switches the MULTI-ZONE feature off

The **MULTI-ZONE** indicator lights when the MULTI-ZONE control has been switched ON.

2 Press MULTI-ZONE CONTROL on the front panel.

• When the receiver is on,[2] make sure that any operations for the sub zone are done while **ZONE 2** shows in the display. If this is not showing, the front panel controls affect the main zone only.

3 Use the INPUT SELECTOR dial to select the source for the sub zone.

For example, **ZONE 2 CD-R** sends the source connected to the **CD-R** inputs to the sub room (**ZONE 2**).

• If you select **TUNER**, you can use the tuner controls to select a preset station (see *Saving station presets* on page 52 if you're unsure how to do this).[3]

• *VSX-30 model only:* iPod/USB, INTERNET RADIO and SIRIUS function cannot be selected for the MULTI-ZONE feature.

📝 **Note**

1 • The subwoofer output depends on the settings you made in *Manual speaker setup* on page 104. However, if **SP▶B** is selected above, no sound is heard from the subwoofer (the LFE channel is not downmixed).
 • All speaker systems (except **Speaker B** connections) are switched off when headphones are connected.
2 If the receiver is in standby, the display is dimmed, and **ZONE 2 DVD** for example shows in the display.
3 The tuner cannot be tuned to more than one station at a time. Therefore, changing the station in one zone also changes the station in the other zone. Please be careful not to change stations when recording a radio broadcast.

4 When Speaker System is set to ZONE 2, use the MASTER VOLUME dial to adjust the volume for the sub zone.[1]

5 When you're finished, press MULTI-ZONE CONTROL again to return to the main zone controls.
You can also press **MULTI-ZONE ON/OFF** on the front panel to switch off all output to the sub zone.[2]

MULTI-ZONE remote controls

Set the MULTI-ZONE operation switch to **ZONE 2** to operate the corresponding zone.

The following table shows the possible MULTI-ZONE remote controls:

Button	What it does
⏻	Switches on/off power in the sub zone.
INPUT SELECT	Use to select the input function in the sub zone.
Input function buttons	Use to select the input function directly (this may not work for some functions) in the sub zone.
MASTER VOLUME +/–	Use to set the listening volume in the sub zone.[a]
MUTE	Mutes the sound or restores the sound if it has been muted (adjusting the volume also restores the sound).[a]

a.You can only use this button when **Speaker System** is set to **ZONE 2**.

Making an audio or a video recording

You can make an audio or a video recording from the built-in tuner, or from an audio or video source connected to the receiver (such as a CD player or TV).[3]

Keep in mind you can't make a digital recording from an analog source or vice-versa, so make sure the components you are recording to/from are hooked up in the same way (see *Connecting your equipment* on page 15 for more on connections).

Since the video converter is not available when making recordings (from the video **OUT** jacks) make sure to use the same type of video cable for connecting your recorder as you used to connect your video source (the one you want to record) to this receiver. For example, you must connect your recorder using Component video if your source has also been connected using Component video.

For more information about video connections, see *Connecting an HDD/DVD recorder, BD recorder and other video sources* on page 29.

1 Select the source you want to record.
Use the input function buttons (or **INPUT SELECT**).

2 Prepare the source you want to record.
Tune to the radio station, load the CD, video, DVD etc.

3 Prepare the recorder.
Insert a blank tape, MD, video etc. into the recording device and set the recording levels.

📝 **Note**
1 The volume levels of the main and sub zone are independent.
2 • You won't be able to switch the main zone off completely unless you've switched off the MULTI-ZONE control first.
 • If you don't plan to use the MULTI-ZONE feature for a while, turn off the power in both the sub and main rooms so that this receiver is in standby.
3 • The receiver's volume, Audio parameters (the tone controls, for example), and surround effects have no effect on the recorded signal.
 • Some digital sources are copy-protected, and can only be recorded in analog.
 • Some video sources are copy-protected. These cannot be recorded.

Refer to the instructions that came with the recorder if you are unsure how to do this. Most video recorders set the audio recording level automatically—check the component's instruction manual if you're unsure.

4   Start recording, then start playback of the source component.

Reducing the level of an analog signal

The input attenuator lowers the input level of an analog signal when it's too strong. You can use this if you find that the **OVER** indicator lights often or you can hear distortion in the sound.[1]

• **Press ⎟RECEIVER⎟, then press A.ATT to switch the input attenuator on or off.**

Using the sleep timer

The sleep timer switches the receiver into standby after a specified amount of time so you can fall asleep without worrying about the receiver being left on all night. Use the remote control to set the sleep timer.

• **Press ⎟RECEIVER⎟, then press SLEEP repeatedly to set the sleep time.**

```
30 min ———— 60 min
Off ———— 90 min
```

• You can check the remaining sleep time at any time by pressing **SLEEP** once. Pressing repeatedly will cycle through the sleep options again.[2]

Dimming the display

You can choose between four brightness levels for the front panel display. Note that when selecting sources, the display automatically brightens for a few seconds.

• **Press ⎟RECEIVER⎟, then press DIMMER repeatedly to change the brightness of the front panel display.**

Checking your system settings

Use the status display screen to check your current settings for features such as your current MCACC preset.

1   Press ⎟RECEIVER⎟, then press STATUS to check the system settings.
These appear on the front panel display.

The front panel display shows each of the following settings for three seconds each:

Input Source
↓
Sampling Frequency
↓
MCACC preset
↓
ZONE 2 input

2   When you're finished, press STATUS again to switch off the display.

Note
1 The attenuator isn't available with digital sources, or when using the Stream Direct (ANALOG DIRECT) modes.
2 • You can also switch off the sleep timer simply by switching off the receiver.
  • The sleep timer is valid for all zones. If any zone is on, the sleep timer continues functioning.

Resetting the system

Use this procedure to reset all the receiver's settings to the factory default. Use the front panel controls to do this. Set **MULTI-ZONE** to **OFF**.

• Disconnect the iPod and USB memory device from the receiver beforehand.

1 Switch the receiver into standby.

2 While holding down ENTER on the front panel, press ⏻ STANDBY/ON.
The display shows **RESET ◄ NO ►**.

3 Select 'RESET' using PRESET ◄/►, then press ENTER on the front panel.
The display shows **RESET? OK**.

4 Press ENTER to confirm.
OK appears in the display to indicate that the receiver has been reset to the factory default settings.

• Note that all settings will be saved, even if the receiver is unplugged.

Default system settings

Setting	Default
Digital Video Conversion	ON
SPEAKERS	A
Speaker System	Normal(SB/FH)
Speaker Setting	Front: SMALL Center: SMALL FH/FW: SMALL Surr: SMALL SB: SMALLx2 SW: YES
Surround Position	IN REAR
Crossover	80 Hz
X-Curve	OFF
DIMMER	brightest
Inputs	
See *Input function default and possible settings* on page 45.	
HDMI	
HDMI Audio	Amp
Control	ON
Control Mode	ALL

Setting	Default
DIsplay Power Off	YES
DSP	
Power On Level	LAST
Volume Limit	OFF
Mute Level	FULL
Phase Control	ON
Sound Retriever	ON (iPod/USB, INTERNET RADIO, ADAPTER PORT function)/ OFF (Other functions)
Sound Delay	0.0 frame
Dual Mono	CH1
DRC	AUTO
SACD Gain	0 dB
LFE Attenuate	0 dB
Auto delay	OFF
Digital Safety	OFF
Effect Level	90 (EXT.STEREO)/ 50 (Other modes)
◗◖ PL II Music Options	Center Width:3 Dimension:0 Panorama:OFF
Neo:6 Options	Center Image: 3 (Neo:6 MUSIC)/ 10 (Neo:6 CINEMA)
Listening Mode (All Inputs)	AUTO SURROUND (2 ch/multi ch)/ STEREO (Head phones)
See also *Setting the Audio options* on page 72 for other default DSP settings.	
MCACC	
MCACC Position Memory	M1: MEMORY 1
Channel Level (M1 to M6)	0.0 dB
Speaker Distance (M1 to M6)	10'00"
Standing Wave (M1 to M6)	ATT of all channels/ filters: 0.0 dB SWch Trim: 0.0 dB
EQ Data (M1 to M6)	All channels/bands: 0.0 dB EQ Trim: 0.0 dB

Chapter 9:
Controlling the rest of your system

Operating multiple receivers

Up to four receivers can be operated discretely using this receiver's remote control when using multiple receivers, provided they are of the same model as this receiver. The receiver to be operated is switched by inputting the preset code to set the remote control setting.

- Set the remote modes on the receivers before using this function (see *Remote Control Mode Setup* on page 111).

1   Press and hold R.SETUP, then press "4" for three seconds.
The LED flashes continuously.

- To cancel the preset setup mode press **R.SETUP**.

2   Press the number button for the receiver ("Receiver 1" to "Receiver 4") you wish to operate.
For example, to operate "Receiver 2", press "**2**".

If the LED lights for one second, the setting has been successfully completed.

When the preset code is input, the LED flashes three times to indicate that the setting has failed.

Setting the remote to control other components

Most components can be assigned to one of the input function buttons (such as **DVD** or **CD**) using the component's manufacturer preset code stored in the remote.

However, there are cases where only certain functions may be controllable after assigning the proper preset code, or the codes for the manufacturer in the remote control will not work for the model that you are using.

If you can't find a preset code that matches the component you want to control, you can still teach the remote individual commands from another remote control (see *Programming signals from other remote controls* on page 82).

Note

- You can cancel or exit any of the steps by pressing **R.SETUP**.
- After one minute of inactivity, the remote automatically exits the operation.
- For greater convenience, assign the TV connected to the MONITOR OUT terminal to the **TV CTRL** button, and assign your satellite/cable receiver or set-top box connected to the TV input terminal to the **TV** input button. If a single device is connected to both terminals, that device should be assigned to both the **TV CTRL** and **TV** input buttons.
- Devices may be assigned to the following input function buttons.

Selecting preset codes directly

1   Press and hold R.SETUP, then press "1" for three seconds.
The LED flashes continuously.

   • To cancel the preset setup mode press **R.SETUP**.

2   Press the input function button for the component you want to control.
When assigning preset codes to **TV CONTROL**, press **TV CTRL** here.

The LED blinks once and flashes continuously.

3   Use the number buttons to enter the 4-digit preset code.
See *Preset code list* on page 127.

If the LED lights for one second, the setting has been successfully completed.

When the preset code is fully input, the LED flashes three times to indicate that the setting has failed. If this happens, enter the 4-digit preset code again.

4   Repeat steps 2 through 3 for the other components you want to control.
To try out the remote control, switch the component on or off (into standby) by pressing ⏻ **SOURCE**. If it doesn't seem to work, select the next code from the list (if there is one).
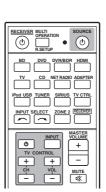
5   Press R.SETUP to exit the preset setup mode.

Programming signals from other remote controls

If the preset code for your component is not available, or the available preset codes do not operate correctly, you can program signals from the remote control of another component. This can also be used to program additional operations (buttons not covered in the presets) after assigning a preset code.[1]

Certain buttons represent operations that cannot be learned from other remote controls. The buttons available are shown below:

1   Press and hold R.SETUP, then press "2" for three seconds.
The LED flashes continuously.

   • To cancel the preset setup mode press **R.SETUP**.

2   Press the input function button for the component you want to control.
The LED blinks once and flashes continuously.
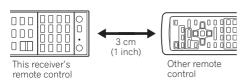
📝 **Note**
1 The remote can store about 120 preset codes from other components (this has been tested with codes of Pioneer format only).

3   Point the two remote controls towards each other, then press the button that will be doing the learning on this receiver's remote control.
The LED blinks once and flashes continuously.

• The remote controls should be 3 cm (1 inch) apart.

This receiver's remote control   Other remote control

4   Press the corresponding button on the other remote control that is sending (teaching) the signal to this receiver's remote control.
If the LED lights for one second, the setting has been successfully completed.[1]

5   To program additional signals for the current component repeat steps 3 and 4.
To program signals for another component, exit and repeat steps 2 through 4.

6   Press R.SETUP to exit the programming mode.

Erasing one of the remote control button settings

This erases one of the buttons you have programmed and restores the button to the factory default.

1   Press and hold R.SETUP, then press "7" for three seconds.
The LED flashes continuously.

• To cancel the preset setup mode press **R.SETUP**.

2   Press the input function button corresponding to the command to be erased, then press ENTER.
The LED flashes once.

3   Press and hold the button to be erased for three seconds.
If the LED lights for one second, the erasing has been successfully completed.

4   Repeat step 3 to erase other buttons.

5   Press R.SETUP to exit the erasing mode.

Note
1 • Note that interference from TVs or other devices will sometimes result in the remote control learning the wrong signal.
• Some commands from other remote controls cannot be learned, but in most cases the remotes just need to be moved closer together or farther apart.
• If the LED flashes for five seconds, it means the memory is full. See *Resetting the input assignment of one of the input function buttons* on page 84 to erase a programmed button you're not using to free up more memory (note that some signals may take more memory than others).

Resetting the input assignment of one of the input function buttons

This procedure resets the input assignment preset at the remote control's input function button, restoring the default.

1 Press and hold R.SETUP, then press "9" for three seconds.
The LED flashes continuously.

• To cancel the preset setup mode press **R.SETUP**.

2 Press and hold the input function button corresponding to the command to be erased for three seconds.
If the LED lights for one second, the erasing has been successfully completed.

Direct function

• Default setting: **On**

You can use the direct function feature to control one component using the remote control while at the same time using your receiver to play a different component. This could let you, for example, use the remote control to set up and listen to a CD on the receiver, and then use the remote control to rewind a tape in your VCR while you continue to listen to your CD player.

When direct function is on, any component you select (using the input function buttons) will be selected by both the receiver and the remote control. When you turn direct function off, you can operate the remote control without affecting the receiver.

1 Press and hold R.SETUP, then press "5" for three seconds.
The LED flashes continuously.

• To cancel the preset setup mode press **R.SETUP**.

2 Press the input function button for the component you want to control.

3 Press "1" (On) or "0" (Off) to switch the direct function mode.
If the LED lights for one second, the setting has been successfully completed.

If the LED flashes three times, the setting has failed.

4 Press R.SETUP to exit the setup.

Multi operation and System off

The Multi operation feature allows you to program a series of up to 5 commands for the components in your system.

- Be sure to call up the preset codes of devices or perform programming signals for other remote controls before multi operation memory programming (page 82).

The Multi operation feature makes it easy to perform the following operations by pressing just two buttons.

Press **MULTI OPERATION** and then the **DVD** input function button to:

1. Switch this receiver on.
2. Switch this receiver's input to DVD.
3. Transmit a sequence of up to five programmed commands.

Similar to Multi operations, System off allows you to use two buttons to stop and switch off a series of components in your system at the same time.[1] Only one System off operation sequence may be programmed.

Press **MULTI OPERATION** and then ⏻ **SOURCE** to:

1. Transmit a sequence of up to five programmed commands.
2. Switch off all Pioneer devices including the receiver (except DVD recorders and VCRs).

For greater convenience, program this receiver to perform power on/off and playback operations on non-Pioneer devices as well.[2] (The signals for Pioneer devices described above are not contingent on programming for non-Pioneer devices.)

The buttons that can be programmed using Multi operation or System off are the same buttons as those that can be programmed for other remote controls (see *Programming signals from other remote controls* on page 82).

Programming a Multi operation or a shutdown sequence

1   Press and hold R.SETUP, then press "3" for three seconds.
The LED flashes continuously.

- To cancel the preset setup mode press **R.SETUP**.

2   Press the input function button (or ⏻ SOURCE button).
For Multi operations, press the input function you wish to program (for example, if you want to start the sequence by switching on your DVD player, press **DVD**).[3]

For System off, press the ⏻ **SOURCE** button.

The LED blinks twice and flashes continuously.

3   If necessary, press the input function button for the component whose command you want to input.
This is only necessary if the command is for a new component (input function).

4   Select the button for the command you want to input.
The LED blinks once and flashes continuously.

- You don't need to program the receiver to switch on or off. This is done automatically.

Note

1 • Before Multi operation and System off will work correctly, you must setup the remote to work with your TV and other components (see *Operating multiple receivers* on page 81 for more on this).
- Some units may take some time to power up, in which case multiple operations may not be possible.
- Power on and off commands only work with components that have a standby mode.
2 Some remote controllers for other manufacturers' devices use the same signals for switching the power on and off. In some cases, even if this receiver is programmed to perform these commands, power to the non-Pioneer devices may not be switched on and off correctly. Program the receiver to perform these commands if the non-Pioneer device uses separate signals for power on/off.
3 With Multi operation, the **HDMI** and **TV CTRL** settings cannot be made, but the **iPod USB** settings can. For other settable input functions, see *Setting the remote to control other components* on page 81.

With Pioneer components, you don't need to program the power to switch off in a shutdown sequence (except DVD recorders).

5 Repeat steps 3 to 4 to program a sequence of up to five commands.
Programming mode will terminate automatically when the 5 commands are entered.

• If you press **R.SETUP** before programming is completed, commands programmed up to that point will be stored.

