Pioneer sound.vision.soul

AUDIO/VIDEO MULTI-CHANNEL RECEIVER

VSX-D912

Operating Instructions

WARNING: THE APPARATUS IS NOT WATERPROOFS, TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE AND DO NOT PUT ANY WATER SOURCE NEAR THIS APPARATUS, SUCH AS VASE, FLOWER POT, COSMETICS CONTAINER AND MEDICINE BOTTLE ETC. H001AEn

[For Canadian model]

CAUTION: TO PREVENT ELECTRIC SHOCK, DO NOT USE THIS (POLARIZED) PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

ATTENTION: POUR PREVENIR LES CHOCS ELECTRIQUES NE PAS UTILISER CETTE FICHE POLARISEE AVEC UN PROLONGATEUR UNE PRISE DE COURANT OU UNE AUTRE SORTIE DE COURANT, SAUF SI LES LAMES PEUVENT ETRE INSEREES A FOND SANS EN LAISSER AUCUNE PARTIE A DECOUVERT. H007A2L

[For Canadian model]

This Class B digital apparatus complies with Canadian ICES-003.

[Pour le modèle Canadien]

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada. H009 2L

If the socket outlets on the associated equipment are not suitable for the plug supplied with the product, the plug must be removed and an appropriate one fitted. Replacement and mounting of an AC plug on the power supply cord of this unit should be perfomed only by qualified service personnel. The cut-off plug must be disposed of as an electrical shock hazard could exist if connected to a socket outlet. H022AEn

[For U.S. model]

ENERGY STAR® and the ENERGY STAR certification mark are registered US marks. K001A_En

CAUTION:

THE STANDBY/ON BUTTON IS SECONDARY CONNECTED AND THEREFORE DOES NOT SEPARATE THE UNIT FROM MAINS POWER IN STANDBY POSITION. THEREFORE INSTALL THE UNIT SUITABLE PLACES EASY TO DISCONNECT THE MAINS PLUG IN CASE OF THE ACCIDENT. THE MAINS PLUG OF UNIT SHOULD BE UNPLUGGED FROM THE WALL SOCKET WHEN LEFT UNUSED FOR A LONG PERIOD OF TIME. H017BEn

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.

IMPORTANT NOTICE H006AEn

The serial number for this equipment is located in the rear panel. Please write this serial number on your enclosed warranty card and keep it in a secure area. This is for your security.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help. H010 En

Information to User

Alteration or modifications carried out without appropriate authorization may invalidate the user's right to operate the equipment. H011 En

CAUTION:

This product satisfies FCC regulations when shielded cables and connectors are used to connect the unit to other equipment. To prevent electromagnetic interference with electric appliances such as radios and televisions, use shielded cables and connectors for connections. H012 En

WARNING: Handling the cord on this product or cords associated with accessories sold with the product will expose you to lead, a chemical known to the State of California and other governmental entities to cause cancer and birth defects or other reproductive harm. ***Wash hands after handling.***

IMPORTANT

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.

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.

IMPORTANT SAFETY INSTRUCTIONS

H003 En

READ INSTRUCTIONS — All the safety and operating instructions should be read before the product is operated.

RETAIN INSTRUCTIONS — The safety and operating instructions should be retained for future reference.

HEED WARNINGS — All warnings on the product and in the operating instructions should be adhered to.

FOLLOW INSTRUCTIONS — All operating and use instructions should be followed.

CLEANING — Unplug this product from the wall outlet before cleaning. The product should be cleaned only with a polishing cloth or a soft dry cloth. Never clean with furniture wax, benzine, insecticides or other volatile liquids since they may corrode the cabinet.

ATTACHMENTS — Do not use attachments not recommended by the product manufacturer as they may cause hazards.

WATER AND MOISTURE — Do not use this product near water — for example, near a bathtub, wash bowl, kitchen sink, or laundry tub; in a wet basement; or near a swimming pool; and the like.

ACCESSORIES — Do not place this product on an unstable cart, stand, tripod, bracket, or table. The product may fall, causing serious injury to a child or adult, and serious damage to the product. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer, or sold with the product. Any mounting of the product should follow the manufacturer's instructions, and should use a mounting accessory recommended by the manufacturer.

CART — A product and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the product and cart combination to overturn.

VENTILATION — Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the product and to protect it from overheating, and these openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.

POWER SOURCES — This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your product dealer or local power company.

LOCATION – The appliance should be installed in a stable location.

NONUSE PERIODS – The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.

GROUNDING OR POLARIZATION

- If this product is equipped with a polarized alternating current line plug (a plug having one blade wider than the other), it will fit into the outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.
- If this product is equipped with a three-wire grounding type plug, a plug having a third (grounding) pin, it will only fit into a grounding type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding type plug.

POWER-CORD PROTECTION — Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the product.

OUTDOOR ANTENNA GROUNDING — If an outside antenna or cable system is connected to the product, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges. Article 810 of the National Electrical Code, ANSI/NFPA 70, provides information with regard to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Figure A.

LIGHTNING — For added protection for this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the product due to lightning and power-line surges.

POWER LINES — An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.

OVERLOADING — Do not overload wall outlets, extension cords, or integral convenience receptacles as this can result in a risk of fire or electric shock.

OBJECT AND LIQUID ENTRY — Never push objects of any kind into this product through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.

SERVICING — Do not attempt to service this product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

DAMAGE REQUIRING SERVICE — Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:

- When the power-supply cord or plug is damaged.
- If liquid has been spilled, or objects have fallen into the product.
- If the product has been exposed to rain or water.
- If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation.
- If the product has been dropped or damaged in any way.
- When the product exhibits a distinct change in performance — this indicates a need for service.

REPLACEMENT PARTS — When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.

SAFETY CHECK — Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.

WALL OR CEILING MOUNTING — The product should not be mounted to a wall or ceiling.

HEAT — The product should be situated away from heat sources such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat.

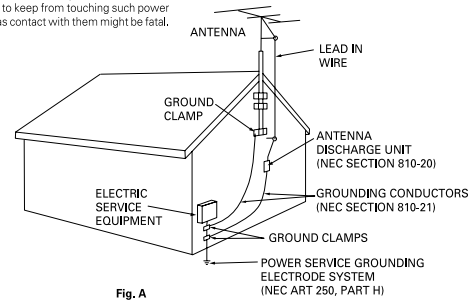

Fig. A

NEC — NATIONAL ELECTRICAL CODE

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"DTS" ,"DTS-ES Extended Surround" and "Neo:6" are trademarks of Digital Theater Systems, Inc.

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Chapter 1:
Before you start

Checking what's in the box

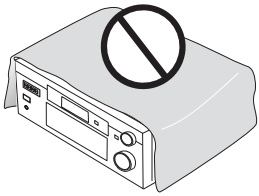
Please check that you've received the following supplied accessories:

- AM loop antenna
- FM wire antenna
- AA/LR6 dry cell batteries x2
- Remote control
- Microphone
- Microphone stand
- These operating instructions

Installing the receiver

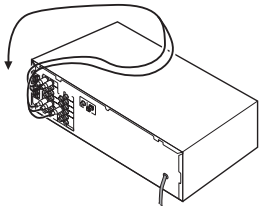
Please note the following points:

- Do not place objects directly on top of this unit. This prevents proper heat dispersal.
- When installing on a rack, shelf, etc., be sure to leave more than 8 inches (20 cm.) of space above the receiver.

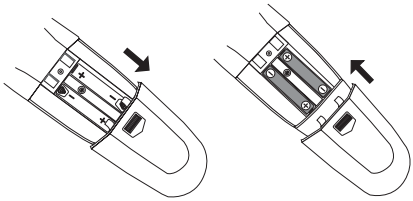


Making cable connections

Make sure not to bend the cables over the top of this unit (as shown in the illustration). If this happens, the magnetic field produced by the transformers in this unit may cause a humming noise from the speakers.



Loading the batteries



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

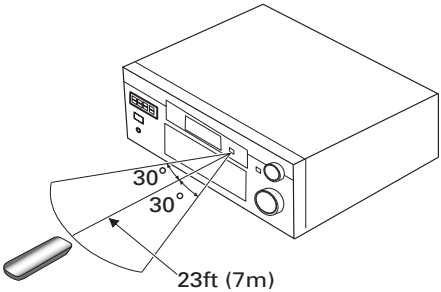
- Never use new and old batteries together.
- Insert the plus and minus sides of the batteries properly according to the marks in the battery case.
- Batteries with the same shape may have different voltages. Do not use different batteries together.

- When disposing of used batteries, please comply with governmental regulations or environmental public instruction's rules that apply in your country or area.

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.



Chapter 2:
5 minute guide

Introduction to home theater

You are probably used to using stereo equipment to listen to music, but may not be used to home theater systems that give you many more options (such as surround sound) when listening to soundtracks.

Home theater refers to the use of multiple audio tracks to create a surround sound effect, making you feel like you're in the middle of the action or concert. The surround sound you get from a home theater system depends not only on the speakers you have set up in your room, but also on the source and the sound settings of the receiver.

DVD-Video has become the basic source material for home theater due to its size, quality, and ease of use. Depending on the DVD, you can have up to seven different audio tracks coming from one disc, all of them being sent to different speakers in your system. This is what creates a surround sound effect and gives you the feeling of ‘being there’.

This receiver will automatically decode Dolby Digital, DTS, or Dolby Surround DVD-Video discs, according to your speaker setup. In most cases, you won’t have to make changes for realistic surround sound, but other possibilities (like listening to a CD with multi-channel surround sound) are explained in *Playing sources* on page 35.

Listening to Surround Sound

This receiver was designed with the easiest possible setup in mind, so with the following quick setup guide, you should have your system hooked up for surround sound in no time at all. In most cases, you can simply leave the receiver in the default settings.

Be sure to complete all connections before connecting this unit to the AC power source.

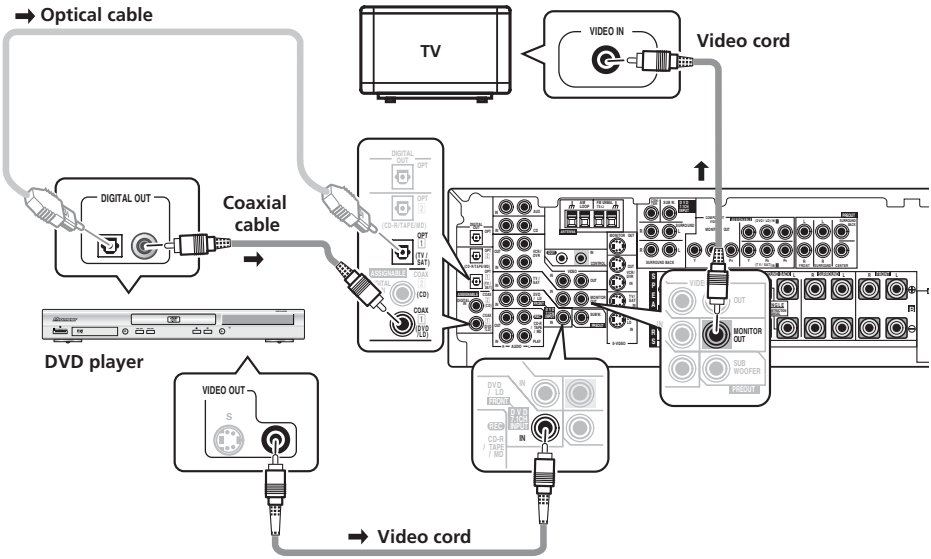
1 Hook up your DVD player.

For surround sound, you'll want to hook up using a digital connection from the DVD player to the receiver. You can do this with either a coaxial, or an optical connection (you don't need to connect both). If you hook up using an optical cable, you should refer to *Digital input settings* on page 49 to assign the optical input to **DVD**.

Use a video cord to connect the video output on your DVD player to the receiver using the jacks shown below.

2 Hook up your TV.

Use a video cord to connect your receiver to the TV using the jacks as shown below.



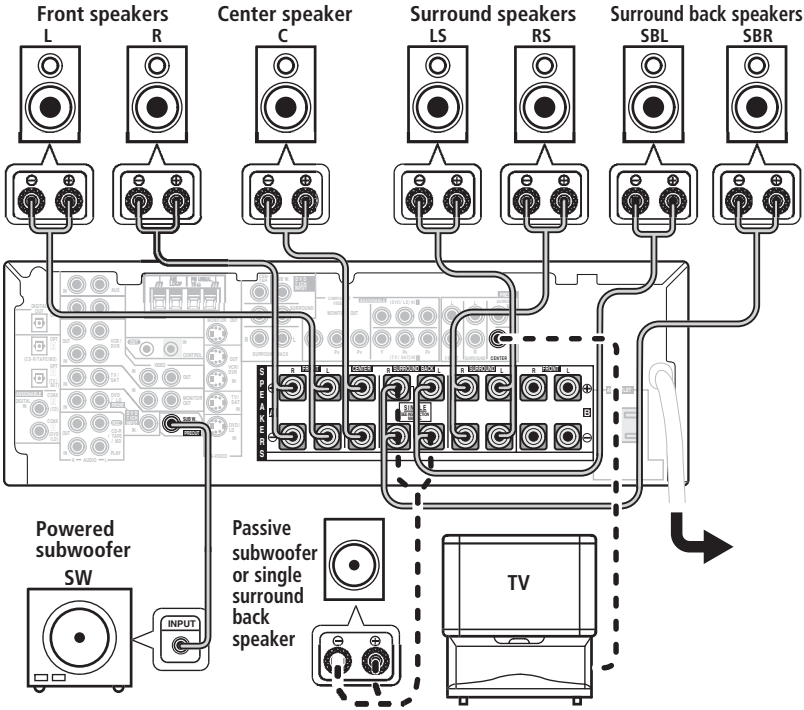
3 Connect your speakers.

A complete setup of eight speakers (including the subwoofer) is shown here but everyone's home setup will vary. Simply connect the speakers you have in the manner shown below. The receiver will work with just two stereo speakers (the front speakers in the diagram) but using at least three speakers is recommended, and a complete setup is best.

Make sure you connect the speaker on the right to the right terminal and the speaker on the left to the left terminal. Also make sure the positive and negative (**+**/**–**) terminals on the receiver match those on the speakers.

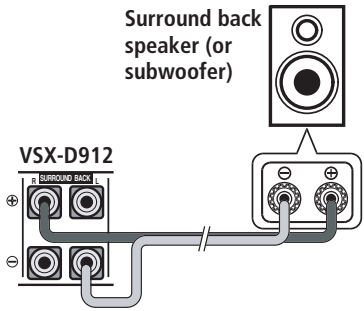
Important

- Use speakers with a nominal impedance of 8 Ω to 16 Ω.
- If you're not using a subwoofer, change the front speaker setting (see *Speaker setting* on page 45) to large.



- To use the speaker on your TV as the center speaker (**C**), connect the **CENTER PREOUT** jack on this unit to the audio input jack on your TV. In this case the center speaker shown is unnecessary.

- If you are using only one surround back speaker, connect the positive wire to the right channel (**+**) terminal, and the negative wire to the left channel (**–**) terminal (shown below).
- If you select subwoofer (**SB SW**) in the *Surround back speaker setting* on page 46 you can hook up a subwoofer instead of speakers to the surround back speaker terminals. Connect the wires just as above (and as shown below), connecting the positive wire to the right channel (**+**) terminal, and the negative wire to the left channel (**–**) terminal.



4 Plug in the receiver and switch it on, followed by your DVD player, your subwoofer and the TV.

Make sure you've set the video input on your TV to this receiver. Check the manual that came with the TV if you don't know how to do this.

Also make sure that **DVD/LD** is showing in the receiver's display, indicating that the DVD input is selected. If it isn't, press **DVD** on the remote control to set the receiver to the DVD input.

5 Press QUICK SETUP on the front panel to specify your speaker setup, room size and listening position.

Use the **MULTI JOG** dial to select and **ENTER** to confirm your selection. See *Using the Quick Setup* on page 12 if you're unsure about the settings.

For a more complete surround sound setup, we recommend using the automatic MCACC setup in the *Quick surround sound setup* on page 14.

6 Play a DVD, and adjust the volume to your liking.

There are several other sound options you can select. See *Introduction to Sound Modes* on page 35 for more on this. See also *Choosing your receiver setup* on page 44 for more setup options.

Note

- Depending on your DVD player or source discs, you may only get digital 2 channel stereo and analog sound. In this case, the listening mode must be set to **STANDARD** (it should already be set—see *Listening to multi-channel playback* on page 37 if you need to do this) if you want multi-channel surround sound.

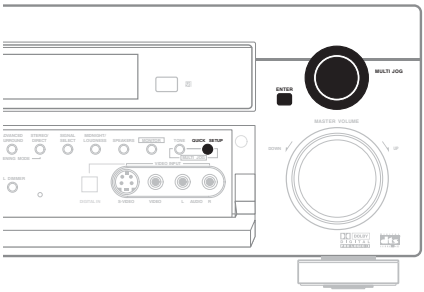
Using the Quick Setup

You can use the Quick Setup to get your system up and running with just a few button presses. The receiver automatically makes the necessary settings after you have selected your speaker setup, room size and listening position.

Note that you don't have to make these settings if you use the automatic MCACC setup instead (in this case, go straight to the *Quick surround sound setup* on page 14).

If you want to make more specific settings, refer to *Choosing your receiver setup* on page 44.

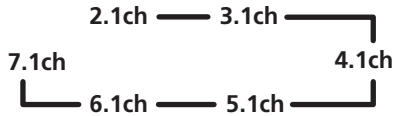
Use the front panel controls for the steps below.



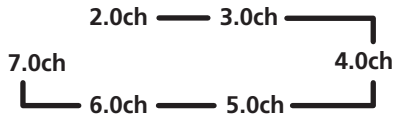
1 If the receiver is off, press ⏻ STANDBY/ON to turn the power on.
The **STANDBY** indicator goes out.

2 Press QUICK SETUP.
SW DET flashes in the display while the receiver checks your setup for a subwoofer. **SW YES** or **SW NO** confirms the subwoofer check, then the display prompts you to select your speaker setup.

3 Use the MULTI JOG dial to choose your speaker setup.
When a subwoofer was detected in step 2, you can cycle between the following choices:



If a subwoofer wasn't detected in step 2, you can cycle between the following choices:



- Check the table below to find the speaker setup that corresponds with your system.

	Front Speakers	Center Speaker	Surround Speakers	Surround Back Sp.	Sub Woofer
2.0 ch	√				
2.1 ch	√				√
3.0 ch	√	√			
3.1 ch	√	√			√
4.0 ch	√		√		
4.1 ch	√		√		√
5.0 ch	√	√	√		
5.1 ch	√	√	√		√
6.0 ch	√	√	√	(1 speaker)	
6.1 ch	√	√	√	(1 speaker)	√
7.0 ch	√	√	√	(2 speakers)	
7.1 ch	√	√	√	(2 speakers)	√

4 Press ENTER.

5 Use the MULTI JOG dial to choose your room size.
Depending on the distance of your speakers from the listening position, choose between small, medium, or large (**S**, **M** or **L**), **M** being an average-sized room.