Using multi operations

1 Press MULTI OPERATION.
The LED flashes continuously.

2 Within five seconds, press an input function button that has been set up with a multi operation.
The receiver switches on (if it was in standby) and the programmed multi operation is performed automatically.

Using System off

1 Press MULTI OPERATION.
The LED flashes continuously.

2 Within five seconds, press ⏻ SOURCE.
The command sequence you programmed will run, then all Pioneer components will switch off[1], followed by this receiver (switch of all the zones becomes off).

Erasing the settings for the multi-operation
This erases all the settings programmed in the remote control for the multi-operation.

1 Press and hold R.SETUP, then press "8" for three seconds.
The LED flashes continuously.

• To cancel the preset setup mode press **R.SETUP**.

2 Press the input function button containing the program you want to cancel or the ⏻ SOURCE button for three seconds.
If the LED lights for one second, the erasing has been successfully completed.

📝 **Note**
1 In order to avoid accidently switching off a DVD recorder that is currently recording, no DVD recorder power off codes are sent.

Clearing all the remote control settings

This will erase all preset remote control preset codes and programmed buttons.[1]

1   Press and hold R.SETUP, then press "0" for three seconds.
The LED flashes continuously.

2   Press and hold the ENTER button for three seconds.
If the LED lights for one second, the erasing has been successfully completed.
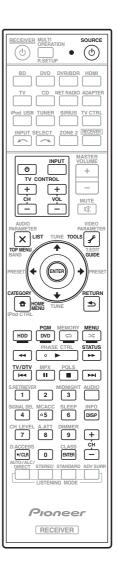
Default preset codes

Input function button	Preset code
BD	2 1 6 0
DVD	2 1 5 8
DVR/BDR	2 1 5 0
HDMI	2 1 5 9
TV	0 1 1 6
CD	5 0 6 6
TV CTRL	0 1 1 6

Controlling components

This remote control can control components after entering the proper codes (see *Setting the remote to control other components* on page 81 for more on this). Use the input function buttons to select the component.

• The **TV CONTROL** buttons on the remote control are dedicated to control the TV assigned to the **TV CTRL** button. If you have two TVs, assign the main TV to the **TV CTRL** button.

📝 **Note**
1 When *Programming signals from other remote controls* on page 82 are set, all the signals learned in the input function buttons are cleared. This function is convenient when you want to reset some but not all of input function buttons.

Button(s)	TV	TV (Monitor)	BD/DVD	HDD/DVR	VCR	SAT/CATV
⏻ **SOURCE**	POWER ON/ OFF	POWER ON/ OFF	POWER ON/ OFF	POWER ON/ OFF	POWER ON/ OFF	POWER ON/ OFF
Number buttons	*numerics*	*numerics*	*numerics*	*numerics*	*numerics*	*numerics*
• *(dot)*	• *(dot)*	KURO LINK	CLEAR	+	-	∗
ENTER (CLASS)	ENTER	CH ENTER	ENTER	ENTER	-	ENTER
✕	EXIT/INFO	EXIT	TOP MENU	TOP MENU	-	LIST
🔧	TOOLS/ GUIDE/EPG	USER MENU	TOOLS	GUIDE	-	GUIDE
↑/↓/←/→	↑/↓/←/→	↑/↓/←/→	↑/↓/←/→	↑/↓/←/→	-	↑/↓/←/→
ENTER	ENTER	ENTER	ENTER	ENTER	-	ENTER
🏠	HOME MENU	HOME MENU	HOME MENU	HOME MENU	-	HOME/ MENU
↩	RETURN	RETURN	RETURN	RETURN	-	RETURN
HDD *(Red)*	*Red*	*Red*	-	HDD	-	*Red*
DVD *(Green)*	*Green*	*Green*	-	DVD	-	*Green*
⇄ *(Yellow)*	*Yellow*	*Yellow*	-	VCR	-	*Yellow*
⤬ *(Blue)*	*Blue*	*Blue*	MENU	MENU	-	*Blue*
▶	-	-	▶	▶	▶	▶
❚❚	-	AUTO SETUP	❚❚	❚❚	❚❚	❚❚
■	-	FREEZE	■	■	■	■
◀◀	-	-	◀◀	◀◀	◀◀	◀◀
▶▶	-	-	▶▶	▶▶	▶▶	▶▶
◀◀|	ANT	AV SELECTION	◀◀|	◀◀|	-	◀◀|
|▶▶	-	SCREEN SIZE	|▶▶	|▶▶	-	|▶▶
AUDIO	AUDIO	AUDIO	AUDIO	AUDIO	AUDIO	AUDIO
DISP	DISPLAY	DISPLAY	DISPLAY	DISPLAY	-	DISPLAY/ INFO
CH +/−	CH+/−	CH+/−	OUTPUT RESOLUTION +/−[a]	CH+/−	CH+/−	CH+/−

a. Controls for BD.

Button(s)	LD	CD/CD-R/ SACD	MD/DAT	TAPE
⏻ **SOURCE**	POWER ON/ OFF	POWER ON/ OFF	POWER ON/ OFF	POWER ON/ OFF
Number buttons	*numerics*	*numerics*	*numerics*	-
• *(dot)*	+10	>10/CLEAR	CLEAR[c]	CLEAR
ENTER (CLASS)	ENTER	DISK/ENTER	OPEN/CLOSE[c]	ENTER
✕	TOP MENU	-	-	MS←
🔧	-	LEGATO LINK[b]	-	MS→
↑/↓/←/→	↑/↓/←/→	-	-	❚❚/■/◀◀/▶▶
ENTER	ENTER	-	-	-
🏠	-	SACD SETUP[b]	-	-
⬑	RETURN	-	-	-
▶	▶	▶	▶	▶
❚❚	❚❚	❚❚	❚❚	❚❚
■	■	■	■	■
◀◀	◀◀	◀◀	◀◀	◀◀
▶▶	▶▶	▶▶	▶▶	▶▶
◀◀❙	◀◀❙	◀◀❙	◀◀❙	◀◀❙
❙▶▶	❙▶▶	❙▶▶	❙▶▶	❙▶▶
AUDIO	AUDIO	PURE AUDIO[b]	-	-
DISP	DISPLAY/ INFO	TIME[b]	-	-

b. Controls for SACD.
c. Controls for MD.

Button(s)	TV (Projector)
⏻ **SOURCE**	POWER ON
1	MOVIE
2	STANDARD
3	DYNAMIC
4	USER1
5	USER2
6	USER3
7	COLOR+
8	SHARP+
9	GAMMA
0	COLOR−
• *(dot)*	SHARP−
ENTER (CLASS)	COLOR TEMP
✕	EXIT
🔧	INFO
↑/↓/←/→	↑/↓/←/→
ENTER	ENTER
🏠	TEST
⬑	HIDE
✕	MENU
◀◀	HDMI1
▶	HDMI2
▶▶	COMP.
◀◀❙	VIDEO
❚❚	S-VIDEO
■	BRIGHT−
❙▶▶	BRIGHT+
AUDIO	POWER OFF
DISP	ASPECT
CH +/−	CONTRAST+/−

Chapter 10:
The Advanced MCACC menu

Making receiver settings from the Advanced MCACC menu

The Advanced MCACC (Multi Channel ACoustic Calibration) system was developed in Pioneer's laboratories with the aim of making it possible for home users to perform adjustments of the same level as in a studio easily and with high precision. The acoustic characteristics of the listening environment are measured and the frequency response is calibrated accordingly to allow high precision, automatic analysis and optimal calibration of the sound field to bring it closer to a studio environment than ever before. Furthermore, while it was previously difficult to eliminate standing waves, this receiver is equipped with a standing wave control function using a unique process to perform acoustic analysis and reduce their influence.

This section describes how to calibrate the sound field automatically and fine-adjust the sound field data manually.
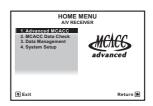
1   Switch on the receiver and your TV.
Use Ⓞ **RECEIVER** to switch on.[1]

• If headphones are connected to the receiver, disconnect them.

2   Press ⌈RECEIVER⌋ on the remote control, then press HOME MENU.
A Graphical User Interface (GUI) screen appears on your TV. Use ↑/↓/←/→ and **ENTER** to navigate through the screens and select menu items. Press **RETURN** to confirm and exit the current menu.

• Press **HOME MENU** at any time to exit the **Home Menu**.

3   Select 'Advanced MCACC' from the Home Menu, then press ENTER.

4   Select the setting you want to adjust.

• **Full Auto MCACC** – See *Automatically conducting optimum sound tuning (Auto MCACC* on page 41 for a quick and effective automatic surround setup.

• **Auto MCACC** – See *Automatic MCACC (Expert)* on page 91 for a more detailed MCACC setup.

• **Manual MCACC** – Fine-tunes your speaker settings and customizes the Acoustic Calibration EQ (see *Manual MCACC setup* on page 94).

• **Demo** – No settings are saved and no errors occur. When the speakers are connected to this receiver, the test tone is output repeatedly. Press **RETURN** to cancel the test tone.

📝 **Note**
1 Make sure not to switch off the power when using the **HOME MENU**.

Automatic MCACC (Expert)

If your setup requires more detailed settings than those provided in *Automatically conducting optimum sound tuning (Auto MCACC* on page 41, you can customize your setup options below. You can calibrate your system differently for up to six different MCACC presets[1], which are useful if you have different listening positions depending on the type of source (for example, watching movies from a sofa, or playing a video game close to the TV).[2]

🔧 Important

- Make sure the microphone/speakers are not moved during the Auto MCACC Setup.

- Using the Auto MCACC Setup will overwrite any existing settings for the MCACC preset you select.[3]

- The screen saver will automatically appear after five minutes of inactivity.

⚠️ CAUTION

- The test tones used in the Auto MCACC Setup are output at high volume.

1   Select 'Auto MCACC' from the Advanced MCACC menu, then press ENTER.
If the **Advanced MCACC** screen is not displayed, refer to *Making receiver settings from the Advanced MCACC menu* on page 90.
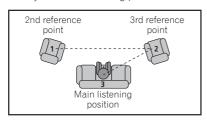
2   Select the parameters you want to set.
Use ↑/↓ to select the item, then use ←/➡ to set.

- **Auto MCACC** – The default is **ALL** (recommended), but you can limit the system calibration to only one setting (to save time) if you want.[4] The available options are **ALL**, **Keep SP System**,[5] **Speaker Setting**, **Channel Level**, **Speaker Distance** and **EQ Pro & S-Wave**.

- **EQ Type** *(only available when the* **Auto MCACC** *Menu above is* **EQ Pro & S-Wave***)* – This determines how the frequency balance is adjusted.

📝 Note

1 These are stored in memory and referred to as **MEMORY1** to **MEMORY6** until you rename them in *Data Management* on page 102.
2 You may also want to have separate calibration settings for the same listening position, depending on how you're using your system.
3 Except in cases where you are only adjusting one parameter (i.e. channel level) from the **Auto MCACC** menu (step 2).
4 • When data measurement is taken (after selecting **ALL** or **Keep SP System**), the reverb characteristics data (both before- and after-calibration) that this receiver had been storing will be overwritten. If you want to save the reverb characteristics data before measuring, connect a USB memory device to this receiver and transfer the data.
• When measurement is taken of data other than **SYMMETRY** (after selecting **ALL** or **Keep SP System**), the data are not measured after the correction. If you will need to measure after correction data, take the measurement using the EQ Professional menu in the Manual MCACC setup (page 97).
• The **EQ Pro & S-Wave** measurement is also taken when **Keep SP System** or **EQ Pro & S-Wave** is selected. See *Acoustic Calibration EQ Professional* on page 97 for more on this.
• Either effect of Acoustic Calibration EQ Professional and Standing Wave can be switched on and off in the respective MCACC preset. For details, see *Setting the Audio options* on page 72.
5 The **Keep SP System** option allows you to calibrate your system while leaving your current speaker setting (page 106) unchanged.

After a single calibration is performed, each of the following three correction curves can be stored separately in the MCACC memory. **SYMMETRY** implements symmetric correction for each pair of left and right speakers to flatten the frequency-amplitude characteristics. **ALL CH ADJ** is a 'flat' setting where all the speakers are set individually so no special weighting is given to any one channel. **FRONT ALIGN**[1] sets all speakers in accordance with the front speaker settings (no equalization is applied to the front left and right channels).
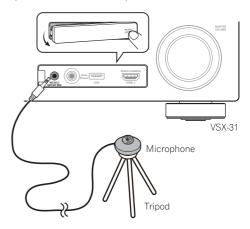
- **THX Speaker** *(only available when the* **Auto MCACC** *Menu above is* **ALL** *or* **Speaker Setting***)* – Select **YES** if you are using THX speakers (set all speakers to **SMALL**), otherwise leave it set to **NO**.

- **STAND.WAVE Multi-P** *(only available when the* **Auto MCACC** *Menu above is* **EQ Pro & S-Wave***)* – In addition to measurements at the listening position, you can use two more reference points for which test tones will be analyzed for standing waves. This is useful if you want to get a balanced 'flat' calibration for several seating positions in your listening area.[2] Place the microphone at the reference point indicated on-screen and note that *the last microphone placement will be at your main listening position:*

2nd reference point 3rd reference point

1

2

3

Main listening position

3 Connect the microphone to the MCACC SETUP MIC jack on the front panel.
Make sure there are no obstacles between the speakers and the microphone.

VSX-31

Microphone

Tripod

If you have a tripod, use it to place the microphone so that it's about ear level at your normal listening position. If you do not have a tripod, use some other object to install the microphone.[3]

4 When you're finished setting the options, select START then press ENTER.

5 Follow the instructions on-screen.
- Make sure the microphone is connected.

- If you're using a subwoofer, it is automatically detected every time you switch on the system. Make sure it is on and the volume is turned up.

- See *Problems when using the Auto MCACC Setup* on page 44 for notes regarding high background noise levels and other possible interference.

📝 **Note**

1 If you selected **ALL** or **Keep SP System** as your **Auto MCACC** menu, you can specify the MCACC preset where you want to save the **SYMMETRY**, **ALL CH ADJ** and **FRONT ALIGN** settings.
2 Switch the **Multi-P** setting **NO** if you only use one listening position.
3 Install the microphone on a stable floor. Placing the microphone on any of the following surfaces may make accurate measurement impossible:
 • Sofas or other soft surfaces.
 • High places such as tabletops and sofa tops.

6 Wait for the Auto MCACC Setup to finish outputting test tones.

A progress report is displayed on-screen while the receiver outputs test tones to determine the speakers present in your setup. Try to be as quiet as possible while it's doing this.[1]

- With error messages (such as **Too much ambient noise!** or **Check microphone**) select **RETRY** after checking for ambient noise (see *Problems when using the Auto MCACC Setup* on page 44) and verifying the mic connection. If there doesn't seem to be a problem, you can simply select **GO NEXT** and continue.

7 If necessary, confirm the speaker configuration in the GUI screen.[2]

The configuration shown on-screen should reflect the actual speakers you have.

If no operations are performed for 10 seconds while the speaker configuration check screen is being displayed, the Auto MCACC Setup will resume automatically. In this case, you don't need to select '**OK**' and press **ENTER** in step 8.

- If you see an **ERR** message (or the speaker configuration displayed isn't correct), there may be a problem with the speaker connection.
  If selecting **RETRY** doesn't work, turn off the power and check the speaker connections. If there doesn't seem to be a problem, you can simply use ↑/↓ to select the speaker and ←/→ to change the setting and continue.

- If **Reverse Phase** is displayed, the speaker's wiring (+ and –) may be inverted. Check the speaker connections.[3]
  – If the connections were wrong, turn off the power, disconnect the power cord, then reconnect properly. After this, perform the Full Auto MCACC procedure again.
  – If the connections were right, select **GO NEXT** and continue.

8 Make sure 'OK' is selected, then press ENTER.[2]

A progress report is displayed on-screen while the receiver outputs more test tones to determine the optimum receiver settings for channel level, speaker distance, and Acoustic Calibration EQ.

Again, try to be as quiet as possible while this is happening. It may take 3 to 7 minutes.

- If you selected a **STAND.WAVE Multi-P** setup (in step 2), you will be asked to place the mic at the 2nd and 3rd reference points before finally placing it at your main listening position.

9 The Auto MCACC Setup procedure is completed and the Advanced MCACC menu reappears automatically.

The settings made in the Auto MCACC Setup should give you excellent surround sound from your system, but it is also possible to adjust these settings manually using the **Manual MCACC** setup menu (starting below) or **Manual SP Setup** menu (starting on page 104).[4]

Note
1 Do not adjust the volume during the test tones. This may result in incorrect speaker settings.
2 This screen is only shown if you selected **ALL** or **Speaker Setting** from the **Auto MCACC** menu.
3 If the speaker is not pointed to the microphone (listening position) or when using speakers that affect the phase (dipole speakers, reflective speakers, etc.), **Reverse Phase** may be displayed even if the speakers are properly connected.
4 • Depending on the characteristics of your room, sometimes identical speakers with cone sizes of around 12 cm (5 inches) will end up with different size settings. You can correct the setting manually using the *Manual speaker setup* on page 104.
• The subwoofer distance setting may be farther than the actual distance from the listening position. This setting should be accurate (taking delay and room characteristics into account) and generally does not need to be changed.
• If Auto MCACC Setup measurement results are incorrect due to the interaction of the speakers and viewing environment, we recommend adjusting the settings manually.