6 Press ENTER.

7 Use the MULTI JOG dial to choose your listening position.
You can cycle between the following choices:

FWD – If you are nearer to the front speakers than the surround speakers

MID – If you are equal distance from the front and surround speakers

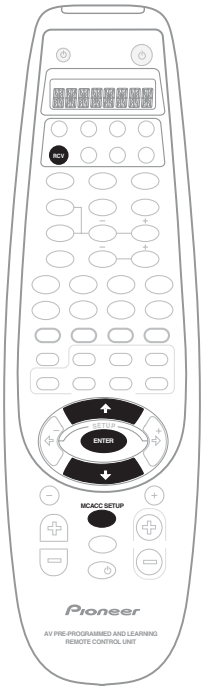
BACK – If you are nearer to the surround speakers than the front speakers

8 Press ENTER to confirm your setup.
The display shows the speaker setup, room size and listening position that you have selected.

Chapter 3:
Quick surround sound setup

Automatically calibrating your listening area (MCACC)

The Multi-Channel Acoustic Calibration (MCACC) system measures the acoustic characteristics of your listening area, taking into account ambient noise, speaker size and distance, 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.



Caution

- These test tones can be loud, so take care that there is no one in the room who will be startled by the noise.
- Make sure the mic and speakers are not moved during the MCACC setup.

1 Connect the microphone to the SETUP MIC jack on the front panel.

2 Place the microphone at your normal listening position.

Place the mic about ear level at your normal listening position using the supplied microphone stand on a table or chair.

Make sure there are no obstacles between the speakers and the microphone.

3 If the receiver is off, press ⏻ STANDBY/ON to turn the power on.

The **STANDBY** indicator goes out.

4 If you have a subwoofer, turn it on.

5 Press RCV.

6 Press MCACC SETUP.

Try to be as quiet as possible after pressing **MCACC SETUP**. The system outputs a series of test tones to establish the ambient noise level.

If the noise level is too high, **NOISY!** blinks in the display for five seconds. To exit and check the noise levels again, press **MCACC SETUP** (see the notes regarding ambient noise levels below) or press **ENTER** when you're prompted to **GO NEXT?**

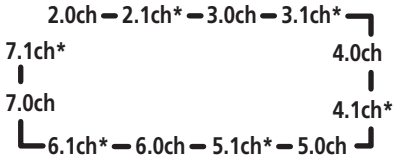
The system now checks the microphone and your speaker setup.

If you see an **ERR** message in the display, there may be a problem with your mic or the speaker connections.

Turn off the power, and check the problem indicated by the **ERR** message (see below), then try the auto surround setup again.

- **ERR MIC** – Check the microphone connection.
- **ERR Fch** – Check the front speaker connections.
- **ERR Sch** – Check the surround or surround back speaker connections.
- **ERR SW** – Make sure the subwoofer has been switched on and volume on the subwoofer is turned up.

7 Use ⇧ and ⇩ to select the speaker system that corresponds to your setup.
Cycle between the following choices:



** Indicates a subwoofer is included in your speaker setup*

See the table on page 12 if you're unsure which speaker system to select.

8 If you selected a speaker system that includes a subwoofer, press ENTER to check the subwoofer output level.
If the subwoofer output level is too high/low, **SW.VOL.DWN**/**SW.VOL.UP** blinks in the display for five seconds. To exit and check your subwoofer output level, press **MCACC SETUP** (see the notes regarding noise levels below) or simply press **ENTER** when you're prompted to **GO NEXT?**

9 Press ENTER to finish the auto surround setup.
The system checks for speaker size, channel delay and channel level. If you have connected a subwoofer, it will check for ambient noise once again.

When the auto surround setup is complete, the volume level returns to normal and **COMPLETE**, then **RESUME** shows in the display.

Note

- If the room environment is not optimal for the auto surround setup (too much ambient 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.
- Some older TVs may interfere with the operation of the mic. If this seems to be happening, switch off the TV when doing the auto surround setup.
- Using the MCACC system to set up your speaker system overwrites any previous settings you had for the **STANDARD** or **ADVANCED SURROUND** modes.
- When the **STANDARD** or **ADVANCED SURROUND** mode is selected, you can check the settings made with MCACC by using **CH SELECT** (to check channel levels) or by going through the steps in *Choosing your receiver setup* on page 44 to check other settings.
- Depending on the the characteristics of your room, sometimes identical speakers with cone sizes of around 5 inches (12cm) will end up with different size settings. You can correct the setting manually using the receiver setup on page 44.

Chapter 4:
Connecting up

Important

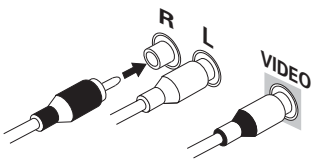
- Before making or changing any connections, switch off the power and disconnect the power cord from the AC outlet.

Audio/Video cords

Use audio/video cords (not supplied) to connect the audio/video components and a video cord to connect the monitor TV.

Connect red plugs to R (right), white plugs to L (left), and the yellow plugs to **VIDEO**.

Be sure to insert completely.

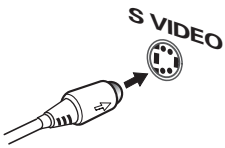


S-video cables

Use S-video cables (not supplied) to get clearer picture reproduction than regular video cords.

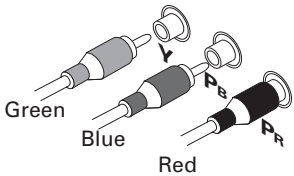
Connect from an S-video jack on the rear of the receiver to an S-video jack on the video component you are hooking up.

Be sure to insert completely.



Component video cords

Use component video cords to get the best possible color reproduction of your video source. The color signal of the TV is divided into the luminance (**Y**) signal and the color (**PB** and **PR**) signals and then output. In this way, interference between the signals is avoided. Connect from the component video jacks on the rear of the receiver to the component video jacks on the video component you are hooking up.

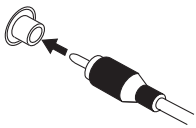


Digital audio coaxial cords/ Optical cables

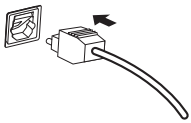
Commercially available digital audio coaxial cords (standard video cords can also be used) or optical cables (not supplied) are used to connect digital components to this receiver.

Be sure to insert completely.

Digital audio coaxial cord (or standard video cord)



Optical cable



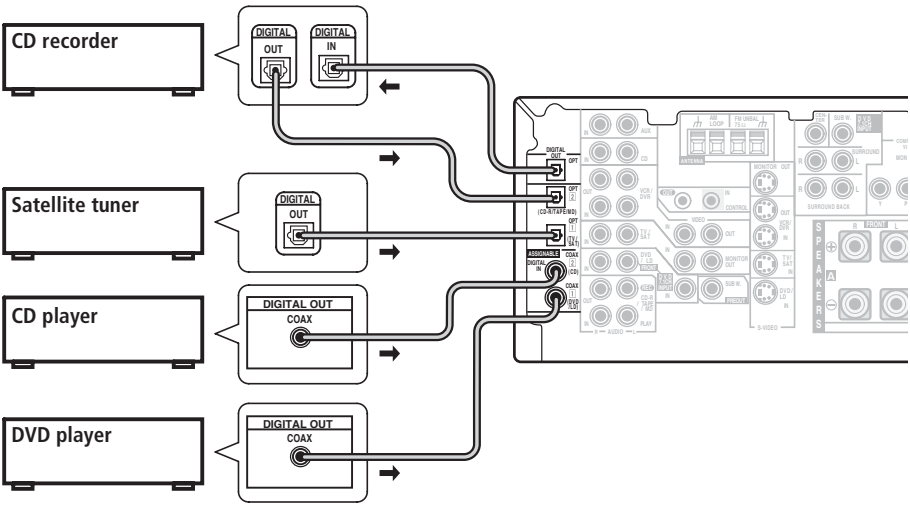
Connecting digital components

The easiest way to hook up this receiver for surround sound is to use a digital input. You can do this by either coaxial or optical connections (you do not need to do both). The quality of these two types of connections is the same but since some digital components only have one type of digital terminal, it is a matter of matching like with like (for example, the coaxial output from the component to coaxial input on the receiver). The VSX-D912 has four digital inputs (two coaxial inputs and two optical inputs) on the rear panel. Connect your digital components as shown below.

There is one digital output jack which is marked **DIGITAL OUT**. If you connect this to the optical input on a digital recorder (currently these include MD, DAT and CD-R) you can make direct digital recordings with this unit.

When connecting your equipment, always make sure the power is turned off and the power cord is disconnected from the AC outlet.

- The arrows indicate the direction of the signal.



Note

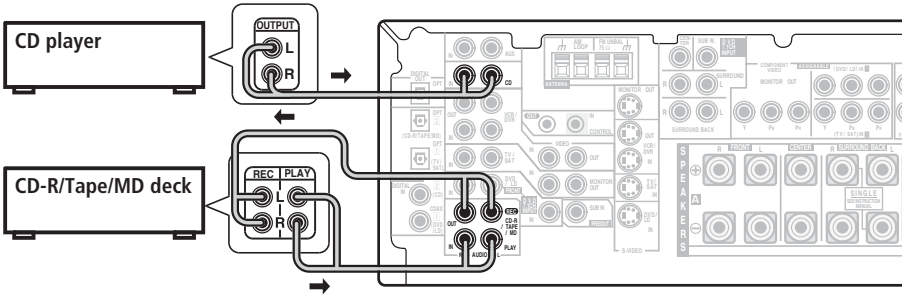
- If you have an LD player, you need to make special connections to ensure you can play DD RF format LDs on your system. If this is the case, hook up your DVD or LD player directly to an RF demodulator using both the DD RF output and either a coaxial or optical digital connection. We also recommend hooking up your digital components to analog audio jacks as well. Make sure the RF demodulator digital in switch is set correctly (optical or coaxial depending on the connection). See the component's instruction manual if you are unsure about its input and output jacks.

Connecting audio components

To begin set up, connect your analog audio components (such as a cassette deck) to the jacks. For components you want to record with, you need to hook up four plugs to the receiver (a set of stereo inputs and a set of stereo outputs), but for components that only play, you only need to hook up one set of stereo plugs. You must also hook up your digital components to analog audio jacks if you want to record to/from digital components (like an MD) to/from analog components. See page 17 for more on digital connections.

When connecting your equipment, always make sure the power is turned off and the power cord is disconnected from the AC outlet.

- The arrows indicate the direction of the audio signal.

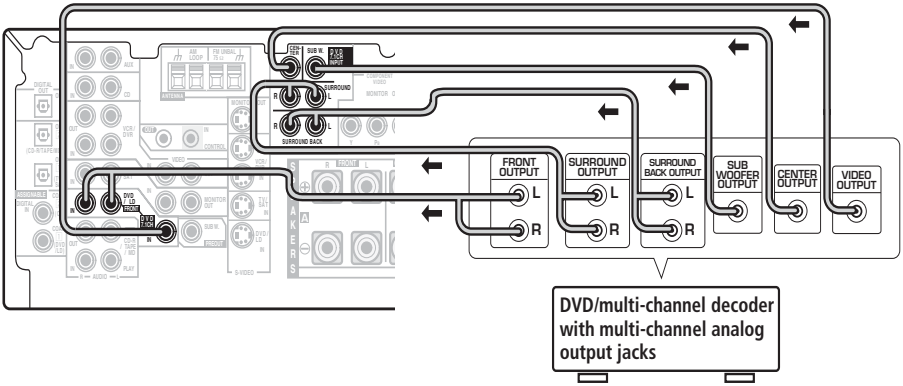


Connecting DVD 7.1 channel components

If you prefer to use a seperate component for decoding DVDs, you can connect a decoder or a DVD player with multi-channel analog outputs to the multi-channel inputs of this receiver.

When connecting your equipment, always make sure the power is turned off and the power cord is disconnected from the AC outlet.

- The arrows indicate the direction of the signal.



Note

- The multi-channel input can only be used when **DVD 7.1 ch** is selected (see page 43).
- If the component you are connecting only has one surround back channel output, change the Surround back channel input setting (page 49) to **SB 1ch IN**.

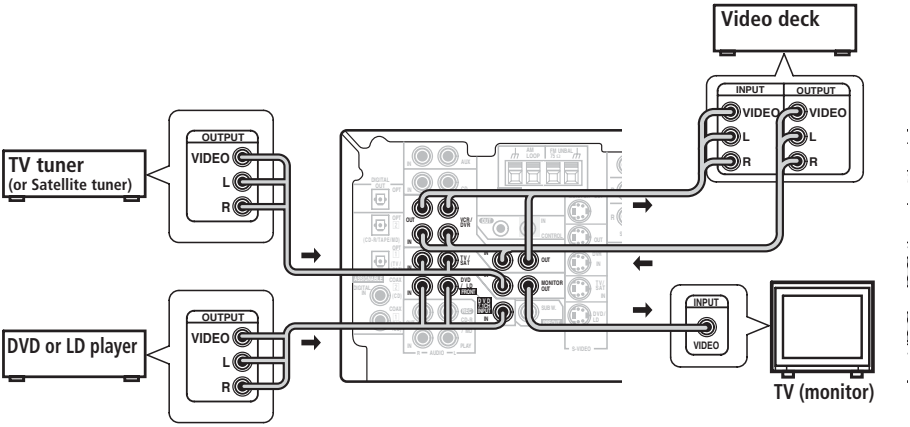
Connecting video components

Connect your video components to the jacks as shown below. With digital video components (like a DVD player), you must use the connections shown on this page for the video signal, but in order to hear a digital source (like a DVD) you should hook up the audio to a digital input (see page 17). It is also a good idea to hook up your digital components with analog audio connections (see page 18).

For better quality video, you can hook up using the component video jacks or the S-video jacks (quality descends in this order) on the rear of the receiver instead of the regular video jacks. Make sure they are connected to the video component using the same kind of connection.

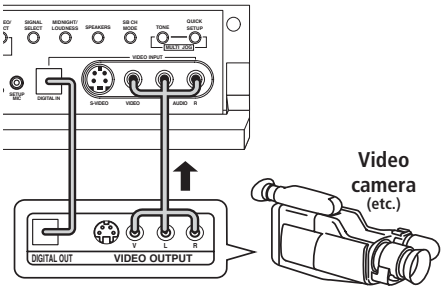
When connecting your equipment, always make sure the power is turned off and the power cord is disconnected from the AC outlet.

- The arrows indicate the direction of the signal



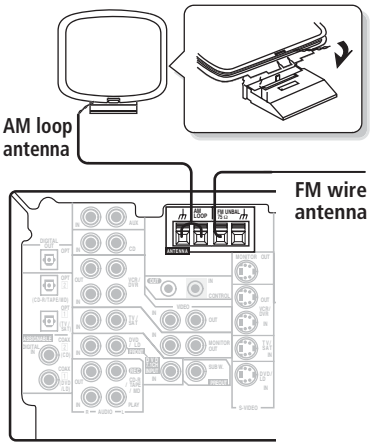
Connecting to the front panel video terminal

Front video connections are accessed via the front panel using the **VIDEO** button. There are standard audio/video jacks as well as an S-video jack and an optical input. Hook them up the same way you made the rear panel connections.



Connecting antennas

Connect the AM loop antenna and the FM wire antenna as shown below. To improve reception and sound quality, connect external antennas (see *Using external antennas* below). Always make sure that the receiver is switched off and unplugged from the wall outlet before making or changing any connections.

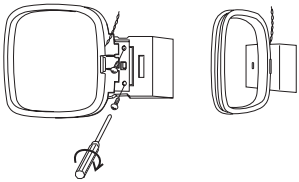


FM wire antenna

Connect the FM wire antenna and fully extend vertically along a window frame or another suitable place that gives good reception.

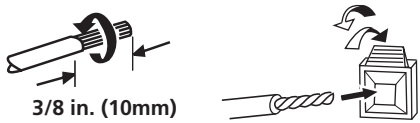
AM loop antenna

Assemble the antenna and connect to the receiver. Attach (if necessary) and face in the direction that gives the best reception.



Antenna snap connectors

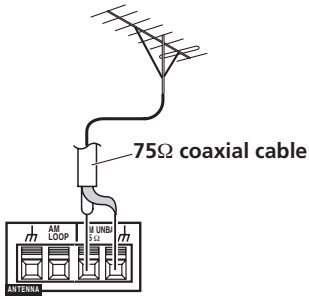
Twist the exposed wire strands together and insert into the hole, then snap the connector shut.



Using external antennas

To improve FM reception

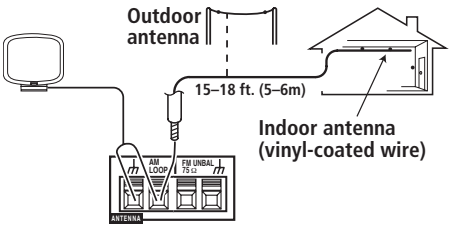
Connect an external FM antenna.



To improve AM reception

Connect a 15–18 feet length of vinyl-coated wire to the AM antenna terminal without disconnecting the supplied AM loop antenna.

For the best possible reception, suspend horizontally outdoors.



Connecting the speakers

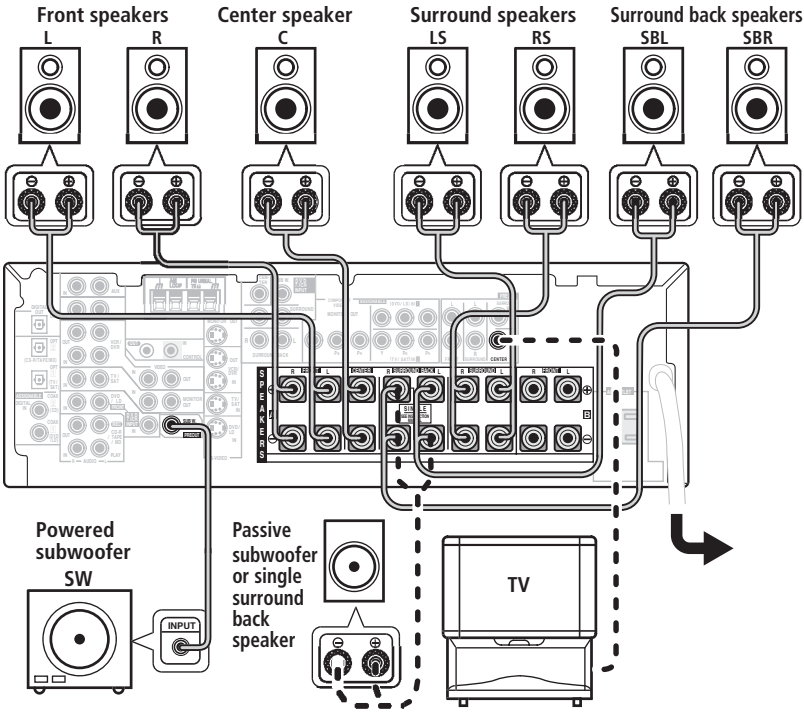
A complete setup of eight speakers (including the subwoofer) is shown below, but everyone's home setup will vary. Simply connect the speakers you have in the manner shown below. The receiver will work with just two stereo speakers (the front speakers in the diagram) but using at least three speakers is recommended, and a complete setup is best for surround sound. If you're not using a subwoofer, change the front speaker setting (see *Speaker setting* on page 45) to large.