You can also choose to view the settings by selecting individual parameters from the **MCACC Data Check** screen:

- **Speaker Setting** – The size and number of speakers you've connected (see page 106 for more on this)
- **Channel Level** – The overall balance of your speaker system (see page 95 or 107 for more on this)
- **Speaker Distance** – The distance of your speakers from the listening position (see page 95 or 107 for more on this)[1]
- **Standing Wave** – Filter settings to control lower 'boomy' frequencies (see page 96 for more on this)
- **Acoustic Cal EQ** – Adjustments to the frequency balance of your speaker system based on the acoustic characteristics of your room (see page 97 for more on this)
- **Output MCACC data** – MCACC data and parameters can be transferred from this receiver to a USB device and the data imported into other devices using a special application via a computer (see *Output MCACC data* on page 101 for more on this).

Press **RETURN** after you have finished checking each screen. When you're finished, select **RETURN** to go back to the **Home Menu**.

Be sure to disconnect the microphone from this receiver upon completion of the Auto MCACC Setup.

Manual MCACC setup

You can use the settings in the **Manual MCACC** setup menu to make detailed adjustments when you're more familiar with the system. Before making these settings, you should have already completed *Automatically conducting optimum sound tuning (Auto MCACC* on page 41.

You only need to make these settings once (unless you change the placement of your current speaker system or add new speakers).

⚠ CAUTION

- The test tones used in the **Manual MCACC** setup are output at high volume.

🔧 Important

- Press the **MCACC** button while the pertinent setup screens are displayed to select MCACC presets.
- For some of the settings below, you'll have to connect the setup microphone to the front panel and place it about ear level at your normal listening position. Press **HOME MENU** to display the **Home Menu** before you connect the microphone to this receiver. If the microphone is connected while the **HOME MENU** is not being displayed, the display will change to the **Full Auto MCACC** under **Advanced MCACC**.
- See *Problems when using the Auto MCACC Setup* on page 44 for notes regarding high background noise levels and other possible interference.
- If you're using a subwoofer, switch it on and turn up the volume to the middle position.

Note
1 Since the distance measurements have been set according to the sound characteristics of your speakers, there are cases where (for optimal surround sound) the actual distance may differ from the speaker distance setting.

1   Select 'Manual MCACC' from the Advanced MCACC menu.
See *Making receiver settings from the Advanced MCACC menu* on page 90 if you're not already at this screen.

2   Select the setting you want to adjust.
If you're doing this for the first time, you might want to make these settings in order.

- **Fine Channel Level** – Make fine adjustments to the overall balance of your speaker system (see *Fine Channel Level* below).
- **Fine SP Distance** – Make precise delay settings for your speaker system (see *Fine Speaker Distance* below).
- **Standing Wave** – Control overly resonant low frequencies in your listening room (see *Standing Wave* on page 96).

The last two settings are specifically for customizing the parameters explained in *Acoustic Calibration EQ Adjust* on page 97:

- **EQ Adjust** – Manually adjust the frequency balance of your speaker system while listening to test tones (see *Acoustic Calibration EQ Adjust* on page 97).
- **EQ Professional** – Calibrate your system based on the direct sound coming from the speakers and make detailed settings according to your room's reverb characteristics (see *Acoustic Calibration EQ Professional* on page 97).

Fine Channel Level

- Default setting: **0.0dB** (all channels)

You can achieve better surround sound by properly adjusting the overall balance of your speaker system. You can adjust the Channel Level of each speaker in 0.5 dB increments. The following setting can help you make detailed adjustments that you may not achieve using the *Manual speaker setup* on page 104.

1   Select 'Fine Channel Level' from the Manual MCACC setup menu.
The volume increases to the 0.0 dB reference level.

2   Adjust the level of the left channel.
This will be the reference speaker level, so you may want to keep the level around **0.0 dB** so that you'll have plenty of room to adjust the other speaker levels.

- After pressing **ENTER**, test tones will be output.

3   Select each channel in turn and adjust the levels (+/–12.0 dB) as necessary.
Use ←/→ to adjust the volume of the speaker you selected to match the reference speaker. When it sounds like both tones are the same volume, press ↓ to confirm and continue to the next channel.

- For comparison purposes, the reference speaker will change depending on which speaker you select.
- If you want to go back and adjust a channel, simply use ↑/↓ to select it.

4   When you're finished, press RETURN.
You will return to the **Manual MCACC** setup menu.

Fine Speaker Distance

- Default setting: **10'00''** (all speakers)

For proper sound depth and separation with your system, it is necessary to add a slight bit of delay to some speakers so that all sounds will arrive at the listening position at the same time. You can adjust the distance of each speaker in half inch increments. The following setting can help you make detailed adjustments that you may not achieve using the *Manual speaker setup* on page 104.

1   Select 'Fine SP Distance' from the Manual MCACC setup menu.

2   Adjust the distance of the left channel from the listening position.

3 Select each channel in turn and adjust the distance as necessary.
Use ←/→ to adjust the delay of the speaker you selected to match the reference speaker. The delay is measured in terms of speaker distance from **0'00-1/2''** to **45'00''**.

Listen to the reference speaker and use it to measure the target channel. From the listening position, face the two speakers with your arms outstretched pointing at each speaker. Try to make the two tones sound as if they are arriving simultaneously at a position slightly in front of you and between your arm span.[1]

When it sounds like the delay settings are matched up, press ↓ to confirm and continue to the next channel.

- For comparison purposes, the reference speaker will change depending on which speaker you select.
- If you want to go back and adjust a channel, simply use ↑/↓ to select it.

4 When you're finished, press RETURN.
You will return to the **Manual MCACC** setup menu.

Standing Wave
- Default setting: **ON**[2]/**ATT 0.0dB** (all filters)

Acoustic standing waves occur when, under certain conditions, sound waves from your speaker system resonate mutually with sound waves reflected off the walls in your listening area. This can have a negative effect on the overall sound, especially at certain lower frequencies. Depending on speaker placement, your listening position, and ultimately the shape of your room, it results in an overly resonant ('boomy') sound. The Standing Wave Control uses filters to reduce the effect of overly resonant sounds in your listening area. During playback of a source, you can customize the filters used for Standing Wave Control for each of your MCACC presets.[3]

1 Select 'Standing Wave' from the Manual MCACC setup menu.

2 Adjust the parameters for the Standing Wave Control.
- **Filter Channel** – Select the channel to which you will apply the filter(s): **MAIN** (all except center channel and subwoofer), **Center** or **SW** (subwoofer).
- **TRIM** *(only available when the filter channel above is* **SW***)* – Adjust the subwoofer channel level (to compensate for the difference in output post-filter).

📝 **Note**

1 • If you can't seem to achieve this by adjusting the distance setting, you may need to change the angle of your speakers very slightly.
• For better audibility, the subwoofer emits a continuous test tone (oscillating pulses are heard from your other speakers). Note that it may be difficult to compare this tone with the other speakers in your setup (depending on the low frequency response of the reference speaker).
2 You can switch on or off the Standing Wave and Acoustic Calibration EQ feature in the **AUDIO PARAMETER** menu. See *Setting the Audio options* on page 72 for more on this.
3 • Since they will be overwritten, you may want to save the standing wave settings made with the Auto MCACC Setup to another MCACC preset.
• Standing Wave control filter settings cannot be changed during playback of sources using the HDMI connection.
• When **Standing Wave** is selected for an MCACC preset memory where **STAND.WAVE** is set to **OFF** in the **AUDIO PARAMETER**, **STAND.WAVE ON** is automatically selected.

- **Freq** / **Q** / **ATT** – These are the filter parameters where **Freq** represents the frequency you will be targeting and **Q** is the bandwidth (the higher the Q, the narrower the bandwidth, or range) of the attenuation (**ATT**, the amount of reduction to the targeted frequency).

3   When you're finished, press RETURN.
You will return to the **Manual MCACC** setup menu.

Acoustic Calibration EQ Adjust

- Default setting: **ON**[1]/**0.0dB** (all channels/bands)

Acoustic Calibration Equalization is a kind of room equalizer for your speakers (excluding the subwoofer). It works by measuring the acoustic characteristics of your room and neutralizing the ambient characteristics that can color the original source material (providing a 'flat' equalization setting). If you're not satisfied with the adjustment provided in *Automatically conducting optimum sound tuning (Auto MCACC* on page 41 or *Automatic MCACC (Expert)* on page 91, you can also adjust these settings manually to get a frequency balance that suits your tastes.

1   Select 'EQ Adjust' from the Manual MCACC setup menu.

2   Select the channel(s) you want and adjust to your liking.
Use ↑/↓ to select the channel.

Use ←/→ to select the frequency and ↑/↓ to boost or cut the EQ. When you're finished, go back to the top of the screen and press ← to return to **Ch**, then use ↑/↓ to select the channel.

- The **OVER!** indicator shows in the display if the frequency adjustment is too drastic and might distort. If this happens, bring the level down until **OVER!** disappears from the display.

⚙ Tip

- Changing the frequency curve of one channel too drastically will affect the overall balance. If the speaker balance seems uneven, you can raise or lower channel levels using test tones with the **TRIM** feature. Use ↑/↓ to select **TRIM**, then use ←/→ to raise or lower the channel level for the current speaker.

3   When you're finished, press RETURN.
You will return to the **Manual MCACC** setup menu.
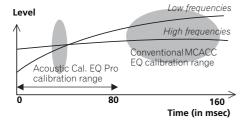
Acoustic Calibration EQ Professional
This setup minimizes the unwanted effects of room reverberation by allowing you to calibrate your system based on the direct sound coming from the speakers.

How to use Acoustic Calibration EQ Professional
If you find that lower frequencies seem overly reverberant in your listening room (i.e. it sounds 'boomy'), or that different channels seem to exhibit different reverb characteristics (when Type A or Type B shown on the diagrams on the following applies), select **EQ Pro. & S-Wave** (or **ALL**) for the **Auto MCACC** setting in *Automatic MCACC (Expert)* on page 91 to calibrate the room automatically.
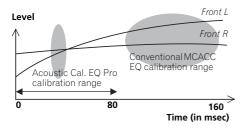
📝 **Note**
1 When **EQ Adjust** is selected for an MCACC preset memory where **EQ** is set to **OFF** in the **AUDIO PARAMETER**, **EQ ON** is automatically selected.

• **Type A: Reverberance of high vs. low frequencies**

Level

Low frequencies

High frequencies

Conventional MCACC EQ calibration range

Acoustic Cal. EQ Pro calibration range

0   80   160

Time (in msec)

• **Type B: Reverb characteristics for different channels**

Level

Front L

Front R

Conventional MCACC EQ calibration range

Acoustic Cal. EQ Pro calibration range

0   80   160

Time (in msec)

If the pattern is as shown above, select the **30-50ms** setting. If not, this setting is not necessary.

Using Acoustic Calibration EQ Professional

1   Select 'EQ Professional', then press ENTER.

2   Select an option and press ENTER.
  • **Reverb Measurement** – Use this to measure the reverb characteristics of your room.

  • **Reverb View** – You can check the reverb measurements made for specified frequency ranges in each channel.[1]

  • **Advanced EQ Setup** – Use this to select the time period that will be used for frequency adjustment and calibration, based on the reverb measurement of your listening area. Note that customizing system calibration using this setup will alter the settings you made in *Automatically conducting optimum sound tuning (Auto MCACC* on page 41 or *Automatic MCACC (Expert)* on page 91 and is not necessary if you're satisfied with these settings.

3   If you selected 'Reverb Measurement', select EQ ON or OFF, and then START.
The following options determine how the reverb characteristics of your listening area are displayed in **Reverb View**:

  • **EQ OFF** – You will see the reverb characteristics of your listening area *without* the equalization performed by this receiver (before calibration).

📝 **Note**

1 If the **Reverb View** procedure is performed after the *Automatically conducting optimum sound tuning (Auto MCACC* on page 41 or **Reverb Measurement** operation, depending on the standing wave control setting, differences may appear on the reverb graph. With the Auto MCACC function, the reverberations are measured with the standing waves controlled, so the reverb characteristics graph shows the characteristics with the effect of the standing waves eliminated. By contrast, the **Reverb Measurement** function measures the reverberations without controlling the standing waves, so the graph indicates the reverb characteristics including the effect of the standing waves. If you wish to check the reverb characteristics of the room itself (with the standing waves as such), we recommend using the **Reverb Measurement** function.

• **EQ ON** – You will see the reverb characteristics of your listening area *with* the equalization performed by this receiver (after calibration).[1] Note that the EQ response may not appear entirely flat due to adjustments necessary for your listening area.[2]

When the reverb measurement is finished, you can select **Reverb View** to see the results on-screen. See *Professional Calibration EQ graphical output* on page 118 for troubleshooting information.

4   If you selected 'Reverb View', you can check the reverb characteristics for each channel. Press RETURN when you're done.
The reverb characteristics are displayed when the **Full Auto MCACC** or **Reverb Measurement** measurements are conducted.[3]

Use ←/→ to select the channel, frequency and calibration setting you want to check. Use ↑/↓ to go back and forth between the three. The reverb characteristics graph before and after EQ calibration can be displayed by selecting **Calibration : Before** / **After**.[4] Note that the markers on the vertical axis indicate decibels in 2 dB steps.

5   If 'Advanced EQ Setup' is selected, select the MCACC memory to be stored, then enter the desired time setting for calibration, and then select START.[5]
Based on the reverb measurement above, you can choose the time period that will be used for the final frequency adjustment and calibration. Even though you can make this setting without reverb measurement, it is best to use the measurement results as a reference for your time setting. For an optimal system calibration based on the direct sound coming from the speakers, we recommend using the **30-50ms** setting.

Use ←/→ to select the setting. Use ↑/↓ to switch between them.

Select the setting from the following time periods (in milliseconds): **0-20ms**, **10-30ms**, **20-40ms**, **30-50ms**, **40-60ms**, **50-70ms** and **60-80ms**. This setting will be applied to all channels during calibration.

When you're finished, select **START**. It will take about 2 to 4 minutes for the calibration to finish.

After the Acoustic Calibration Equalization is set, you are given the option to check the settings on-screen.

📝 **Note**

1 The calibration corresponding to the currently selected MCACC preset will be used when **EQ ON** is selected. To use another MCACC preset, press **MCACC** to select the MCACC memory you want to store.

2 After auto calibration with **EQ Type : SYMMETRY** (**Full Auto MCACC**, etc.), the graph for the inferred reverb characteristics can be displayed by selecting **Reverb View**. To display the actually measured reverb characteristics after EQ calibration, measure with **EQ ON**.

3 The **After** display when measurements have been made using the **Full Auto MCACC** or **Auto MCACC** (**ALL** or **KEEP SP system**) function shows the graph for the inferred reverb characteristics after **EQ Type : SYMMETRY** calibration.

4 The reverb characteristics graph is overwritten each time the reverberations are measured. **No Data** is displayed if there is no reverb characteristic data, for example before measurements have been taken.

5 To specify the place where the MCACC memory is to be stored, press **MCACC** to select the MCACC memory you want to store.

Checking MCACC Data

At the procedure of *Automatically conducting optimum sound tuning (Auto MCACC* on page 41, the procedure of *Automatic MCACC (Expert)* on page 91 or after fine-adjusting at *Manual MCACC setup* on page 94, you can check your calibrated settings using the GUI screen. The data can be transferred to a computer using a USB device to check it on the computer's screen as well.

1   Press RECEIVER , then press HOME MENU.
A Graphical User Interface (GUI) screen appears on your TV. Use ↑/↓/←/→ and **ENTER** to navigate through the screens and select menu items. Press **RETURN** to confirm and exit the current menu.

2   Select 'MCACC Data Check' from the Home Menu.

3   Select the setting you want to check.
• **Speaker Setting** – Used to check the settings of the speaker systems. See *Speaker Setting* below for more on this.
• **Channel Level** – Used to check the output level of the different speakers. See *Channel Level* below for more on this.
• **Speaker Distance** – Used to check the distance to the different speakers. See *Speaker Distance* below for more on this.
• **Standing Wave** – Used to check the standing wave control filter settings. See *Standing Wave* on page 101 for more on this.
• **Acoustic Cal EQ** – Used to check the calibration values of the listening environment's frequency response. See *Acoustic Cal EQ* on page 101 for more on this.
• **Output MCACC data** – See *Output MCACC data* on page 101 for more on this.

4   Press RETURN to go back to the MCACC Data Check menu, repeating steps 2 and 3 to check other settings.

5   When you're finished, press RETURN.
You will return to the **Home Menu**.

Speaker Setting
Use this to display the speaker size and number of speakers. See *Speaker Setting* on page 106 for more on this.

1   Select 'Speaker Setting' from the MCACC Data Check menu.

2   Select the channel you want to check.
Use ↑/↓ to select the channel. The corresponding channel on the layout diagram is highlighted.