Make sure you connect the speaker on the right to the right terminal and the speaker on the left to the left terminal. Also make sure the positive and negative (**+**/**–**) terminals on the receiver match those on the speakers.

Be sure to complete all connections before connecting this unit to the AC power source.

Important

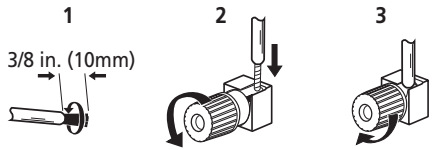
- Use speakers with a nominal impedance of 8 Ω to 16 Ω.



Note

- When using the speaker on your TV as the center speaker (**C**), connect the **CENTER PREOUT** jack on this unit to the audio input jack on your TV. In this case the center speaker shown is unnecessary.
- If you are using only one surround back speaker, connect the positive wire to the right channel (**+**) terminal, and the negative wire to the left channel (**–**) terminal (see illustration on page 11).
- If you select subwoofer (**SB SW**) in the *Surround back speaker setting* on page 46 you can hook up a subwoofer instead of speakers to the surround back speaker terminals. Connect the positive wire to the right channel (**+**) terminal, and the negative wire to the left channel (**–**) terminal (see illustration on page 11).

Speaker terminals



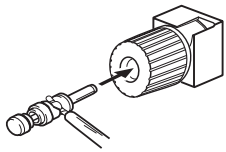
1 Twist exposed wire strands together.

2 Loosen speaker terminal and insert exposed wire.
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 is touching the back panel when you switch the unit on, the power may cut off as a safety measure. Use good quality speaker wire to connect the speakers to the receiver.

3 Tighten terminal.

Note

- The speaker terminals also accept single banana plugs. (Refer to speaker manual for details.)



A and B speaker systems

The receiver has two speaker systems: A and B. A is the main system supporting the full speaker setup. If you switch on both A and B speaker systems, only the front speakers and the (active) subwoofer will be audible. No sound will come from the center, surround, or surround back speakers, but multi-channel sources will be down-mixed to the active speakers so no sound will be lost. Similarly, if you choose just the B system you'll only hear the front speakers connected to the B system and multi channel sources will be down-mixed to these two speakers.

- **Press the SPEAKERS button on the front panel to switch between speaker systems (A, B or both).**

Hints on speaker placement

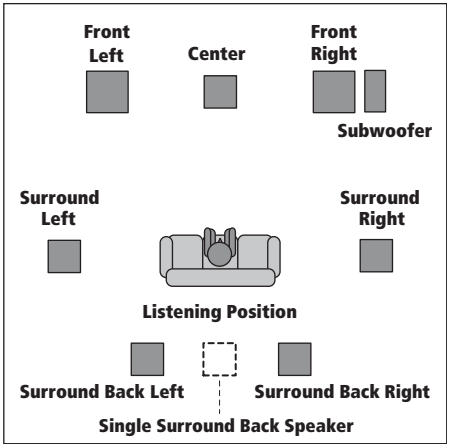
Speakers are usually designed with a particular placement in mind. Some are designed to be floorstanding, while others should be placed on stands to sound their best. Some should be placed near a wall; others should be placed away from walls. We have provided a few tips on getting the best sound from your speakers (following), but you should also follow the guidelines on placement that the speaker manufacturer provided with your particular speakers to get the most out of them.

- Place the front left and right speakers at equal distances from the TV.
- When placing speakers near the TV, we recommend using magnetically shielded speakers to prevent possible interference, such as discoloration of the picture when the TV is switched on. If you do not have magnetically shielded speakers and notice discoloration of the TV picture, move the speakers farther away from the TV.
- Place the center speaker above or below the TV so that the sound of the center channel is localized at the TV screen.
- If possible, place the surround speakers slightly above ear level.
- Try not to place the surround speakers further away from the listening position than the front and center speakers. Doing so can weaken the surround sound effect.
- To achieve the best possible surround sound, install your speakers as shown below. Be sure all speakers are installed securely to prevent accidents and improve sound quality.

Caution

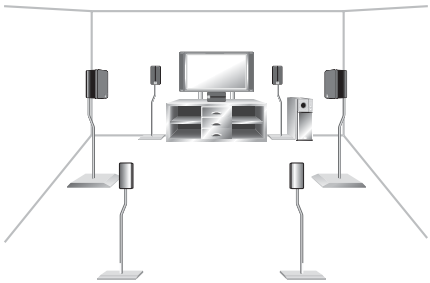
- If you choose to install the center speaker on top of the TV, be sure to secure it with putty, or by other suitable means, to reduce the risk of damage or injury resulting from the speaker falling from the TV in the event of external shocks such as earthquakes.

Overhead view of speaker setup



3-D view of 6.1 channel speaker setup

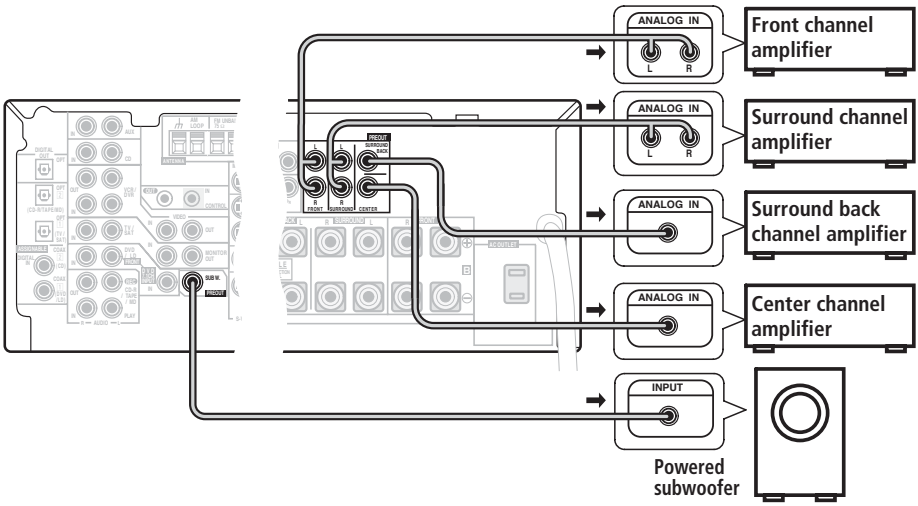
3-D view of 7.1 channel speaker setup



Connecting additional amplifiers

This receiver has more than sufficient power for any home use, however it is possible to add additional amplifiers to every channel on the VSX-D912. Make the connections shown below to add amplifiers to power your speakers. Always make sure that the receiver is switched off and unplugged from the wall outlet before making or changing any connections.

- The arrows indicate the direction of the audio signal.

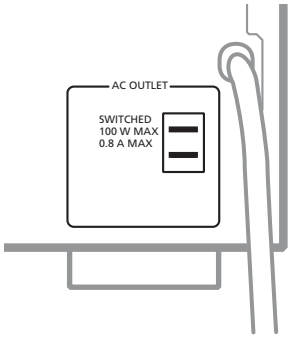


Note

- To hear sound only from the pre-outs, disconnect any speakers that are connected directly to the receiver.
- If you're not using a subwoofer, change the front speaker setting (see *Speaker setting* on page 45) to large.

AC outlet

Power supplied through this outlet is turned on and off by the receiver's power switch. Total electrical power consumption of connected equipment should not exceed 100 W (0.8 A).



Caution

- Do not connect a monitor, TV set, heater, or similar appliance to this unit's AC outlet.
- Do not connect appliances with high power consumption to the AC outlet in order to avoid overheating and fire risk. This can also cause the receiver to malfunction.

Note

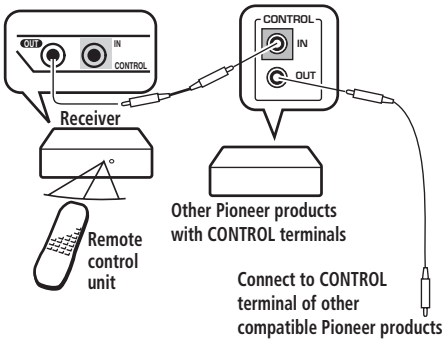
- Make sure no exposed speaker wire is touching the rear panel, this may cause the receiver to turn off automatically.
- This unit should be disconnected by removing the power plug from the wall socket when not in regular use (ex. when on vacation).

Power cord caution

Handle the power cord by the plug. 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 an electric shock. Do not place the unit, a piece of furniture, etc., on the power cord, or pinch the cord. Never make a knot in the cord or tie it with other cords. The power cords should be routed such that they are not likely to be stepped on. A damaged power cord can cause a fire or give you an electrical shock. Check the power cord once in a while. When you find it damaged, ask your nearest Pioneer authorized service center or your dealer for a replacement.

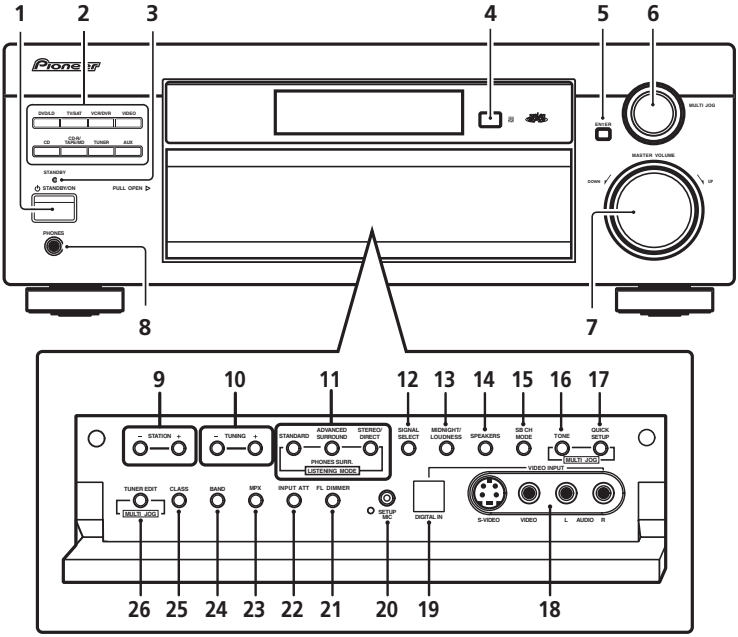
Operating other Pioneer components

By connecting a control cord (optional), you can point the remote controls of other Pioneer components at the receiver's remote sensor. The remote control signals are received by the remote sensor of this unit, and sent to the other devices via the **CONTROL OUT** terminal on the receiver.



Chapter 5:
Controls and displays

Front panel



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

2 Input select buttons
Press to select an input source.

3 STANDBY indicator
Lights when the receiver is in standby.

4 Remote sensor
Receives the signals from the remote control.

5 ENTER

6 MULTI JOG dial
The **MULTI JOG** dial performs a number of tasks. Use it to select options after pressing **TONE**, **QUICK SETUP** or **TUNER EDIT**.

7 MASTER VOLUME

8 PHONES jack
Use to connect headphones. When the headphones are connected, there is no sound output from the speakers.

9 STATION +/– buttons
Selects station presets when using the tuner (page 54).

10 TUNING +/– buttons
Selects the frequency when using the tuner (page 53).

11 LISTENING MODE buttons

STANDARD
Press for Standard decoding and to switch between the various Pro Logic II and Neo:6 options (page 37).

ADVANCED SURROUND
Use to switch between the various surround modes (page 38).

STEREO/DIRECT
Switches between direct and stereo playback. Direct playback bypasses the tone controls and channel levels for the most accurate reproduction of a source (page 38).

12 SIGNAL SELECT
Use to select an input signal (page 37).

13 MIDNIGHT/LOUDNESS
Use Midnight when listening to movie soundtracks at low volume. Use Loudness to boost the bass and treble at low volume (page 42).

14 SPEAKERS
Use to cycle through the speaker system: **A → B → A+B** (page 23)

15 SB CH MODE
Selects the Surround back channel mode (page 40).

16 TONE
Press this button to access the bass and treble controls, which you can then adjust with the **MULTI JOG** dial.

17 QUICK SETUP
See *Using the Quick Setup* on page 12.

18 VIDEO INPUT
See *Connecting to the front panel video terminal* on page 20.

19 DIGITAL IN
See *Connecting to the front panel video terminal* on page 20.

20 SETUP MIC
Connect the microphone supplied with your system to the **SETUP MIC** jack when using the auto surround setup (MCACC) (page 14).

21 FL DIMMER
Use this button to make the fluorescent display (FL) dimmer or brighter.

22 INPUT ATT
Use to attenuate (lower) the level of an analog input signal to prevent distortion.

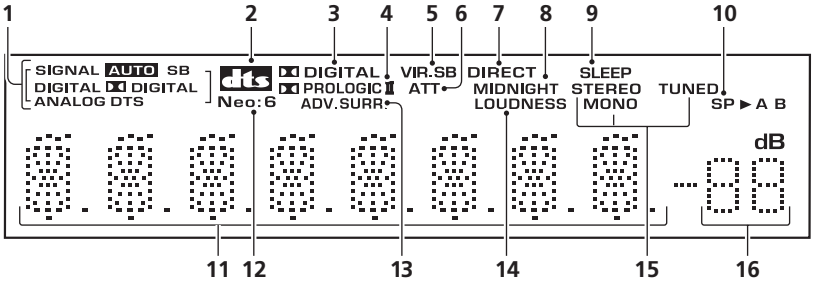
23 MPX
Press to receive a radio broadcast in mono (page 53).

24 BAND
Switches between AM and FM radio bands (page 53).

25 CLASS
Switches between the three banks (classes) of station presets (page 54).

26 TUNER EDIT
Press to memorize and name a station for recall (page 54).

Display



1 SIGNAL SELECT indicators
Lights to indicate the type of input signal assigned for the current component:

AUTO
Lights when **AUTO** signal select is on.

SB
Depending on the source, this lights when a signal with surround back channel encoding is detected.

DIGITAL
Lights when a digital audio signal is detected.

DIGITAL
Lights when a Dolby Digital encoded signal is detected.

ANALOG
Lights when an analog signal is detected.

DTS
Lights when a source with DTS encoded audio signals is detected.

2 DTS
When the **STANDARD** mode of the receiver is on, this lights to indicate decoding of a DTS signal.

3 DIGITAL
When the **STANDARD** mode of the receiver is on, this lights to indicate decoding of a Dolby Digital signal.

4 PRO LOGIC II
When the (**STANDARD**) Pro Logic II mode of the receiver is on, this lights to indicate Pro Logic II decoding.

5 VIR.SB
Lights during Virtual surround back processing.

6 ATT
Lights when **INPUT ATT** is used to attenuate (reduce) the level of the analog input signal.

7 DIRECT
Lights when source direct playback is in use. Direct playback bypasses the tone controls and channel levels for the most accurate reproduction of a source.

8 MIDNIGHT
Lights during Midnight listening.

9 SLEEP
Lights when the receiver is in sleep mode.

10 Speaker indicator
Shows the speaker system currently in use.

11 Character display

12 Neo:6
When the (**STANDARD**) NEO:6 mode of the receiver is on, this lights to indicate NEO:6 processing.

13 ADV.SURR. (Advanced Surround)
Lights when one of the Advanced Surround modes has been selected.

14 LOUDNESS
Lights when **LOUDNESS** has been selected.

15 TUNER indicators

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

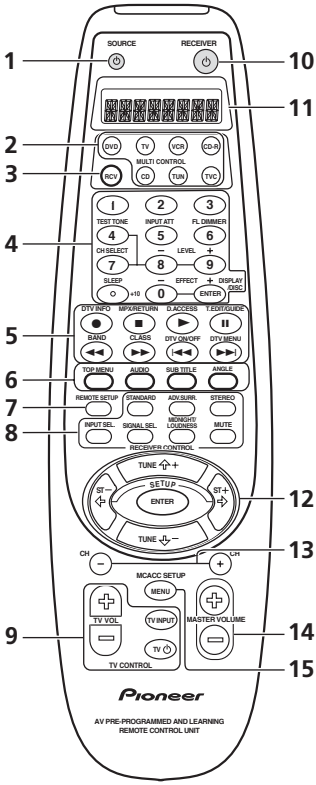
MONO
Lights when the mono mode is set using the **MPX** button.

TUNED
Lights when a broadcast is being received.

16 Master volume level
Shows the overall volume level. **---dB** indicates the minimum level, and **- 0 dB** indicates the maximum level.

Depending on your level settings for each channel, the maximum volume can range between –10 dB and –0 dB.

Remote control



1 ⏻SOURCE
Press to turn on/off other components connected to the receiver.

2 MULTI CONTROL buttons
Press to select control of other components (see *Controlling the rest of your system* on page 57).

3 RCV
Switches the remote to controls the receiver (used to select the features above the number buttons. (ex. **INPUT ATT**, **FL DIMMER**). Also use this button to set up surround sound (page 44, page 50, page 51).

4 Number buttons/Receiver controls/ ENTER buttons
Use the number buttons to directly select a radio frequency (page 53) or the tracks on a CD, DVD, etc.

Press the **RCV** button first to access the functions above the number buttons. The display flashes when it isn't possible to use a function.

The following (except **DISPLAY/DISC**) are accessed by pressing **RCV**:

TEST TONE
Sounds the test tone when setting up the surround sound of the receiver (page 51).

INPUT ATT
Attenuates (lowers) the level of an analog input signal to prevent distortion.

FL DIMMER
Dims or brightens the display.

CH SELECT
Selects a speaker when setting up the surround sound of the receiver (page 51).

LEVEL +/–
Adjusts the levels of the surround sound of the receiver (page 51).

EFFECT +/– buttons
Adds or subtracts the amount of effect with different advanced surround modes (page 38).

SLEEP
Use to put the receiver in sleep mode and select the amount of time before the receiver turns off (page 43).

DISPLAY/DISC (ENTER)
The button's use depends on the component selected. It can be used to enter commands for TV or DTV, and can also be used to select a disc in a multi-CD player. It can also be used to switch the display between the station preset name and the frequency for the tuner.

5 Component/Tuner control buttons
The main buttons (▶, ■, etc.) are used to control a component after you have selected it using the **MULTI CONTROL** buttons. The tuner/DTV controls above these buttons can be accessed after you have selected the corresponding **MULTI CONTROL** button (**TUN** or **TV** (when connected to DTV)).

DTV INFO
Use to bring up information screens on a digital TV.

MPX/RETURN
Switches between stereo and mono reception of FM broadcasts. If the signal is weak then switching to mono will improve the sound quality (page 53). Also selects closed-captioning on DTVs.

D. ACCESS
After pressing, you can access a radio station directly using the number buttons (page 53).

T. EDIT/GUIDE
Press to memorize and name a station for recall using the **STATION +/–** buttons (page 54). Also displays the guides on a digital TV.