Channel Level
Use this to display the level of the various channels. See *Channel Level* on page 107 for more on this.

1   Select 'Channel Level' from the MCACC Data Check menu.

2   When 'MCACC' is highlighted, use ←/→ to select the MCACC preset you want to check.
The level of the various channels set at the selected MCACC preset is displayed. '**---**' is displayed for channels that are not connected.

Speaker Distance
Use this to display the distance from the different channels to the listening position. See *Speaker Distance* on page 107 for more on this.

1   Select 'Speaker Distance' from the MCACC Data Check menu.

2   When 'MCACC' is highlighted, use ←/→ to select the MCACC preset you want to check.
The distance from the various channels set at the selected MCACC preset is displayed. '**---**' is displayed for channels that are not connected.

Standing Wave

Use this to display the standing wave related adjustment values for the various MCACC memories. See *Standing Wave* on page 96 for more on this.

1   Select 'Standing Wave' from the MCACC Data Check menu.

2   When 'Filter Channel' is highlighted, use ↑/↓ to select the channel for which you want to check standing wave control.
The standing wave related calibration value for the selected channel stored at the selected MCACC preset and its graph are displayed.

3   Press ← to highlight 'MCACC', then use ↑/↓ to select the MCACC preset you want to check.

Acoustic Cal EQ

Use this to display the calibration values for the frequency response of the various channels set in the different MCACC presets. See *Acoustic Calibration EQ Adjust* on page 97 for more on this.
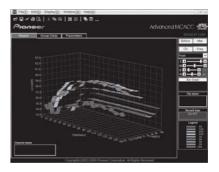
1   Select 'Acoustic Cal EQ' from the MCACC Data Check menu.

2   When 'Ch' is highlighted, use ↑/↓ to select the channel.
The calibration value for the frequency response of the selected channel stored at the selected MCACC preset and its graph are displayed.

3   Press ← to highlight 'MCACC', then use ↑/↓ to select the MCACC preset you want to check.

Output MCACC data

Before continuing, make sure you have completed step 2 in *Checking MCACC Data* on page 100. The data measured with the Advanced MCACC function is transmitted to the USB device.[1] The 3D graphs of the reverb characteristics before and after calibration and the MCACC results (parameters) can be checked on your computer.

1   Select 'Output MCACC data' from the MCACC Data Check menu.
When the receiver is ready for transmission, **"Please connect your USB memory for the MCACC data, then press OK to output them."** shows on the GUI screen.

2   Connect your USB device to the USB terminal on the front panel, then select "OK".
"Please wait..." will be displayed on the screen and transmission of measurement data to the USB device will begin.

Transmission is complete when **"Complete"** is displayed.[2]

Note
1 MCACC data and parameters are transferred from this receiver to a USB device and by connecting the USB device to a computer, the data is imported via the MCACC software in the computer. See *Connecting a USB device for Advanced MCACC output* on page 37 for more on this.
2 Only one set of reverb characteristics is stored on the receiver. If you wish to compare several different measurement results, transmit the data to the USB memory each time reverb measurements are taken.

3   When you're finished, press RETURN.
You will return to the **MCACC Data Check** menu. Continue with other operations in the **MCACC Data Check** menu if necessary. Press **RETURN** again to exit the **MCACC Data Check** menu.

Data Management

This system allows you to store up to six MCACC presets, allowing you to calibrate your system for different listening positions (or frequency adjustments for the same listening position).[1] This is useful for alternate settings to match the kind of source you're listening to and where you're sitting (for example, watching movies from a sofa, or playing a video game close to the TV).

From this menu you can copy from one preset to another, name presets for easier identification and clear any ones you don't need.

1   Press RECEIVER **, then press HOME MENU.**
A Graphical User Interface (GUI) screen appears on your TV. Use ↑/↓/←/→ and **ENTER** to navigate through the screens and select menu items. Press **RETURN** to confirm and exit the current menu.

2   Select 'Data Management' from the Home Menu.

3   Select the setting you want to adjust.
• **Memory Rename** – Name your MCACC presets for easy identification (see *Renaming MCACC presets* below).

• **MCACC Memory Copy** – Copy settings from one MCACC preset to another (see *Copying MCACC preset data* below).

• **MCACC Memory Clear** – Clear any MCACC presets that you don't want (see *Clearing MCACC presets* on page 103).

Renaming MCACC presets

If you have several different MCACC presets that you're using, you may want to rename them for easier identification.

1   Select 'Memory Rename' from the Data Management setup menu.

2   Select the MCACC preset you want to rename, then select an appropriate preset name.
Use ↑/↓ to select the preset, then ←/→ to select a preset name.

3   Repeat for as many MCACC presets as necessary, then press RETURN when you're finished.
You will return to the **Data Management** setup menu.

Copying MCACC preset data

If you want to manually adjust the Acoustic Calibration EQ (see *Manual MCACC setup* on page 94), we recommend copying your current settings[2] to an unused MCACC preset. Instead of just a flat EQ curve, this will give you a reference point from which to start.

1   Select 'MCACC Memory Copy' from the Data Management setup menu.

2   Select the setting you want to copy.
• **All Data** – Copies all the settings of the selected MCACC preset memory.

• **Level & Distance** – Copies only the channel level and speaker distance settings of the selected MCACC preset memory.

📝 **Note**

1 This can be done in *Automatically conducting optimum sound tuning (Auto MCACC* on page 41 or *Automatic MCACC (Expert)* on page 91, either of which you should have already completed.
2 The settings made in *Automatically conducting optimum sound tuning (Auto MCACC* on page 41 or *Automatic MCACC (Expert)* on page 91.

3 Select the MCACC preset you'll be copying the settings 'From', then specify where you want to copy them ('To').
Make sure you don't overwrite an MCACC preset you're currently using (this can't be undone).

4 Select 'OK' to confirm and copy the settings.
When **MCACC Memory Copy?** is displayed, select **YES**. If **NO** is selected, the memory is not copied.

Completed! shows in the GUI screen to confirm the MCACC preset has been copied, then you automatically return to the **Data Management** setup menu.

Clearing MCACC presets
If you are no longer using one of the MCACC presets stored in memory, you can choose to clear the calibration settings of that preset.

1 Select 'MCACC Memory Clear' from the Data Management setup menu.

2 Select the MCACC preset you want to clear.
Make sure you don't clear an MCACC preset you're currently using (this can't be undone).

3 Select 'OK' to confirm and clear the preset.
When **MCACC Memory Clear?** is displayed, select **YES**. If **NO** is selected, the memory is not cleared.

Completed! shows in the GUI screen to confirm the MCACC preset has been cleared, then you automatically return to the **Data Management** setup menu.

Chapter 11:
The System Setup and Other Setup menus

Making receiver settings from the System Setup menu

The following section describes how to change the speaker-related settings manually and make various other settings (input selection, OSD language selection, etc.).

1 Switch on the receiver and your TV.
Use the ⏻ **RECEIVER** button to switch on.[1]

• If headphones are connected to the receiver, disconnect them.

2 Press RECEIVER , then press HOME MENU.
A Graphical User Interface (GUI) screen appears on your TV. Use ↑/↓/←/→ and **ENTER** to navigate through the screens and select menu items. Press **RETURN** to confirm and exit the current menu.

• Press **HOME MENU** at any time to exit the **Home Menu**.

3 Select 'System Setup' from the Home Menu, then press ENTER.

4 Select the setting you want to adjust.
• **Manual SP Setup** – Sets the type of connection used for surround back terminals and the size, number distance and overall balance of the connected speakers (see *Manual speaker setup* below).

• **Input Setup** – Specifies what you've connected to the digital, HDMI and component video inputs (see *The Input Setup menu* on page 44).

• **OSD Language** – The GUI screen's display language can be changed (see *Changing the OSD display language (OSD Language)* on page 41).

• **Network Setup** – Conducts the setup necessary to connect this unit to the network (see *Network Setup menu* on page 108).

• **Other Setup** – Changes customized settings to reflect how you are using the receiver (see *The Other Setup menu* on page 110).

Manual speaker setup

This receiver allows you to make detailed settings to optimize the surround sound performance. You only need to make these settings once (unless you change the placement of your current speaker system or add new speakers).

These settings are designed to customize your system, but if you're satisfied with the settings made in *Automatically conducting optimum sound tuning (Auto MCACC* on page 41, it isn't necessary to make all of these settings.

⚠ CAUTION

• The test tones used in the **Manual SP Setup** are output at high volume.

📝 **Note**
1 Make sure not to switch off the power when using the System Setup menu.

1 Select 'Manual SP Setup', then press ENTER.

See *Making receiver settings from the System Setup menu* above if you're not already at this screen.

2 Select the setting you want to adjust.

If you are doing this for the first time, you may want to adjust these settings in order:

- **Speaker System** – Specifies how you are using the B speaker terminals (see below).
- **Speaker Setting** – Specifies the size and number of speakers you've connected (page 106).
- **Channel Level** – Adjusts the overall balance of your speaker system (page 107).
- **Speaker Distance** – Specifies the distance of your speakers from the listening position (page 107).
- **X-Curve** – Adjusts the tonal balance of your speaker system for movie soundtracks (page 108).

3 Make the adjustments necessary for each setting, pressing RETURN to confirm after each screen.

Speaker system setting

- Default setting: **Normal(SB/FH)**

There are several ways you can use the speaker terminals with this receiver. In addition to a normal home theater setup where they are used for the front height speakers or front wide speakers, they can be used for bi-amping the front speakers or as an independent speaker system in another room.

1 Select 'Speaker System' from the Manual SP Setup menu.

See *Making receiver settings from the System Setup menu* on page 104 if you're not already at this screen.

2 Select the speaker system setting.

- **Normal(SB/FH)** – Select for normal home theater use with front height speakers in your main (speaker system A) setup.
- **Normal(SB/FW)** – Select for normal home theater use with front wide speakers in your main (speaker system A) setup.
- **Speaker B** – Select to use the B speaker terminals to listen to stereo playback in another room (see *Switching the speaker terminals* on page 77).
- **Front Bi-Amp** – Select this setting if you're bi-amping your front speakers (see *Bi-amping your speakers* on page 22).
- **ZONE 2** – Select to use the surround back terminals for an independent system in another zone (see *Using the MULTI-ZONE controls* on page 77).

3 If you selected Normal(SB/FH), Normal(SB/FW), or Speaker B in Step 2, select the placement of the surround speakers.

In a 7.1-channel surround system with surround speakers placed directly at the sides of the listening position, the surround sound of 5.1-channel sources is heard from the side. This function mixes the sound of the surround speakers with the surround back speakers so that the surround sound is heard from diagonally to the rear as it should be.[1]

- **ON SIDE** – Select when the surround speakers is positioned right beside you.
- **IN REAR** – Select when the surround speaker is positioned obliquely behind you.

4 When 'Setting Change?' is displayed, select Yes.

If **No** is selected, the setting is not changed.

You will return to the **Manual SP Setup** menu.

📖 **Note**

1 Depending on the positions of the speakers and the sound source, in some cases it may not be possible to achieve good results. In this case, set the setting to **ON SIDE** or **IN REAR**.

Speaker Setting

Use this setting to specify your speaker configuration (size, number of speakers and crossover frequency). It is a good idea to make sure that the settings made in *Automatically conducting optimum sound tuning (Auto MCACC* on page 41 are correct. Note that this setting applies to all MCACC presets, and cannot be set independently.

1 Select 'Speaker Setting' from the Manual SP Setup menu.

2 Choose the set of speakers that you want to set, then select a speaker size.
Use ←/→ to select the size (and number) of each of the following speakers:[1]

- **Front** – Select **LARGE** if your front speakers reproduce bass frequencies effectively, or if you didn't connect a subwoofer. Select **SMALL** to send the bass frequencies to the subwoofer.

- **Center** – Select **LARGE** if your center speaker reproduces bass frequencies effectively, or select **SMALL** to send bass frequencies to the other speakers or subwoofer. If you didn't connect a center speaker, choose **NO** (the center channel is sent to the front speakers).

- **FH** – Select **LARGE** if your front height speakers reproduce bass frequencies effectively, or select **SMALL** to send bass frequencies to the other speakers or subwoofer. If you didn't connect front height speakers, choose **NO** (the front height channel is sent to the front speakers).[2]

- **FW** – Select **LARGE** if your front wide speakers reproduce bass frequencies effectively, or select **SMALL** to send bass frequencies to the other speakers or subwoofer. If you didn't connect front wide speakers, choose **NO** (the front wide channel is sent to the front speakers).[3]

- **Surr** – Select **LARGE** if your surround speakers reproduce bass frequencies effectively. Select **SMALL** to send bass frequencies to the other speakers or subwoofer. If you didn't connect surround speakers choose **NO** (the sound of the surround channels is sent to the front speakers or a subwoofer).

- **SB** – Select the number of surround back speakers you have (one, two or none).[4] Select **LARGEx2** or **LARGEx1** if your surround back speakers reproduce bass frequencies effectively. Select **SMALLx2** or **SMALLx1** to send bass frequencies to the other speakers or subwoofer. If you didn't connect surround back speakers choose **NO**.

📝 **Note**
1 If you select **SMALL** for the front speakers the subwoofer will automatically be fixed to **YES**. Also, the center, surround, surround back, front height and front wide speakers can't be set to **LARGE** if the front speakers are set to **SMALL**. In this case, all bass frequencies are sent to the subwoofer.
2 • You can only adjust the front height speakers when **Speaker System** is set to **Normal(SB/FH)**.
• If the surround speakers are set to **NO**, the front height speakers will automatically be set to **NO**.
3 • You can only adjust the front wide speakers when **Speaker System** is set to **Normal(SB/FW)**.
• If the surround speakers are set to **NO**, the front wide speakers will automatically be set to **NO**.
4 • If you selected **ZONE 2** or **Front Bi-Amp** (in *Speaker system setting* on page 105) you can't adjust the surround back settings.
• If the surround speakers are set to **NO**, the surround back speakers will automatically be set to **NO**.
• If you select one surround back speaker only, make sure that speaker is hooked up to the left surround back terminal.

• **SW** – LFE signals and bass frequencies of channels set to **SMALL** are output from the subwoofer when **YES** is selected. Choose the **PLUS** setting if you want the subwoofer to output bass sound continuously or you want deeper bass (the bass frequencies that would normally come out the front and center speakers are also routed to the subwoofer).[1] If you did not connect a subwoofer choose **NO** (the bass frequencies are output from other speakers).

3 Select 'X. OVER' and set the crossover frequency.[2]
Frequencies below this point will be sent to the subwoofer (or **LARGE** speakers).

4 When you're finished, press RETURN.
You will return to the **Manual SP Setup** menu.

Channel Level
Using the channel level settings, you can adjust the overall balance of your speaker system, an important factor when setting up a home theater system.

Move the test tone manually from speaker to speaker and adjust individual channel levels.

1 Select 'Channel Level' from the Manual SP Setup menu.
The test tones will start.

2 Adjust the level of each channel using ←/ →.
Use ↑/↓ to switch speakers.
Adjust the level of each speaker as the test tone is emitted.[3]

3 When you're finished, press RETURN.
You will return to the **Manual SP Setup** menu.

☼ Tip
• You can change the channel levels by press RECEIVER, then press **CH LEVEL**, and then using ←/→ on the remote control.[4]

Speaker Distance
For good sound depth and separation from your system, you need to specify the distance of your speakers from the listening position. The receiver can then add the proper delay needed for effective surround sound.

✎ Note
1 If you have a subwoofer and like lots of bass, it may seem logical to select **LARGE** for your front speakers and **PLUS** for the subwoofer. This may not, however, yield the best bass results. Depending on the speaker placement of your room you may actually experience a decrease in the amount of bass due low frequency cancellations. In this case, try changing the position or direction of speakers. If you can't get good results, listen to the bass response with it set to **PLUS** and **YES** or the front speakers set to **LARGE** and **SMALL** alternatively and let your ears judge which sounds best. If you're having problems, the easiest option is to route all the bass sounds to the subwoofer by selecting **SMALL** for the front speakers.
2 • This setting decides the cutoff between bass sounds playing back from the speakers selected as **LARGE**, or the subwoofer, and bass sounds playing back from those selected as **SMALL**. It also decides where the cutoff will be for bass sounds in the LFE channel.
  • With Full Auto MCACC Setup or Auto MCACC Setup (**ALL** or **Speaker Setting**), the setting here will not apply and the crossover frequency will be automatically set. Crossover frequency is a frequency aimed at achieving the optimal sound field taking into account the bass capacity of all connected speakers and human aural characteristics.
  • If you're using THX speakers, confirm that the crossover frequency is set to **80Hz**.
3 • If you are using a Sound Pressure Level (SPL) meter, take the readings from your main listening position and adjust the level of each speaker to 75 dB SPL (C-weighting/slow reading).
  • The subwoofer test tone is output at low volumes. You may need to adjust the level after testing with an actual soundtrack.
4 The channel level cannot be adjusted using this procedure while making settings on **HOME MENU**.