BAND
Switches between the tuner AM and FM bands (page 53).

CLASS
Switches between the three banks (classes) of radio station presets (page 54).

DTV ON/OFF
Switches a digital TV on/off.

DTV MENU
Displays menus on a digital TV.

6 DVD controls (Press **DVD** first to access)
These controls will also function as DTV controls, depending on the component you've selected.

TOP MENU
Displays the disc 'top' menu of a DVD.

AUDIO
Changes the audio language or channel.

SUBTITLE
Displays/changes the subtitles included in multilingual DVD-Video discs.

ANGLE
Switches camera angles on discs with multi-angle scenes.

7 REMOTE SETUP
Press this button to set up the remote control to control other components (page 57).

8 RECEIVER CONTROL buttons

STANDARD
Press for Standard decoding and to switch between the various Pro Logic II and Neo:6 options (page 37).

ADV. SURR.
Use to switch between the various surround modes (page 38).

STEREO
Switches between direct and stereo playback. Direct playback bypasses the tone controls and channel levels for the most accurate reproduction of a source (page 38).

INPUT SEL.
Use to select the input source.

SIGNAL SEL.
Use to select between an input signal (page 37).

MIDNIGHT/LOUDNESS
Switches to Midnight or Loudness listening (page 42).

MUTE
Mutes the sound (or restores the sound if it has been muted).

9 TV CONTROL buttons
These buttons are dedicated to control the TV assigned to the **TVC** button. Thus if you only have one TV to hook up to this system assign it to the **TVC MULTI CONTROL** button. If you have two TVs, assign the main TV to the **TVC** button.

TV VOL +/–
Use to adjust the volume on your TV.

TV INPUT
Use select the TV function.

TV⏻
Use to turn on/off the power of the TV.

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

11 LCD display
This display shows preset codes and other information when transmitting control signals.

12 ⇦⇨⇩⇧ (TUNE/ST +/–) /ENTER
Use the arrow buttons when setting up your surround sound system (see page 44). Also used to control DVD menus/options and for deck 1 of a double cassette deck player. Use the **TUNE +/–** buttons to find radio frequencies and use **ST +/–** to find preset stations (page 54).

13 CH +/–
Use to select channels when using a TV, VCR, DVR, etc. Also use to skip tracks backward or forward on CDs, DVDs, etc.

14 MASTER VOLUME +/–
Use to set the listening volume.

15 MCACC SETUP (Press **RCV** first to access)
Use to setup your speaker system using Multi-Channel Acoustic Calibration (MCACC) (page 14).

MENU button
Displays the disc menu of DVD-Video discs. It also displays TV and DTV menus.

16 Transmit icon
Blinks to indicate the remote is transmitting control signals.

17 Character display (LCD)
The following commands are shown when you're setting the remote to control other components (see *Controlling the rest of your system* on page 57):

SETUP
Indicates the setup mode, from which you choose the options below.

DIR SET
See *Direct function* on page 61.

BRAND
See *Searching for preset codes using brand names* on page 59.

SEARCH
See *Searching for preset codes* on page 58.

LEARN
See *Programming signals from other remote controls* on page 59.

ERASE
See *Erasing one of the remote control button settings* on page 60.

RESET
See *Clearing all the remote control settings* on page 61.

READ ID
See *Confirming preset codes* on page 61.

Chapter 6:
Playing sources

Introduction to Sound Modes

There are three basic sound options: Stereo/ Direct (**STEREO/DIRECT**), Standard (**STANDARD**) or Advanced Surround (**ADVANCED SURROUND**).

Stereo/Direct

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

In **STEREO**, you'll hear the audio with your surround settings and you can still use the Midnight, Loudness, and Tone control functions.

With **DIRECT**, you will bypass all effects and surround settings so that the audio remains as close to the source audio signal as possible.

Note

- If you switch on Midnight listening, Loudness, or the Tone controls when **DIRECT** is selected, the receiver automatically switches to **STEREO**.

Standard mode

The Standard mode can be used to decode Dolby Digital, DTS, and Dolby Surround sources.
The other surround sound options (next column) can add multi-channel sound to regular stereo sources.

You can identify Dolby Digital software by the DOLBY DIGITAL or DOLBY SURROUND AC-3 DIGITAL marks. Most Dolby Surround software is marked DOLBY SURROUND, but unmarked software may also incorporate Dolby Surround. Depending on the source and the sound mode you have selected, you may not get sound from the surround back speakers in your setup. For more on this, refer to *Using the Surround Back Channel (SB CH)* on page 40.

Choose one of the following to add depth to a 2 channel source:

Pro Logic II Movie (MOVIE)

This mode gives 5.1 channel surround sound. It is suitable for movies, especially those recorded in Dolby Surround. The channel separation and movement of surround effects is comparable to Dolby Digital 5.1.

Pro Logic II Music (MUSIC)

This mode gives 5.1 channel surround sound and is suitable for music. The surround effect is more enveloping than Pro Logic II Movie.

Pro Logic (PROLOGIC)

This mode gives 4.1 channel surround sound. It is less sensitive to the quality of the source material, so may be useful when Pro Logic II Movie/ Music modes don't give good results.

Neo:6 Cinema (CINEMA)

This mode gives 6.1 channel surround sound and is suitable for movies. The Neo:6 Cinema mode delivers good channel separation for movie soundtracks.

Neo:6 Music (MUSIC)

This mode gives 6.1 channel surround sound and is suitable for music. The Neo:6 Music mode plays the stereo source as is through the front left/right speakers, and generates a natural, ambient surround and center sound.

Advanced Surround modes

These are designed to be used with multi-channel surround sound audio/visual sources (like DVDs and LDs). 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.

Note

- Depending on the source and the sound mode you have selected, you may not get sound from the surround back speakers in your setup. For more on this, refer to *Using the Surround Back Channel (SB CH)* on page 40.

Advanced Movie (ADV. MOVIE)

Simulates the relaxed environment of a movie theater, and is suitable for watching movies.

Advanced Music (ADV. MUSIC)

Simulates the acoustic environment of a large concert hall and is suitable for music or musical sources.

TV Surround (TV. SURR.)

This mode produces surround sound for both mono and stereo TV sources. It is useful for older movies recorded with mono soundtracks.

Sports (SPORTS)

This is designed for sports programs with alot of action, adding to the excitement by bringing background action to the forefront.

Game (GAME)

Useful when playing video games. It works especially well with sound moving from left to right in game software with alot of movement.

Expanded (EXPANDED)

This mode is especially designed to give sound depth to stereo sources, and lets you hear two-channel (stereo) signals as simulated multi-channel surround sound. Use with Dolby Pro Logic for a stereo surround effect. You can also use with Dolby Digital sources for a wider stereo field than the Standard modes.

6-Channel Stereo (6-STEREO)

This can be selected to give multi-channel sound to a stereo source, using all of the speakers in your setup.

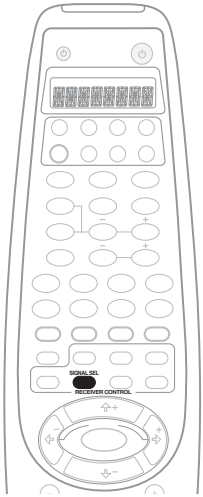
Phones Surround (PHONES SURROUND)

When listening through headphones, you can still get the effect of overall surround.

Choosing the input signal

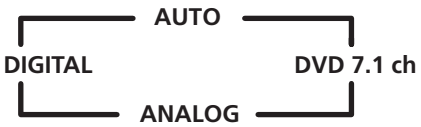
- Default setting: **AUTO**

You need to hook up a component to both analog and digital inputs on the rear of the receiver to select between input signals.



- **Press SIGNAL SEL (SIGNAL SELECT) to select the input signal corresponding to the source component.**

Each press cycles through the options as follows:



The **AUTO** setting automatically switches to **DIGITAL** if a digital source is detected, otherwise the signal select will be **ANALOG**.

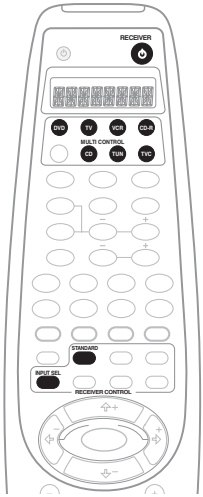
DVD 7.1ch will only appear when **DVD/LD** is selected.

When set to **DIGITAL** or **AUTO**, **DD DIGITAL** lights when a Dolby Digital signal is input, and **DTS** lights when a DTS signal is input.

Note

- This receiver can only play back Dolby Digital, PCM (32kHz–96 kHz) and DTS digital signal formats (including DTS 96kHz/24 bit). With other digital signal formats, set to **ANALOG**.
- You may get digital noise when a LD or CD player compatible with DTS is playing an analog signal. To prevent noise, make the proper digital connections (page 17) 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.

Listening to multi-channel playback



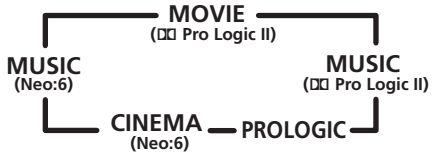
1 Switch on the playback component.

2 Switch on the receiver.

3 Select the source you want to playback.
Use the **MULTI CONTROL** buttons (or **INPUT SEL**).

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

If you are listening to a two channel source, each press changes the display as follows:



Refer to page 35 for more details about each mode.

5 Start playback of the component you selected in step 1.

Note

- You can't use the **STANDARD** mode with 96kHz PCM or DTS 96kHz/24-bit stereo sources.