1 Select 'Speaker Distance' from the Manual SP Setup menu.

2 Adjust the distance of each speaker using ←/→.
You can adjust the distance of each speaker in 1/2 inch increments.

3 When you're finished, press RETURN.
You will return to the **Manual SP Setup** menu.

Tip

• For best surround sound, make sure the surround back speakers are the same distance from the listening position.

X-Curve
Most soundtracks mixed for cinema sound too bright when played back in large rooms. The X-Curve setting acts as a kind of re-equalization for home theater listening, and restores proper tonal balance of movie soundtracks.[1]

1 Select 'X-Curve' from the Manual SP Setup menu.

2 Choose the X-Curve setting you want.
Use ←/→ to adjust the setting. The X-Curve is expressed as a downwards slope in decibels per octave, starting at 2 kHz. The sound becomes less bright as the slope increases (to a maximum of **–3.0dB/oct**). Use the following guidelines to set the X-Curve according to your room size:

Room size (ft²)	≤400	≤550	≤650	≤800	≤2200	≤12000
X-Curve (dB/oct)	–0.5	–1.0	–1.5	–2.0	–2.5	–3.0

• If you select **OFF**, the frequency curve will be flat and the X-Curve has no effect.

3 When you're finished, press RETURN.

Network Setup menu
Set up the network to listen to Internet radio on this receiver.

1 Press RECEIVER on the remote control, then press HOME MENU.
A Graphical User Interface (GUI) screen appears on your TV. Use ↑/↓/←/→ and **ENTER** to navigate through the screens and select menu items. Press **RETURN** to confirm and exit the current menu.

2 Select 'System Setup' from the Home Menu.

3 Select 'Network Setup' from the System Setup menu.

4 Select the setting you want to adjust.
If you are doing this for the first time, you may want to adjust these settings in order:

• **IP Address, Proxy** – Sets up the IP address/Proxy of this receiver (see below).

• **Information** – Checks the MAC address of this receiver (page 109).

IP address/Proxy setting
In case the router connected to the LAN terminal on this receiver is a broadband router (with a built-in DHCP server function), simply turn on the DHCP server function, and you will not need to set up the network manually. You must set up the network as described below only when you have connected this receiver to a broadband router without a DHCP server function. Before you set up the network, consult with your ISP or the network manager for the required settings. It is advised that you also refer to the operation manual supplied with your network component.[2]

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Note
1 Since the principal is the same, X-Curve isn't applied when you're using the Pure direct mode.
2 In case you make changes to the network configuration without the DHCP server function, make the corresponding changes to the network settings of this receiver.

IP Address

The IP address to be entered must be defined within the following ranges. If the IP address defined is beyond the following ranges, you cannot listen to Internet radio stations.
Class A: 10.0.0.1 to 10.255.255.254
Class B: 172.16.0.1 to 172.31.255.254
Class C: 192.168.0.1 to 192.168.255.254

Subnet Mask

In case an xDSL modem or a terminal adapter is directly connected to this receiver, enter the subnet mask provided by your ISP on paper. In most cases, enter 255.255.255.0.

Default Gateway

In case a gateway (router) is connected to this receiver, enter the corresponding IP address.

Primary DNS Server/Secondary DNS Server

In case there is only one DNS server address provided by your ISP on paper, enter it in the **'Primary DNS Server'** field. In case there are more than two DNS server addresses, enter one of the other DNS server addresses in the **'Secondary DNS Server'** field.

Proxy Hostname/Proxy Port

This setting is required when you connect this receiver to the Internet via a proxy server. Enter the IP address of your proxy server in the **'Proxy Hostname'** field. Also, enter the port number of your proxy server in the **'Proxy Port'** field.

☼ Tip

• Press ↑/↓ or the numeric buttons to enter alphanumeric characters. To delete alphanumeric characters entered one at a time, press **CLEAR**.

1   Select 'IP Address, Proxy' from the Network Setup menu.

2   Select the DHCP setting you want.
When you select **ON**, the network is automatically set up, and you do not need to follow Steps 3. Proceed with Step 4.

If there is no DHCP server on the network and you select **ON**, this receiver will use its own Auto IP function to determine the IP address.[1]

3   Enter the IP Address, Subnet Mask, Default Gateway, Primary DNS Server and Secondary DNS Server.
Press ↑/↓ to select a number and ←/→ to move the cursor.

4   Select 'OFF' or 'ON' for the Enable Proxy Server setting to deactivate or activate the proxy server.
In case you select **'OFF'**, proceed with Step 7.
In case you select **'ON'**, on the other hand, proceed with Step 5.

5   Enter the address of your proxy server or the domain name.

6   Enter the port number of your proxy server.

7   Select 'OK' to confirm the IP Address/ Proxy setup.

Checking the MAC address

You can check the MAC address.

• **Select 'Information' from the Network Setup menu.**

📝 **Note**
1 The IP address determined by the Auto IP function is 169.254.X.X. You cannot listen to an Internet radio station if the IP address is set for the Auto IP function.

The Other Setup menu

The **Other Setup** menu is where you can make customized settings to reflect how you are using the receiver.

1   Press [RECEIVER] on the remote control, then press HOME MENU.
A Graphical User Interface (GUI) screen appears on your TV. Use ⬆/⬇/⬅/➡ and **ENTER** to navigate through the screens and select menu items. Press **RETURN** to confirm and exit the current menu.

2   Select 'System Setup' from the Home Menu.

3   Select 'Other Setup', then press ENTER.

4   Select the setting you want to adjust.
If you are doing this for the first time, you may want to adjust these settings in order:

- **HDMI Setup** – Synchronizes this receiver with your Pioneer component supporting **Control** with HDMI (see *HDMI Setup* on page 68).
- **Volume Setup** – Sets up the volume-related operations of this unit (see below).
- **Remote Control Mode Setup** – Sets this receiver's remote control mode (page 111).
- **Flicker Reduction Setup** – Adjusts the way the GUI screen looks (page 111).
- **Pairing Bluetooth Setup** – Used to pair a *Bluetooth* ADAPTER and *Bluetooth* wireless technology device (page 54).

5   Make the adjustments necessary for each setting, pressing RETURN to confirm after each screen.

Volume Setup

You can set the maximum volume of this receiver or specify what the volume level will be when the power is turned on.

1   Select 'Volume Setup' from the Other Setup menu.

2   Select the Power ON Level setting you want.
The volume can be set so that it is always set to the same level when the receiver's power is turned on.

- **LAST** (default) – When the power is turned on, the volume is set to the same level as when the power was last turned off.
- "**---**" – When the power is turned on, the volume is set to minimum level.
- **–80.0dB** to **+12.0dB** – Specify the volume to be set when the power is turned on, in steps of 0.5 dB.

It is not possible to set a volume level greater than the value specified at Volume Limit setup (see below).

3   Select the Volume Limit setting you want.
Use this function to limit the maximum volume. The volume cannot be increased above the level set here, even by operating **MASTER VOLUME** button (or the dial on the front panel).

- **OFF** (default) – The maximum volume is not limited.
- **–20.0dB**/**–10.0dB**/**0.0dB** – The maximum volume is limited to the value set here.

4   Select the Mute Level setting you want.
This sets how much the volume is to be turned down when **MUTE** is pressed.

- **FULL** (default) – No sound.
- **–40.0dB**/**–20.0dB** – The volume will be turned down to the level specified here.

5   When you're finished, press RETURN.
You will return to the **Other Setup** menu.

Remote Control Mode Setup

• Default setting: **1**

This sets this receiver's remote control mode to prevent erroneous operation when multiple units of the receiver are being used.[1]

1   Select 'Remote Control Mode Setup' from the Other Setup menu.

2   Select the Remote Control Mode setting you want.

3   Select "OK" to change the remote control mode.

4   Follow the instructions on the screen to change the remote control's setting.
See *Operating multiple receivers* on page 81.

5   When you're finished, press RETURN.
You will return to the **Other Setup** menu.

Flicker Reduction Setup

• Default setting: **OFF**

The GUI screen's resolution can be increased. If you feel the GUI screen is hard to see, try changing this setting. Note this setting only affects the GUI screen; it has no influence on the video output.

1   Select 'Flicker Reduction Setup' from the Other Setup menu.

2   Select the Flicker Reduction setting you want.

3   When you're finished, press RETURN.
You will return to the **Other Setup** menu.

✎ **Note**
1 If you change this receiver's setting, also change the setting on the remote control.

Chapter 12:
Additional information

Troubleshooting

Incorrect operations are often mistaken for trouble and malfunctions. If you think that there is something wrong with this component, check the points below. Sometimes the trouble may lie in another component. Investigate the other components and electrical appliances being used. If the trouble cannot be rectified even after exercising the checks listed below, ask your nearest Pioneer authorized independent service company to carry out repair work.

✎ Note

• If the unit does not operate normally due to external effects such as static electricity disconnect the power plug from the outlet and insert again to return to normal operating conditions.

Power

Symptom	Remedy
The power does not turn on.	• Make sure that the power cord is plugged in to an active power outlet.
	• Try disconnecting from the power outlet, then plugging back in.
Power cannot be turned off. (**ZONE 2 ON** is displayed.)	• Set the remote control's **MULTI-ZONE** operation selector switch to **ZONE 2**, then press ⏻ **RECEIVER** to switch the Zone 2 off.
The receiver suddenly switches off or the **iPod iPhone** indicator blinks.	• Check that there are no loose strands of speaker wire touching the rear panel or another set of wires. If so, re-attach the speaker wires, making sure there are no stray strands.
	• The receiver may have a serious problem. Disconnect from the power and call a Pioneer authorized independent service company.
During loud playback the power suddenly switches off.	• Turn down the volume.
	• Lower the 63 Hz and 125 Hz equalizer levels in the *Manual MCACC setup* on page 94.
	• Switch on the digital safety feature. While holding down **ENTER** on the front panel, press ⏻ **STANDBY/ON** to set this receiver to the standby mode. Use **TUNE ↑/↓** to select **D.SAFETY ◄OFF►**, and then use **PRESET ←/→** to select **1** or **2** (select **D.SAFETY ◄OFF►** to deactivate this feature). If the power switches off even with **2** switched on, turn down the volume. With **1** or **2** on, some features may be unavailable.
The unit does not respond when the buttons are pressed.	• Try switching the receiver off, then back on again.
	• Try disconnecting the power cord, then connect again.

Symptom	Remedy
AMP ERR blinks in the display, then the power automatically switches off. The **ADVANCED MCACC** blinks and the power does not turn on.	• The receiver may have a serious problem. Do not try switching the receiver on. Unplug the receiver from the wall and call a Pioneer authorized independent service company.
The blue indicator (at the center of the receiver) flashes and power turns off.	• There is a problem with the receiver's power unit. The receiver may have a serious problem. Unplug the receiver from the wall and call a Pioneer authorized independent service company.
AMP OVERHEAT and the blue indicator (at the center of the receiver) flash and the power turns off.	• Allow the unit to cool down in a well-ventilated place before switching back on. • Wait at least 1 minute, then try turning the power on again.
The receiver suddenly power off or **PQLS** flashes.	• The power unit is damaged. Unplug the receiver from the wall and call a Pioneer authorized independent service company.
Display blinks **12V TRG ERR**.	• An error has arisen in the 12 V trigger jacks. Reconnect accurately then turn the power back on.

No sound

Symptom	Remedy
No sound is output when an input function is selected. No sound is output from the front speakers.	• Check the volume, mute setting (press **MUTE**) and speaker setting (press **SPEAKERS**). • Make sure the correct input function is selected. • Check that the MCACC setup microphone is disconnected. • Make sure the correct input signal is selected (press **SIGNAL SEL**). Note that when **PCM** is selected, you won't be able to hear any other signal format. • Check that the source component is connected properly (see *Connecting your equipment* on page 15). • Check that the speakers are connected properly (see *Connecting the speakers* on page 20).
No sound from the surround or center speakers.	• Check that the Stereo listening mode or the Front Stage Surround Advance mode isn't selected; select one of the surround listening modes (see *Listening in surround sound* on page 61). • Check that the surround/center speakers are not set to **NO** (see *Speaker Setting* on page 106). • Check the channel level settings (see *Channel Level* on page 107). • Check the speaker connections (see *Connecting the speakers* on page 20).
No sound from surround back speakers.	• Check that the surround back speakers are set to **LARGE** or **SMALL**, and the surround speakers are not set to **NO** (see *Speaker Setting* on page 106). • Check the speaker connections (see *Connecting the speakers* on page 20). If only one surround back speaker is connected, make sure it's connected to the left channel speaker terminal. • Surround back speakers will not play while the **Speaker System** is set to **Speaker B** and audio is being played through speaker B.

Symptom	Remedy
No sound from front height or front wide speakers.	• Check that the front height or front wide speakers are set to **LARGE** or **SMALL**, and the surround speakers are not set to **NO** (see *Speaker Setting* on page 106). • Check the speaker connections (see *Connecting the speakers* on page 20).
No sound from subwoofer.	• Check that the subwoofer is connected properly, switched on and the volume turned up. • If your subwoofer has a sleep function, make sure it is switched off. • Make sure that the Subwoofer setting is **YES** or **PLUS** (see *Speaker Setting* on page 106). • The crossover frequency may be set too low; try setting it higher to match the characteristics of your other speakers (see *Speaker Setting* on page 106). • If there is very little low frequency information in the source material, change your speaker settings to Front: **SMALL** / Subwoofer: **YES**, or Front: **LARGE** / Subwoofer: **PLUS** (see *Speaker Setting* on page 106). • Check that the LFE channel is not set to **OFF**, or a very quiet setting (see *Setting the Audio options* on page 72). • Check the speaker level settings (see *Channel Level* on page 107).
No sound from one speaker.	• Check the speaker connection (see *Connecting the speakers* on page 20). • Check the speaker level settings (see *Channel Level* on page 107). • Check that the speaker hasn't been set to **NO** (see *Speaker Setting* on page 106). • The channel may not be recorded in the source. By using one of the advanced effect listening modes, you may be able to create the missing channel (see *Listening in surround sound* on page 61).
Sound is produced from analog components, but not from digital ones (DVD, LD, CD-ROM, etc.).	• Check that the input signal type is set to **DIGITAL** (see *Choosing the input signal* on page 65). • Make sure that the digital input is assigned correctly for the input jack the component is connected to (see *The Input Setup menu* on page 44). • Check the digital output settings on the source component. • If the source component has a digital volume control, make sure this is not turned down.
No sound is output or a noise is output when Dolby Digital/DTS software is played back.	• Check that your DVD player is compatible with Dolby Digital/DTS discs. • Check the digital output settings of your DVD player. Make sure that the DTS signal output is set to On. • If the source component has a digital volume control, make sure this is not turned down.
No sound when using the **Home Menu**.	• If the HDMI input function is selected, sound is muted until exiting the **Home Menu**.

Other audio problems

Symptom	Remedy
Broadcast stations cannot be selected automatically, or there is considerable noise in radio broadcasts.	*For FM broadcasts* • Fully extend the FM wire antenna, adjust the position for best reception and secure to a wall, etc. • Use an outdoor antenna for better reception (see page 31). *For AM broadcasts* • Adjust the position and direction of the AM antenna. • Use an outdoor antenna for better reception (see page 31). • Noise may be caused by interference from other equipment, such as a fluorescent light, motor, etc. Switch off or move the other equipment, or move the AM antenna.
Noise is output when scanning a DTS CD.	• This is not a malfunction of the receiver. The scan function of your player alters the digital information, making it unreadable, resulting in noise being output. Lower the volume when scanning.
When playing a DTS format LD there is audible noise on the soundtrack.	• Make sure that the input signal type is set to **DIGITAL** (see *Choosing the input signal* on page 65).
Can't record audio.	• You can only make a digital recording from a digital source, and an analog recording from an analog source. • For digital sources, make sure that what you're recording isn't copy protected. • Check that the **OUT** jacks are properly connected to the recorders input jacks (see *Connecting other audio components* on page 30).
Subwoofer output is very low.	• To route more signal to the subwoofer, set it to **PLUS** or set the front speakers to **SMALL** (see *Speaker Setting* on page 106).
Everything seems to be set up correctly, but the playback sound is odd.	• The speakers may be out of phase. Check that the positive/negative speaker terminals on the receiver are matched with the corresponding terminals on the speakers (see *Connecting the speakers* on page 20).
The **PHASE CONTROL** feature doesn't seem to have an audible effect.	• If applicable, check that the lowpass filter switch on your subwoofer is off, or the lowpass cutoff is set to the highest frequency setting. If there is a **PHASE** setting on your subwoofer, set it to 0º (or depending on the subwoofer, the setting where you think it has the best overall effect on the sound). • Make sure the speaker distance setting is correct for all speakers (see *Speaker Distance* on page 107).
Noise or hum can be heard even when there is no sound being input.	• Check that personal computers or other digital components connected to the same power source are not causing interference.
Can't select some Input functions by the **INPUT SELECTOR** on the front panel or the **INPUT SELECT** button on the remote control.	• Check the Input Skip settings in the Input Setup menu. • Check the HDMI Input assignment in the Input Setup menu then try OFF.
There seems to be a time lag between the speakers and the output of the subwoofer.	• See *Automatically conducting optimum sound tuning* (*Auto MCACC* on page 41 to set up your system again using MCACC (this will automatically compensate for a delay in the subwoofer output).

Symptom	Remedy
The maximum volume available (shown in the front panel display) is lower than the **+12dB** maximum.	• Check that the Volume Limit is set to **OFF** (see *Volume Setup* on page 110). • The channel level setting may be over **0dB**.

Video

Symptom	Remedy
No image is output when an input is selected.	• Check the video connections of the source component (see page 29). • For HDMI, or when digital video conversion is set to **OFF** and a TV and another component are connected with different cords (in *Setting the Video options* on page 75), you must connect your TV to this receiver using the same type of video cable as you used to connect your video component. • Make sure the input assignment is correct for components connected using component video or HDMI cables (see *The Input Setup menu* on page 44). • Check the video output settings of the source component. • Check that the video input you selected on your TV is correct. • Some components (such as video game units) have resolutions that may not be converted. If adjusting this receiver's Resolution setting (in *Setting the Video options* on page 75) and/or the resolution settings on your component or display doesn't work, try switching Digital Video Conversion (in *Setting the Video options* on page 75) to **OFF**.
Can't record video.	• Check that the source is not copy-protected. • The video converter is not available when making recordings. Check that the same type of video cable is used for connecting both the recorder and the video source (the one you want to record) to this receiver.
Noisy, intermittent, or distorted picture.	• Sometimes a video deck may output a noisy video signal (during scanning, for example), or the video quality may just be poor (with some video game units, for example). The picture quality may also depend on the settings, etc. of your display device. Switch off the video converter and reconnect the source and display device using the same type of connection (component or composite), then start playback again.
Video signals are not output from the component terminal.	• When a monitor only compatible with resolutions of 480i is connected to the component terminal and another monitor is connected to the HDMI terminal, the video signals may not be output to the monitor connected to the component terminal. If this happens, do the following: – Turn off the power of the monitor connected to the HDMI terminal. – Change the **VIDEO PARAMETER** menu **RES** setting (page 75). – Video signals from the HDMI terminal cannot be output to the component terminals. Input the video signals from the player or other source to the composite or component terminals. When using the component terminal, assign it at Input Setup.

Settings

Symptom	Remedy
The Auto MCACC Setup continually shows an error.	• The ambient noise level may be too high. Keep the noise level in the room as low as possible (see also *Problems when using the Auto MCACC Setup* on page 44). If the noise level cannot be kept low enough, you will have to set up the surround sound manually (page 104). • When using only one surround back speaker, connect it to the **SURROUND BACK L** (Single) terminals. • To use a 5.1-channel speaker set, use the surround speakers for the surround channel, not the surround back channel. • Make sure there are no obstacles between the speakers and the microphone. • If **Reverse Phase** is displayed, try the following: – The speaker's wiring (+ and –) may be inverted. Check the speaker connections. – Depending on the type of speakers and their installation conditions, **Reverse Phase** may be displayed even if the speakers are properly connected. If this happens, select **GO NEXT** and continue. – If the speaker is not pointed to the microphone (listening position) or when using speakers that affect the phase (dipole speakers, reflective speakers, etc.), it may not be possible to properly identify the polarity.
After using the Auto MCACC Setup, the speaker size setting is incorrect.	• There may have been some low frequency noise in the room from an air-conditioner, motor, etc. Switch off all other appliances in the room and use Auto MCACC Setup again. • Depending on a number of factors (bass reproduction capabilities of the speakers, room size, speaker placement, etc.) this may occur in some cases. Change the speaker setting manually in *Speaker Setting* on page 106, and use the **ALL (Keep SP System)** option for the **Auto MCACC** menu in *Automatic MCACC (Expert)* on page 91 if this is a recurring problem.
Can't adjust the Fine Speaker Distance setting (page 95) properly.	• Check that the speakers are all in phase (make sure the positive (**+**) and negative (**–**) terminals are matched up properly).
The display shows **KEY LOCK ON** when you try to make settings.	• With the receiver in standby, press ⏻ **STANDBY/ON** for about 10 seconds while holding down **SPEAKERS** to disable the key lock.
Most recent settings have been erased.	• The power cord was disconnected from the wall while adjusting this setting. • Settings are only stored if all the zones are turned off. Turn off all the zones before unplugging the power cord.
The various system settings are not stored.	• Do not pull out the power cord while conducting the settings. (The settings will be stored when both the main zone and sub zone turn off. Turn off all zones before pulling out the power cord.)

Professional Calibration EQ graphical output

Symptom	Remedy
The EQ response displayed in the graphical output following calibration does not appear entirely flat.	• There are cases where the graph does not appear flat (even when selecting **ALL CH ADJ** in the Auto MCACC Setup) due to adjustments made to compensate for room characteristics to achieve optimal sound. • Areas of the graph may appear identical (before and after) when there is little or no adjustment needed. • The graph may appear to have shifted vertically when comparing before and after measurements.
EQ adjustments made using the *Manual MCACC setup* on page 94 do not appear to change the graphical output.	• Despite level adjustments being made, the filters used for analysis may not display these adjustments in the graphical output. However, these adjustments are taken this into account by the filters dedicated to overall system calibration.
Lower frequency response curves do not seem to have been calibrated for **SMALL** speakers.	• Low frequencies used in bass management (the subwoofer channel) will not change for speakers that have been specified as **SMALL** in the configuration, or do not output these frequencies. • Calibration is performed, but due to your speakers' low frequency limitations, no measurable sound is output for display.

Display

Symptom	Remedy
The display is dark or off.	• Press **DIMMER** repeatedly to select a different brightness.
After making an adjustment the display goes off.	• Press **DIMMER** repeatedly to select a different brightness.
You can't get **DIGITAL** to display when using **SIGNAL SEL**.	• Check the digital connections and make sure that the digital inputs are assigned correctly (see *The Input Setup menu* on page 44).
□□ DIGITAL or **DTS** does not light when playing Dolby/DTS software.	• These indicators do not light if playback is paused. • Check the playback (especially the digital output) settings of the source component.
When playing Dolby Digital or DTS sources, the receiver's format indicators do not light.	• Check that the player is connected using a digital connection. • Make sure that the receiver is set to **AUTO** or **DIGITAL** (see *Choosing the input signal* on page 65). • Check that the player isn't set up so that Dolby Digital and DTS sources are converted to PCM. • Ensure that if there are several audio tracks on the disc, the Dolby Digital or DTS is selected.
When playing certain discs, none of the receiver's format indicators light.	• The disc may not contain 5.1/6.1 channel material. Check the disc packaging for more on what audio tracks are recorded on the disc.
When playing a disc with the listening mode set to Auto Surround or ALC, **□□ PL II** or **Neo:6** appear on the receiver.	• Make sure that the receiver is set to **AUTO** or **DIGITAL** (see *Choosing the input signal* on page 65). • If a two channel soundtrack is currently playing (including Dolby Surround encoded), then this is not a malfunction. Check the disc packaging for details about the audio tracks available.

Symptom	Remedy
During playback of DVD-Audio, the display shows **PCM**.	• This will occur when playing DVD-Audio material over the HDMI connection. This is not a malfunction.
The power turns off automatically and some indicator flashes, or some indicator flashes and the power does not turn on.	• See the **Power** section (page 112).

Remote control

Symptom	Remedy
Cannot be remote controlled.	• Set the remote control unit's remote control mode so that it matches the setting on the receiver (see *Operating multiple receivers* on page 81). • Check whether the receiver's remote control mode is properly set (see *Remote Control Mode Setup* on page 111). • Try replacing the batteries in the remote control (see *Loading the batteries* on page 8). • Be sure to operate within 7 m (23 feet) and a 30° angle of the remote sensor on the front panel (see *Operating range of remote control unit* on page 14). • Check that there are no obstacles between the receiver and the remote control. • Make sure that there is no fluorescent or other strong light shining on to the remote sensor. • Check the connections of the **CONTROL IN** jacks (see *Operating other Pioneer components with this unit's sensor* on page 39).
Other components can't be operated with the system remote.	• If the battery ran down, the preset codes may have been cleared. Re-enter the preset codes. • The preset code may be incorrect. Redo the procedure for entering preset codes.

HDMI

Symptom	Remedy
The HDMI indicator blinks continuously.	• Check all the points below.
No picture or sound.	• This receiver is HDCP-compatible. Check that the components you are connecting are also HDCP-compatible. If they are not, please connect them using the component or composite video jacks.
	• Depending on the connected source component, it's possible that it will not work with this receiver (even if it is HDCP-compatible). In this case, connect using the component or composite video jacks between source and receiver.
	• If the problem still persists when connecting your HDMI component directly to your monitor, please consult the component or monitor manual or contact the manufacturer for support.
	• If video images do not appear on your TV, try adjusting the resolution, Deep Color or other setting for your component.
	• While analog video signals are being output over HDMI, use a separate connection for audio output.
	• To output signals in Deep Color, use an HDMI cable (High Speed HDMI® Cable) to connect this receiver to a component or TV with the Deep Color feature.
No picture.	• Try changing the Resolution setting (in *Setting the Video options* on page 75).
No sound, or sound suddenly ceases.	• Check that the HDMI AV setting is set to **AMP/THROUGH**.
	• If the component is a DVI device, use a separate connection for the audio.
	• If analog video is being output over HDMI, please use a separate connection for the audio.
	• Check the audio output settings of the source component.
	• HDMI format digital audio transmissions require a longer time to be recognized. Due to this, interruption in the audio may occur when switching between audio formats or beginning playback.
	• Turning on/off the device connected to this unit's HDMI OUT terminal during playback, or disconnecting/connecting the HDMI cable during playback, may cause noise or interrupted audio.
Noisy or distorted picture.	• Sometimes a video deck may output a noisy video signal (during scanning, for example), or the video quality may just be poor (with some video game units, for example). The picture quality may also depend on the settings, etc. of your display device. Switch off the video converter and reconnect the source and display device using the same type of connection (component or composite), then start playback again.
	• If the problem still persists when connecting your HDMI component directly to your monitor, please consult the component or monitor manual or contact the manufacturer for support.
HDCP ERROR shows in the display.	• Check whether or not the connected component is compatible with HDCP. If it is not compatible with HDCP, reconnect the source device using a different type of connection (component or composite). Some components that are compatible with HDCP still cause this message to be displayed, but so long as there is no problem with displaying video, this is not a malfunction.

Symptom	Remedy
When **Control** with HDMI is set to **ON**, the **HDMI Input** assignment at **Input Setup** is canceled.	• Even when **Control** with HDMI is set to **ON**, for **Digital In** assignment of **HDMI 1** is not canceled, so in this case use the **HDMI IN 1** input.
Synchronized operation not possible using **Control** with HDMI function.	• Check the HDMI connections. • The cable may be damaged. • Select **ON** for the **Control** with HDMI setting (see *HDMI Setup* on page 68). • Select **ALL** for the **Control Mode** setting (see *HDMI Setup* on page 68). • Turn the TV's power on before turning on this receiver's power. • Set the TV side Control with HDMI setting to on (see TV's operating instructions).

Important information regarding the HDMI connection

There are cases where you may not be able to route HDMI signals through this receiver (this depends on the HDMI-equipped component you are connecting–check with the manufacturer for HDMI compatibility information).

If you aren't receiving HDMI signals properly through this receiver (from your component), please try one of the following configurations when connecting up.

Configuration A

Use component video cables to connect the video output of your HDMI-equipped component to the receiver's component video input. The receiver can then convert the analog component video signal to a digital HDMI signal for transmission to the display. For this configuration, use the most convenient connection (digital is recommended) for sending audio to the receiver. See the operating instructions for more on audio connections.

✎ Note

• The picture quality will change slightly during conversion.

Configuration B

Connect your HDMI-equipped component directly to the display using an HDMI cable. Then use the most convenient connection (digital is recommended) for sending audio to the receiver. See the operating instructions for more on audio connections. Set the display volume to minimum when using this configuration.

✎ Note

• If your display only has one HDMI terminal, you can only receive HDMI video from the connected component.

• Depending on the component, audio output may be limited to the number of channels available from the connected display unit (for example audio output is reduced to 2 channels for a monitor with stereo audio limitations).

• If you want to switch the input function, you'll have to switch functions on both the receiver and your display unit.

• Since the sound is muted on the display when using the HDMI connection, you must adjust the volume on the display every time you switch input functions.

USB interface

Symptoms	Causes	Remedies
The folders/files stored on a USB memory device are not displayed.	The folders/files are currently stored in a region other than the FAT (File Allocation Table) region.	Store the folders/files in the FAT region.
	The number of levels in a folder is more than 8.	Limit the maximum number of levels in a folder to 8 (page 49).
	There are more than 30 000 folders/files stored in a USB memory device.	Limit the maximum number of folders/files stored in a USB memory device to 30 000 (page 49).
	The audio files are copyrighted.	Copyrighted audio files stored on a USB memory device cannot be played back (page 49).
A USB memory device is not recognized.	The USB memory device does not support the mass storage class specifications.	Try using a USB memory device compatible with the mass storage class specifications. Note that there are cases where even the audio files stored on a USB memory device compatible with the mass storage class specifications are not played back on this receiver (page 49).
	Some formats of USB memory device, including NTFS, and HFS, cannot be played back on this receiver.	Check whether the format of your USB memory device is either FAT 12, FAT 16 or FAT 32. Note that the NTFS, and HFS formats cannot be played back on this receiver (page 49).
	The USB memory device is not connected properly.	Check the USB memory device connection, then switch on this receiver (page 37).
	A USB hub is currently being used.	This receiver does not support USB hubs (page 49).
	This receiver recognizes the USB memory device as a fraud.	Switch off and on again this receiver.
A USB memory device is connected and displayed, but the audio files stored on the USB memory device cannot be played back.	The file format cannot be properly played back on this receiver.	See the list of file formats that can be played back on this receiver (page 51).
Cannot detect USB keyboard.	The USB keyboard is routed through a USB hub.	This receiver is not compatible with USB hubs. Plug the keyboard directly into the receiver.
	A PS2 keyboard is routed through a PS2/USB connector.	PS2 keyboards cannot be used with this receiver, even if routed through a PS2/USB connector. Use a USB keyboard.
	Keyboard is not a USB HID Class device.	Some devices will not be detected. Use a USB HID Class keyboard.
Cannot enter correct text using the USB keyboard.	Keyboard is not US-international layout keyboard.	Use a US-international layout keyboard. NB: Some characters cannot be entered.

ADAPTER PORT

Symptom	Remedy
The *Bluetooth* wireless technology device cannot be connected or operated. Sound from the *Bluetooth* wireless technology device is not emitted or the sound is interrupted.	• Check that no object that emits electromagnetic waves in the 2.4 GHz band (microwave oven, wireless LAN device or *Bluetooth* wireless technology apparatus) is near the unit. If such an object is near the unit, set the unit far from it. Or, stop using the object emitting the electromagnetic waves. • Check that the *Bluetooth* wireless technology device is not too far from the unit and that obstructions are not set between the *Bluetooth* wireless technology device and the unit. Set the *Bluetooth* wireless technology device and the unit so that the distance between them is less than about 10 m and no obstructions exist between them. • Check that the *Bluetooth* ADAPTER and the **ADAPTER PORT** of the unit are correctly connected. • The *Bluetooth* wireless technology device may not be set to the communication mode supporting the *Bluetooth* wireless technology. Check the setting of the *Bluetooth* wireless technology device. • Check that pairing is correct. The pairing setting was deleted from this unit or the *Bluetooth* wireless technology device. Reset the pairing. • Check that the profile is correct. Use a *Bluetooth* wireless technology device that supports A2DP profile and AVRCP profile.

Internet radio

Symptoms	Causes	Remedies
Cannot access the network. ("**Connection Error**" shows in the display.)	The LAN cable is not firmly connected.	Firmly connect the LAN cable (page 34).
	The router is not switched on.	Switch on the router.
	The network device was switched on when this receiver was already on.	Switch the network device on before the receiver.
Cannot listen to Internet radio stations. ("**Connection Error**" shows in the display.)	The firewall settings for components on the network are currently in operation.	Check the firewall settings for components on the network.
	You are currently disconnected from the Internet.	Check the connection settings for components on the network, and consult with your network service provider if necessary (page 108).
	The URL for the Internet radio station is incorrectly programmed.	Check that the URL was correctly entered when programming.
	The broadcasts from an Internet radio station are stopped or interrupted.	Broadcasts may be interrupted or suspended by the radio station.
	An Internet radio station is selected whose protocol this receiver does not recognize.	This receiver does not recognize protocols other than 'http' and 'mms'.
	An Internet radio station had closed or moved.	Enter new internet radio station on the Internet Radio Setup.

Symptoms	Causes	Remedies
Cannot listen to Internet radio stations. ("**File Format Error**" shows in the display.)	Broadcast is in a format not compatible with this receiver.	This receiver cannot play audio in formats other than MP3 or WMA. Also, even if they are MP3 or WMA formats, this receiver may not be able to play back.
The Internet radio settings screen cannot be displayed on the computer's Internet browser.	This receiver's IP address has not been entered into the browser correctly.	Check the receiver's IP address and enter it correctly on the browser (page 108).
	JavaScript is disabled on the Internet browser.	Enable JavaScript.
	The browser is not compatible with JavaScript.	Use an Internet browser that is compatible with JavaScript.

SIRIUS radio messages

Message	Cause	Action
Antenna Error	The SIRIUS antenna is not properly connected.	Check that the antenna cable is attached securely.
Check Sirius Tuner	The SiriusConnect™ tuner is not properly connected.	Check that the 8 pin mini DIN cable and AC Adapter are attached securely.
Acquiring Signal	The SIRIUS signal is too weak at the current location.	Check for antenna obstructions and reposition the SIRIUS antenna to get better signal reception. Use the Antenna Aiming option to optimize the antenna position.
Subscription Updating	Unit is updating subscription.	Wait until the encryption code has been updated.
Updating Channels	Unit is updating channels.	Wait until the encryption code has been updated.
Invalid Channel	Selected channel is not available/ does not exist.	Select another channel.
Firmware Updating	The SiriusConnect™ tuner's firmware is being updated.	Wait for updating to finish.

If the problem is not solved after the troubleshooting above, if the screen freezes unexpectedly or if the buttons on the remote control or front panel stop working completely, do the following:

- Press ⏻ **STANDBY/ON** on the front panel to turn off the power, then turn the power back on.
- If the power cannot be turned off, press and hold ⏻ **STANDBY/ON** on the front panel for over 10 seconds. The power will turn off. (In this case, the various settings made on the receiver may be cleared.)

About SIRIUS

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About iPod

Made for iPod

Works with iPhone

"Made for iPod" means that an electronic accessory has been designed to connect specifically to iPod and has been certified by the developer to meet Apple performance standards.

"Works with iPhone" means that an electronic accessory has been designed to connect specifically to iPhone and has been certified by the developer to meet Apple performance standards.

Apple is not responsible for the operation of this device or its compliance with safety and regulatory standards.

iPod is a trademark of Apple Inc., registered in the U.S. and other countries. iPhone is a trademark of Apple Inc.

Surround sound formats

Below is a brief description of the main surround sound formats you'll find on DVDs, satellite, cable and terrestrial broadcasts, and video cassettes.

Dolby

The Dolby technologies are explained below. See www.dolby.com for more detailed information.

DOLBY TRUEHD PRO LOGIC IIz

Manufactured under license from Dolby Laboratories. Dolby, Pro Logic, Surround EX and the double-D symbol are trademarks of Dolby Laboratories.

DTS

The DTS technologies are explained below. See www.dtstech.com for more detailed information.

dts-HD Master Audio

dts Neural Surround

Manufactured under license under U.S. Patent #'s: 5,451,942; 5,956,674; 5,974,380; 5,978,762; 6,226,616; 6,487,535; 7,212,872; 7,333,929; 7,392,195; 7,272,567 & other U.S. and worldwide patents issued & pending. DTS and the Symbol are registered trademarks, & DTS-HD, DTS-HD Master Audio, and the DTS logos are trademarks of DTS, Inc. Product includes software. © DTS, Inc. All Rights Reserved.

Windows Media Audio 9 Professional

Windows Media Audio 9 Professional (WMA9 Pro) is a discrete surround format developed by Microsoft Corporation.

Plays Windows Media™

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Auto Surround, ALC and Stream Direct with different input signal formats

The following charts show what you will hear with different input signal formats, depending on the Stream Direct mode (see *Using Stream Direct* on page 64) you have selected.

Stereo (2 channel) signal formats

Input signal format	Auto Surround / ALC / DIRECT	PURE DIRECT
Surround Back speaker(s): Connected		
Dolby Digital Surround	◻◻ **Pro Logic IIx MOVIE**	◻◻ **Pro Logic IIx MOVIE**
DTS Surround	**Neo:6 CINEMA**	**Neo:6 CINEMA**
Other stereo sources	Stereo playback	Stereo playback
Analog sources	*As above*	ANALOG DIRECT (stereo)
PCM sources	*As above*	PCM DIRECT
DVD-A sources	*As above*	*As above*
SACD sources	*As above*	*As above*
Surround Back speaker(s): Not connected		
Dolby Digital Surround	◻◻ **Pro Logic II MOVIE**	◻◻ **Pro Logic II MOVIE**
DTS Surround	**Neo:6 CINEMA**	**Neo:6 CINEMA**
Other stereo sources	Stereo playback	Stereo playback
Analog sources	*As above*	ANALOG DIRECT (stereo)
PCM sources	*As above*	PCM DIRECT
DVD-A sources	*As above*	*As above*
SACD sources	*As above*	*As above*

Multichannel signal formats

Input signal format	Auto Surround / ALC	PURE DIRECT / DIRECT
Surround Back speaker(s): Connected		
Dolby Digital EX (6.1 channel flagged)	**Dolby Digital EX** ◻◻ **Pro Logic IIx MOVIE**[a]	**Dolby Digital EX** ◻◻ **Pro Logic IIx MOVIE**[a]
DTS-ES (6.1 channel sources/6.1 channel flagged)	**DTS-ES** (Matrix/Discrete)	**DTS-ES** (Matrix/Discrete)
DTS sources (5.1 channel encoding)	Straight decoding	Straight decoding
DTS-HD sources	*As above*	*As above*
Other 5.1/6.1/7.1 channel sources	*As above*	*As above*
Surround Back speaker(s): Not connected		
DVD-A sources/Multi-ch PCM	Straight decoding	Straight decoding
SACD sources (5.1 channel encoding)	*As above*	*As above*
Other 5.1/6.1/7.1 channel sources	*As above*	*As above*

a.Unavailable with only one surround back speaker connected.

Preset code list

You should have no problem controlling a component if you find the manufacturer in this list, but please note that there are cases where codes for the manufacturer in the list will not work for the model that you are using. There are also cases where only certain functions may be controllable after assigning the proper preset code.

🔧 Important

• We do not guarantee the operations of all the manufacturers and devices listed. Operation may not be possible even if a preset code is entered.
  If you can't find a preset code that matches the component you want to control, you can still teach the remote individual commands from another remote control (see *Programming signals from other remote controls* on page 82).

```
example:

TV ──────────── Category
Pioneer 0004 ─────── Preset code
       └──────────── Manufacturer
```

TV

Pioneer 0004, 0006, 0113, 0115, 0116, 0117, 0119, 0122, 0123
Admiral 0001, 0014
Adventura 0012
Aiwa 0002
Akai 0002, 0100
Albatron 0097
Alleron 0009
America Action 0104
Amtron 0008
Anam 0104
Anam National 0003, 0008
AOC 0004, 0005, 0006, 0100
Apex 0021, 0102, 0106
Audiovox 0008, 0104
Aventura 0103
Axion 0094
Bang & Olufsen 0111
Belcor 0004
Bell & Howell 0001
Benq 0064
Bradford 0008, 0104
Brillian 0109
Brockwood 0004
Broksonic 0104
Candle 0004, 0006, 0012, 0100
Carnivale 0100
Carver 0101
CCE 0110

Celebrity 0002
Celera 0106
Changhong 0106
Citizen 0004, 0006, 0008, 0100
Clarion 0104
Coby 0056
Colortyme 0004, 0006
Concerto 0004, 0006
Contec 0104
Contec/Cony 0007, 0008
Craig 0008, 0104
Crosley 0081, 0101
Crown 0008, 0104
CTX 0063
Curtis Mathes 0000, 0004, 0006, 0014, 0100, 0101
CXC 0008, 0104
Cytron 0093
Daewoo 0004, 0005, 0006, 0023
Daytron 0004, 0006
Dell 0073
DiamondVision 0096
Dimensia 0000
Disney 0046
Dumont 0004, 0011, 0099
Durabrand 0041, 0103, 0104
Dwin 0014
Electroband 0002
Electrograph 0107

Electrohome 0002, 0003, 0004, 0006
Element 0082
Emerson 0004, 0006, 0007, 0008, 0009, 0023, 0103, 0104
Emprex 0092
Envision 0004, 0006, 0100
Epson 0061
ESA 0103
Fujitsu 0009
Funai 0008, 0009, 0103, 0104
Futuretech 0008, 0104
Gateway 0067, 0107, 0108
GE 0000, 0003, 0004, 0006, 0010, 0016, 0039
GFM 0080, 0084
Gibralter 0004, 0011, 0099, 0100
Goldstar 0004, 0005, 0006, 0007, 0100
Gradiente 0066
Grunpy 0008, 0009, 0104
Haier 0112
Hallmark 0004, 0006
Harman/Kardon 0101
Harvard 0008, 0104
Havermy 0014
Hewlett Packard 0053
Hisense 0069
Hitachi 0004, 0006, 0007

Hyundai 0098
Ilo 0089, 0091
IMA 0008
Infinity 0101
InFocus 0074
Initial 0091
Insignia 0085, 0086
Inteq 0099
Janeil 0012
JBL 0101
JC Penney 0000, 0004, 0005, 0006, 0010
JCB 0002
Jensen 0004, 0006
JVC 0007, 0010, 0044, 5064
Kawasho 0002, 0004, 0006
KEC 0104
Kenwood 0004, 0006, 0100
KLH 0106
Kloss Novabeam 0008, 0012
KTV 0008, 0100, 0104, 0110
LG 0005, 0052, 0078, 0097
Logik 0001
Luxman 0004, 0006
LXI 0000, 0006, 0101, 0102
Magnavox 0004, 0006, 0019, 0020, 0037, 0042, 0100, 0101
Majestic 0001

Marantz 0004, 0006, 0062, 0100, 0101
Matsushita 0105
Maxent 0087, 0107
Megapower 0097
Megatron 0006
Memorex 0001, 0005, 0006, 0041
MGA 0004, 0005, 0006, 0100
Midland 0010, 0011, 0099
Mintek 0091
Mitsubishi 0004, 0005, 0006, 0014, 0045
Monivision 0097
Montgomery Ward 0001
Motorola 0003, 0014
MTC 0004, 0005, 0006, 0100
Multitech 0008, 0104, 0110
NAD 0006, 0102
NEC 0003, 0004, 0005, 0006, 0100
Net-TV 0107
Nikko 0006, 0100
Norcent 0060
Olevia 0048, 0054, 0059
Onwa 0008, 0104
Oppo 0095
Optimus 0105
Optoma 0075
Optonica 0014
Orion 0025

Panasonic 0003, 0010, 0017, 0027, 0105, 0114, 0120, 0121, 0124, 0125
Penney 0100, 0102
Philco 0003, 0004, 0005, 0006, 0007, 0100, 0101
Philips 0003, 0004, 0007, 0019, 0020, 0101
Philips Magnavox 0019
Pilot 0004, 0100
Polaroid 0057, 0106
Portland 0004, 0005, 0006
Prima 0065
Princeton 0097
Prism 0010
Proscan 0000
Proton 0004, 0006, 0007
Protron 0055
Proview 0068
Pulsar 0004, 0011, 0099
Quasar 0003, 0010, 0105
Radio Shack 0100, 0104
Radio Shack/Realistic 0000, 0004, 0006, 0007, 0008
RCA 0000, 0003, 0004, 0005, 0006, 0013, 0024, 0035
Realistic 0100, 0104
Runco 0011, 0099, 0100
Sampo 0004, 0006, 0100, 0107

Samsung 0004, 0005, 0006, 0007, 0022, 0032, 0076, 0077, 0083, 0100, 0110
Sansui 0025
Sanyo 0004, 0050
Sceptre 0072
Scotch 0006
Scott 0004, 0006, 0007, 0008, 0009, 0090, 0104
Sears 0000, 0004, 0006, 0009, 0101, 0102, 0103
Sharp 0004, 0006, 0007, 0014, 0033
Sheng Chia 0014
Shogun 0004
Signature 0001
Sony 0002, 0018, 0029, 0030, 0031, 0034
Soundesign 0004, 0006, 0008, 0009, 0104
Squareview 0103
SSS 0004, 0008, 0104
Starlite 0008, 0104
Superscan 0014
Supre-Macy 0012
Supreme 0002
SVA 0088
Sylvania 0004, 0006, 0049, 0079, 0080, 0100, 0101, 0103
Symphonic 0008, 0041, 0103, 0104

Syntax 0054
Syntax-Brillian 0054
Tandy 0014
Tatung 0003, 0108
Technics 0010, 0105
Techwood 0004, 0006, 0010
Teknika 0001, 0004, 0005, 0006, 0007, 0008, 0009, 0101, 0104
TMK 0004, 0006
TNCi 0099
Toshiba 0026, 0028, 0036, 0038, 0040, 0043, 0102
Vector Research 0100
Vidikron 0101
Vidtech 0004, 0005, 0006
Viewsonic 0058, 0107
Viking 0012
Viore 0089
Vizio 0004, 0070, 0071, 0108
Wards 0000, 0001, 0004, 0005, 0006, 0009, 0100, 0101
Waycon 0102
Westinghouse 0047, 0051
White Westinghouse 0023
Yamaha 0004, 0005, 0006, 0100
Zenith 0001, 0004, 0011, 0015, 0099

DVD

If operations are not possible using the preset codes below, you may be able to conduct operations with the preset codes for the **BD***,* **DVR (BDR, HDR)***.*

Pioneer 2014, 2158
Accurian 2092
Advent 2072
Aiwa 2012
Akai 2066
Alco 2070
Allegro 2087
Amphion MediaWorks 2037
AMW 2037
Apex 2002, 2018, 2079, 2080
Apple 2058
Arrgo 2088
Aspire 2073
Astar 2052
Audiovox 2070
Axion 2040
Bang & Olufsen 2081
Blaupunkt 2080
Blue Parade 2078
Boston 2059
Broksonic 2066
California Audio Labs 2068

CambridgeSoundWorks 2065
CineVision 2087
Coby 2029
Curtis Mathes 2089
CyberHome 2000, 2088
Cytron 2039
Daewoo 2021, 2087
Denon 2026, 2068
Desay 2055
DiamondVision 2042
Disney 2022
Durabrand 2090
Emerson 2067, 2082, 2091
Enterprise 2082
ESA 2053, 2091
Fisher 2083
Funai 2091
GE 2016, 2077, 2080
GFM 2043
Go Video 2087
Gradiente 2068
Greenhill 2080
Haier 2094

Harman/Kardon 2030, 2084
Hitachi 2011
Hiteker 2079
iLive 2062
Ilo 2038
Initial 2038, 2080
Insignia 2036, 2064, 2091
Integra 2078
iSymphony 2060
JBL 2084
JVC 2013
Kawasaki 2070
Kenwood 2028, 2068
KLH 2070, 2080
Koss 2024, 2069, 2075
Landel 2093
Lasonic 2085
Lenoxx 2074, 2090
LG 2019, 2051, 2061, 2082, 2087
Liquid Video 2075
Liteon 2025, 2092
Magnavox 2067, 2076, 2091

Memorex 2066
Microsoft 2077
Mintek 2038, 2080, 2086
Mitsubishi 2020
Nesa 2080
Next Base 2093
Nexxtech 2056
Onkyo 2076
Oppo 2041, 2057
Oritron 2069, 2075
Panasonic 2005, 2007, 2017, 2032, 2033, 2050, 2068, 2076
Philips 2045, 2076
Proceed 2079
Proscan 2077
Qwestar 2069
RCA 2008, 2016, 2070, 2077, 2078, 2080
Regent 2074
Rio 2087
Rowa 2071
Samsung 2009, 2011, 2015, 2031, 2044, 2068

Sansui 2066
Sanyo 2066, 2083
Sharp 2035
Sherwood 2063
Shinsonic 2086
Sonic Blue 2087

Sony 2003, 2004, 2010, 2012, 2027, 2046, 2047, 2048
Sungale 2054
Superscan 2067
Sylvania 2023, 2067, 2091
Symphonic 2023
Teac 2070

Technics 2068
Theta Digital 2078
Toshiba 2001, 2006, 2049, 2066, 2076
Trutech 2000
Urban Concepts 2076
US Logic 2086

Venturer 2070
Xbox 2077
Yamaha 2005, 2068
Zenith 2019, 2076, 2082, 2087

BD

If operations are not possible using the preset codes below, you may be able to conduct operations with the preset codes for the **DVD***,* **DVR (BDR, HDR)***.*

Pioneer 2159, 2160
Denon 2147, 2148, 2149
Hitachi 2144, 2145, 2146
JVC 2127, 2128, 2130, 2131, 2132, 2133

Kenwood 2044
LG 2123, 2124
Marantz 2139, 2140
Mitsubishi 2137, 2138
Onkyo 2126

Panasonic 2114, 2115, 2116
Philips 2117
Samsung 2119
Sharp 2141, 2142, 2143
Sony 2120, 2121, 2122, 2129

Toshiba 2125, 2099
Yamaha 2134, 2135, 2136

DVR (BDR, HDR)

If operations are not possible using the preset codes below, you may be able to conduct operations with the preset codes for the **DVD***,* **BD***.*

Pioneer 2103, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157
Panasonic 2100, 2106
Sharp 2104, 2112
Sony 2105, 2108, 2109, 2110, 2113
Toshiba 2111

VCR

Pioneer 1035
ABS 1017
Adventura 1005
Aiwa 1005
Alienware 1017
American High 1004
Asha 1002
Audio Dynamics 1000
Audiovox 1003
Bang & Olufsen 1032
Beaumark 1002
Bell & Howell 1001
Calix 1003
Candle 1002, 1003
Canon 1004
Citizen 1002, 1003
Colortyme 1000
Craig 1002, 1003
Curtis Mathes 1000, 1002, 1004
Cybernex 1002
CyberPower 1017
Daewoo 1005
DBX 1000
Dell 1017

DIRECTV 1016, 1020, 1022, 1023, 1024, 1027, 1030, 1031
Dish Network 1029
Dishpro 1029
Durabrand 1018
Dynatech 1005
Echostar 1029
Electrohome 1003
Electrophonic 1003
Emerson 1003, 1004, 1005
Expressvu 1029
Fisher 1001
Fuji 1004
Funai 1005
Garrard 1005
Gateway 1017
GE 1002, 1004
GOI 1029
Goldstar 1000, 1003
Gradiente 1005
Harley Davidson 1005
Harman/Kardon 1000
Headquarter 1001
Hewlett Packard 1017
HNS 1016

Howard Computers 1017
HP 1017
HTS 1029
Hughes Network Systems 1016, 1020, 1022, 1023, 1024
Humax 1016, 1020
Hush 1017
iBUYPOWER 1017
Instant Replay 1004
JC Penney 1000, 1001, 1002, 1003, 1004
JCL 1004
JVC 1000, 1001, 1020, 1029
Kenwood 1000, 1001
Kodak 1003, 1004
LG 1003
Linksys 1017
Lloyd's 1005
LXI 1003
Magnavox 1004, 1018
Magnin 1003
Marantz 1000, 1001, 1004
Marta 1003
Matsushita 1004
Media Center PC 1017

MEI 1004
Memorex 1001, 1002, 1003, 1004, 1005, 1018, 1019
MGN Technology 1002
Microsoft 1017
Mind 1017
Mitsubishi 1010
Motorola 1004
MTC 1002
Multitech 1002, 1005
NEC 1000, 1001
Nikko 1003
Niveus Media 1017
Noblex 1002
Northgate 1017
Olympus 1004
Optimus 1003
Orion 1014, 1019
Panasonic 1004, 1008
Philco 1004
Philips 1004, 1011, 1016, 1020, 1022, 1023, 1024, 1025
Philips Magnavox 1011
Pilot 1003
Proscan 1030

Pulsar 1018
Quarter 1001
Quartz 1001
Quasar 1004
Radio Shack 1003
Radio Shack/Realistic 1001, 1002, 1003, 1004, 1005
Radix 1003
Randex 1003
RCA 1002, 1004, 1007, 1016, 1020, 1022, 1030, 1031
Realistic 1001, 1002, 1003, 1004, 1005
ReplayTV 1026

Ricavision 1017
Runco 1018
Samsung 1002, 1016, 1022, 1024
Sanky 1018
Sansui 1014, 1019
Sanyo 1001, 1002
Sears 1001, 1003, 1004
Sharp 1012
Shogun 1002
Singer 1004
Sonic Blue 1026
Sony 1006, 1009, 1017, 1021
Stack 1017
STS 1004

Sylvania 1004, 1005
Symphonic 1005
Systemax 1017
Tagar Systems 1017
Tandy 1001
Tashiko 1003
Teac 1005
Technics 1004
Teknika 1003, 1004, 1005
Tivo 1016, 1020, 1021, 1022, 1025
TMK 1002
Toshiba 1015, 1017, 1028
Totevision 1002, 1003
Touch 1017

UltimateTV 1031
Unitech 1002
Vector Research 1000
Video Concepts 1000
Videosonic 1002
Viewsonic 1017
Voodoo 1017
Wards 1002, 1003, 1004, 1005
XR-1000 1004, 1005
Yamaha 1000, 1001
Zenith 1013, 1018
ZT Group 1017

Satellite Set Top Box

Pioneer 0126, 6097, 6098, 6145
ADB 6035, 6001
Akai 6102
Alba 6005, 6013, 6011
Allsat 6102
Alltech 6011
Amstrad 6033, 6030, 6044
Anttron 6013
Asat 6102
Austar 6000, 6045
BELL 6160
Bell ExpressVu 6002, 6003
British Sky Broadcasting 6030
Canal 6105
Chaparral 6034
CNS 6001
Coolsat 6021
Crossdigital 6043
Digenius 6104
Digiwave 6053
DirecTV 6070, 6110, 6111, 6062, 6063, 6113, 6008, 6038, 6054, 6069, 6060, 6059, 6043, 6018, 6114, 6115, 6116, 6093
Dish Network System 6002, 6089, 6003, 6004
Dishpro 6002, 6089, 6004

DX Antenna 6140
E Aichi 6141
Echostar 6002, 6089, 6036, 6005, 6003, 6004, 6146
Expressvu 6002, 6004
Fujitsu 6133, 6134, 6135
Fortec Star 6123, 6023
Fresat 6014
Funai 6070
GE 6111
General Instrument 6032
GOI 6002, 6004
Grundig 6007, 6030
Hirschmann 6033
Hisense 6020
Hitachi 6038, 6049, 6132
Houston 6002
HTS 6002, 6004
Hughes Network Systems 6113, 6038, 6054, 6114, 6115, 6116
Hyundai 6016
iLo 6020
Innova 6059
Jerrold 6032, 6128, 6149, 6150, 6151, 6152, 6153, 6154, 6155, 6156, 6157
JVC 6002, 6003, 6004
Kathrein 6096
Lava 6053

LG 6047, 6018
Marantz 6102
McIntosh 6032
Mitsubishi 6038
Motorola 6032, 6042
NEC 6050, 6131
Netsat 6059
Next Level 6032
nfusion 6015
Nokia 6025, 6026, 6118, 6119, 6121
Pace 6035, 6005, 6030, 6031
Panarex 6016
Panasonic 6008, 6009, 6030, 6136, 6137, 6138
Pansat 6016, 6022
Philips 6002, 6113, 6038, 6054, 6060, 6059, 6102, 6103, 6030, 6114
Primestar 6032, 6147
Proscan 6110, 6111
Proton 6020
RadioShack 6002, 6111, 6032
Radix 6036
RCA 6002, 6110, 6111, 6113, 6109, 6061, 6114, 6142, 6144, 6148
SA 6124, 6126, 6158, 6159
Saba 6014

Sagem 6041, 6120
Samsung 6070, 6113, 6091, 6043, 6017, 6114, 6093
Sanyo 6046
Sat Cruiser 6015
Schwaiger 6066
SEI 6139
Siemens 6007, 6036
SKY 6042, 6059, 6030, 6031
SM Electronic 6011
Smart 6051
Sonicview 6055, 6107
Sony 6062, 6063, 6030, 6143
Star Choice 6032
Star Trak 6032
TechniSat 6033
Thomson 6110, 6111, 6014
Tivo 6113, 6114, 6115, 6116
Toshiba 6038, 6054, 6039, 6130
TPS 6041
Triasat 6033
Ultrasat 6021
US Digital 6020
USDTV 6020
ViewSat 6048
Voom 6032
Zehnder 6101
Zenith 6042, 6069, 6037, 6125, 6127, 6129

Satellite Set Top Box (SAT/PVR Combination)

Pioneer 0126, 0128
Bell ExpressVu 6002, 6003
DirecTV 6070, 6110, 6062, 6113, 6060, 6059, 6114, 6115, 6116
Dish Network System 6002, 6089
Dishpro 6002, 6089
Echostar 6002, 6089, 6003

Expressvu 6002
Hughes Network Systems 6113, 6114, 6115, 6116
JVC 6003
Motorola 6032
Philips 6113, 6114
Proscan 6110
Samsung 6114

Sonicview 6055, 6107
Sony 6062
Star Choice 6032
Tivo 6113, 6114, 6115, 6116

Cable Set Top Box

Pioneer 6028, 6029, 6095, 6099
ABC 6122
Accuphase 6122
Amino 6077, 6078
Auna 6082
BCC 6072
Bell & Howell 6122
Bright House 6074, 6029
Cable One 6074, 6029
Cablevision 6074, 6029
Charter 6074, 6029, 6058
Cisco 6029, 6028, 6083
Comcast 6074, 6029, 1982
Cox 6074, 6029
Digeo 6029, 6058

Director 6073
Emerson 6122
Fosgate 6072
General Instrument 6073, 6072, 6122
Homecast 6024
i3 Micro 6077
Insight 6074, 6073, 6029
Jebsee 6122
Jerrold 6073, 6072, 6122
Knology 6029
Macab 6040
Mediacom 6074, 6029
Memorex 6112
Motorola 6074, 6073, 6072, 6029, 6122, 6094

MTS 6094
Myrio 6077, 6078
Noos 6040
Pace 6074, 6029, 6028, 6106, 6083
Panasonic 6112, 6083
Paragon 6112
Penney 6112
Philips 6012
Pulsar 6112
Quasar 6112
Regal 6072
Rogers 6029
Runco 6112
Samsung 6095

Scientific Atlanta 6029, 6028, 6027, 6112
Sejin 6077
Shaw 6074
Starcom 6122
Stargate 6122
Suddenlink 6074, 6029
Supercable 6072
Time Warner 6074, 6029, 6058
Tivo 6076
Toshiba 6112
United Cable 6072, 6122
US Electronics 6072
Videoway 6112
Zenith 6112

Cable Set Top Box (Cable/PVR Combination)

Pioneer 0127, 6029
Amino 6078
Bright House 6074, 6029
Cable One 6074, 6029
Cablevision 6074, 6029
Charter 6074, 6029, 6058

Cisco 6029, 6083
Comcast 6074, 6029, 6083, 6076
Cox 6074, 6029
Digeo 6081, 6058
Homecast 6024
Insight 6074, 6029

Knology 6029
Mediacom 6074, 6029
Motorola 6074, 6081
Myrio 6078
Pace 6029
Panasonic 6083
Rogers 6029

Scientific Atlanta 6029
Shaw 6074
Suddenlink 6074, 6029
Supercable 6072
Time Warner 6074, 6029, 6058
Tivo 6076

CD

Pioneer 5065, 5066
AKAI 5043
Asuka 5045
Denon 5019
Fisher 5048
Goldstar 5040

Hitachi 5042
Kenwood 5020, 5021, 5031
Luxman 5049
Marantz 5033
Onkyo 5017, 5018, 5030, 5050
Panasonic 5036

Philips 5022, 5032, 5044
RCA 5013, 5029
Roadstar 5052
Sharp 5051
Sony 5012, 5023, 5026, 5027, 5028, 5039

TEAC 5015, 5016, 5034, 5035, 5037
Technics 5041
Victor 5014
Yamaha 5024, 5025, 5038, 5046, 5047

CD-R

Pioneer 5067　　**Philips** 5054　　**Yamaha** 5055

Laser Disc Player

Pioneer 5062, 5063

Cassete Deck

Pioneer 5058, 5059, 5070

Digital Tape

Pioneer 5069

MD

Pioneer 5068

Specifications

Amplifier section
Continuous average power output of 80 watts* per channel, min., at 8 ohms, from 20 Hz to 20 000 Hz with no more than 0.08 %** total harmonic distortion.

Front (stereo). . . . . 80 W + 80 W
Guaranteed speaker impedance

. . . . .6 Ω to 16 Ω
* Measured pursuant to the Federal Trade Commission's Trade Regulation rule on Power Output Claims for Amplifiers
** Measured by Audio Spectrum Analyzer

Audio section
Input (Sensitivity/Impedance)
LINE . . . . 300 mV/47 kΩ
Output (Level/Impedance)
REC . . . . 300 mV/2.2 kΩ
Signal-to-Noise Ratio
(IHF, short circuited, A network)
LINE . . . . 100 dB
Signal-to-Noise Ratio [EIA, at 1 W (1 kHz)]
LINE . . . . 81 dB

Video section
Signal level
Composite . . . . 1 Vp-p (75 Ω)
Component Video . . . . Y: 1.0 Vp-p (75 Ω),
PB, PR: 0.7 Vp-p (75 Ω)
Corresponding maximum resolution
Component Video
. . . . 1080i (1125i)/720p (750p)
(Video convert off)

Tuner section
Frequency Range (FM) . . . 87.5 MHz to 108 MHz
Antenna Input (FM) . . . . .75 Ω unbalanced
Frequency Range (AM). . . . 530 kHz to 1700 kHz
Antenna (AM) . . . . Loop antenna (balanced)

Digital In/Out section
HDMI terminal . . . . 19-pin (Not DVI)
HDMI output type . . . . .5 V, 100 mA
USB terminal . . . . . .USB2.0 Full Speed (Type A)
iPod terminal . . . . .USB, and Video (Composite)
SIRIUS antenna cable . . . . 8-pin mini DIN cable
ADAPTER PORT terminal . . . . .5 V, 100 mA

Integrated control section
Control (SR) terminal. . .Ø 3.5 Mini-jack (MONO)
Control (IR) terminal . . .Ø 3.5 Mini-jack (MONO)
IR signal . . . . High Active (High Level: 2.0 V)
12 V Trigger terminal . . Ø 3.5 Mini-jack (MONO)
12 V Trigger output type . . . . . . 12 V, Total 50 mA
RS-232C cable type
. . . . .9-pin, cross type, female-female

Miscellaneous
Power requirements . . . . AC 120 V, 60 Hz
Power consumption . . . . .245 W
In standby . . . . 0.5 W (Control OFF)
0.8 W (Control ON)
Dimensions
. . . . . . .420 mm (W) x 158 mm (H) x 379 mm (D)
(16 $^9/_{16}$ in. (W) x 6 $^1/_4$ in. (H) x 14 $^{15}/_{16}$ in. (D))
Weight (without package). . . 10.2 kg (22 lb 8 oz)

Number of Furnished Parts
MCACC Setup microphone. 1
Remote control unit. 1
AAA/IEC R03 dry cell batteries 2
AM loop antenna 1
FM wire antenna 1
iPod cable. 1
Power cord 1
Warranty card 1
These operating instructions

✐ Note
• Specifications and the design are subject to possible modifications without notice, due to improvements.

Dear Customer:

Selecting fine audio equipment such as the unit you've just purchased is only the start of your musical enjoyment. Now it's time to consider how you can maximize the fun and excitement your equipment offers. This manufacturer and the Electronic Industries Association's Consumer Electronics Group want you to get the most out of your equipment by playing it at a safe level. One that lets the sound come through loud and clear without annoying blaring or distortion-and, most importantly, without affecting your sensitive hearing.

Sound can be deceiving. Over time your hearing "comfort level" adapts to higher volumes of sound. So what sounds "normal" can actually be loud and harmful to your hearing. Guard against this by setting your equipment at a safe level BEFORE your hearing adapts.

To establish a safe level:
• Start your volume control at a low setting.
• Slowly increase the sound until you can hear it comfortably and clearly, and without distortion.

Once you have established a comfortable sound level:
• Set the dial and leave it there.

Taking a minute to do this now will help to prevent hearing damage or loss in the future. After all, we want you listening for a lifetime.

We Want You Listening For A Lifetime

Used wisely, your new sound equipment will provide a lifetime of fun and enjoyment. Since hearing damage from loud noise is often undetectable until it is too late, this manufacturer and the Electronic Industries Association's Consumer Electronics Group recommend you avoid prolonged exposure to excessive noise. This list of sound levels is included for your protection.

Decibel
Level   Example

30   Quiet library, soft whispers
40   Living room, refrigerator, bedroom away from traffic
50   Light traffic, normal conversation, quiet office
60   Air conditioner at 20 feet, sewing machine
70   Vacuum cleaner, hair dryer, noisy restaurant
80   Average city traffic, garbage disposals, alarm clock
      at two feet.

THE FOLLOWING NOISES CAN BE DANGEROUS UNDER CONSTANT EXPOSURE

90   Subway, motorcycle, truck traffic, lawn mower
100   Garbage truck, chain saw, pneumatic drill
120   Rock band concert in front of speakers, thunderclap
140   Gunshot blast, jet plane
180   Rocket launching pad

Information courtesy of the Deafness Research Foundation.

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Cleaning the unit

• Use a polishing cloth or dry cloth to wipe off dust and dirt.

• When the surface is dirty, wipe with a soft cloth dipped in some neutral cleanser diluted five or six times with water, and wrung out well, and then wipe again with a dry cloth. Do not use furniture wax or cleansers.

• Never use thinners, benzine, insecticide sprays or other chemicals on or near this unit, since these will corrode the surface.

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To register your product, find the nearest authorized service location, to purchase replacement parts, operating instructions, or accessories, please go to one of following URLs :

Pour enregistrer votre produit, trouver le service après-vente agréé le plus proche et pour acheter des pièces de rechange, des modes d'emploi ou des accessoires, reportez-vous aux URL suivantes :

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<5707-00000-327-0S>   Printed in China