Using Stereo/Direct

When you select **STEREO** or **DIRECT**, you will hear the source through just the front left and right speakers (and possibly your subwoofer depending on your speaker settings). Dolby Digital and DTS multichannel sources are downmixed to stereo. See page 35 for more on these modes.

- **Press STEREO (STEREO/DIRECT on the front panel) repeatedly to switch between the two options.**

Note

- If you switch on Midnight listening, Loudness, or the Tone controls when **DIRECT** is selected, the receiver automatically switches to **STEREO**.

Using Advanced Surround

When you select one of the Advanced surround options, Dolby Pro Logic, Dolby Digital and DTS decoding is done automatically corresponding to the input signal. Use Advanced surround to add effects to the surround sound.

- **Press ADV. SURR. (ADVANCED SURROUND) repeatedly to cycle the sound options.**
Each press changes the display as follows:

Refer to page 36 for more details about each surround effect.

Note

- If you press **ADV. SURR.** when the headphones are connected, the **PHONES SURROUND** mode will automatically be selected.
- You can't use the Advanced Surround listening modes with 96kHz PCM or DTS 96kHz/24 bit sources.

Tip

- The Advanced Surround effects can be adjusted in the range of 10 to 90 by pressing **RCV** then pressing **EFFECT +/–** . The effect level can be set for each Advanced Surround mode. The Standard mode cannot be changed.

Using the Surround Back Channel (SB CH)

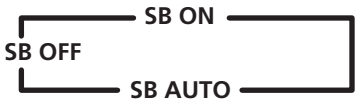
- Default setting: **SB ON**

You can have the receiver automatically switch to Dolby Digital EX or DTS-ES decoding for 6.1 encoded sources (**SB AUTO**), or you can choose to listen to other kinds of sources (for example, 5.1 encoded material) with 6.1 encoding (**SB ON**). With 5.1 encoded sources, a surround back channel will be generated, but the material may sound better in the 5.1 format for which it was originally encoded, in which case you can simply switch the surround back channel off (**SB OFF**).

The table indicates when you will hear the surround back channel.

- **Press SB CH MODE (front panel) repeatedly to cycle the surround back channel options.**

Each press cycles through the options as follows:



Note

- You can't use the surround back channel if the *Surround back speaker setting* on page 46 is set to **SB SW** or **SB ✱**.
- You can't hear the surround back channel with DTS 96kHz/24 bit sources.

Type of source	SB CH MODE	STANDARD			ADVANCED SURROUND
		STANDARD decoding	MOVIE/MUSIC/ PROLOGIC	NEO:6 CINEMA/ NEO:6 MUSIC	All modes
DTS-ES/Dolby Digital Matrix encoded multi-channel sources with 6.1 surround	ON	√			√
	AUTO	√			√
Dolby Digital/DTS encoded multi-channel sources	ON	√			√
	AUTO				√
Dolby Digital/DTS encoded stereo sources, Stereo sources	ON		√	√	√
	AUTO			√	√
Analog 2-channel (stereo) source	ON		√	√	√
	AUTO			√	√

Using the Virtual Surround Back mode (VSB)

Selecting this mode allows you to hear a virtual back channel through your surround speakers. For example, you can choose to listen to sources with no surround back channel information (for example, 5.1 encoded material) with emulated 6.1 encoding (**VSB ON**). Sometimes the material may sound better in the 5.1 format for which it was originally encoded. In this case you can have the receiver only apply this effect to 6.1 encoded sources like Dolby Digital EX or DTS-ES (**VSB AUTO**), or you can simply switch it off (**VSB OFF**).

The table indicates when you will hear the virtual surround back channel.

- **Press SB CH MODE (front panel) repeatedly to cycle the virtual surround back channel options.**

Each press cycles through the options as follows:

Note

- You can't use the Virtual Surround Back mode if the *Speaker setting* on page 45 is set to **S⁑**.
- You can only use the Virtual Surround Back mode if the surround speakers are on and the *Surround back speaker setting* on page 46 is set to **SB ⁑** or **SB SW**.
- You can't adjust the surround back channel level when you're listening to the virtual surround back channel.

Type of source	Virtual Surround Back mode	STANDARD			ADVANCED SURROUND
		STANDARD decoding	MOVIE/MUSIC/ PROLOGIC	NEO:6 CINEMA/ NEO:6 MUSIC	All modes
DTS-ES/Dolby Digital Matrix encoded multi-channel sources with 6.1 surround	ON	√			√
	AUTO	√			√
Dolby Digital/DTS encoded multi-channel sources	ON	√			√
	AUTO				√
Dolby Digital/DTS encoded stereo sources, Stereo sources	ON		√	√	√
	AUTO			√	√
Analog 2-channel (stereo) source	ON		√	√	√
	AUTO			√	√

Using Loudness and Midnight listening

The Loudness listening feature can be used to get good bass and treble from music sources at low volume levels.

The Midnight listening feature allows you to hear effective surround sound of movies at low volume levels. The effect automatically adjusts according to the volume at which you're listening.

- **Press MIDNIGHT/LOUDNESS.**

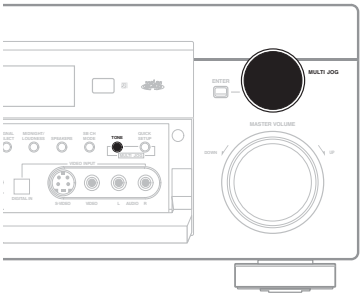
Each press cycles through the effects as follows:

Note

- You can't use **MIDNIGHT/LOUDNESS** when **DVD 7.1 ch** has been selected, or when listening to a DTS 96kHz/24 bit source.

Using the tone controls

Depending on what you are listening to, you may want to adjust the bass or treble using the front panel tone control.



1 Press TONE to select the frequency you want to adjust.

Each press switches between **BASS** and **TREBLE**.

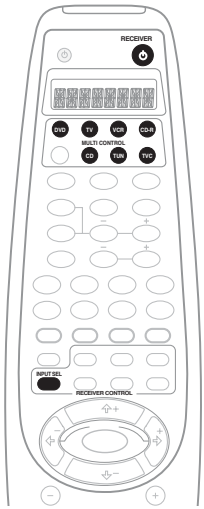
2 Use the MULTI JOG dial to change the amount of bass or treble as necessary.

Wait about five seconds for your changes to be input automatically.

Note

- You can only use the tone controls when **STEREO/DIRECT** is selected. **DIRECT** will switch to **STEREO** when the tone controls are used.
- The tone controls affect **SPEAKER A** only. They can't be used when **SPEAKER A** is switched off.

Playing other sources



1 Turn on the power of the playback component.

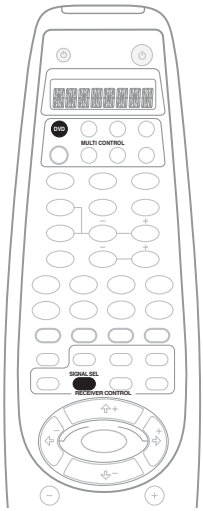
2 Turn on the power of the receiver.

3 Select the source you want to playback.
Use the **MULTI CONTROL** buttons (or **INPUT SEL**).

4 Start playback of the component you selected in step 1.

Selecting the multi-channel analog inputs

If you have connected a decoder or a DVD player with multi-channel analog outputs to this receiver (page 19), you must select the analog multi-channel inputs for surround sound playback.



1 Press DVD (DVD/LD on the front panel).

2 Press SIGNAL SEL (SIGNAL SELECT) repeatedly to select DVD 7.1ch.
To cancel playback from the multi-channel inputs, use the **SIGNAL SEL** (**SIGNAL SELECT**) button to select a different input signal.

Note

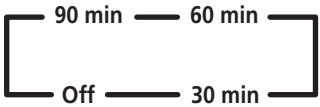
- When playback from the multi-channel inputs is selected, you can't use the **INPUT ATT**, **TONE**, and **MIDNIGHT/LOUDNESS** buttons, as well as the **STANDARD**, **ADVANCED SURROUND**, and **STEREO/DIRECT** sound modes.
- When playback from the multi-channel inputs is selected, only the volume and channel levels can be set.

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.

1 Press RCV.

2 Press SLEEP repeatedly to set the sleep time.



Tip

- You can check the remaning sleep time at any time by pressing **SLEEP** once. Pressing repeatedly will cycle through the sleep options again.
- You can also switch off the sleep timer simply by switching off the receiver.

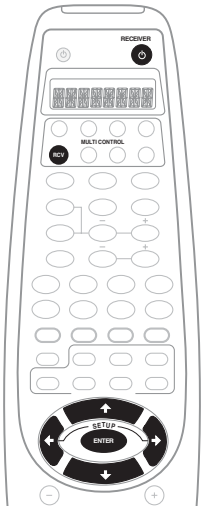
Chapter 7:
Setting up the receiver

Choosing your receiver setup

To ensure the best possible surround sound, be sure to complete the following set up operations. This is particularly important when using DTS and Dolby surround. You only need to make these settings once (unless you change the placement of your current speaker system or add new speakers, etc.). Refer to the following pages for details on each of the settings.

Important

- If you are using the Pioneer S-FCRW730 speaker system, make sure the *Subwoofer setting* is set to **YES** and the *Speaker setting* is set to **FS-CS-SS**. You'll also have to change the *Crossover frequency setting* to **200Hz**.



1 Press RECEIVER⏻ to turn the power on.
The **STANDBY** indicator goes out.

2 Press RCV.

3 Use ⇦ or ⇨ to choose the option you want to adjust.
It will be easiest to adjust each of the settings in turn, following the order below (and on the following pages). The current setting is shown for each option as you cycle through the display.

Speaker setting (page 45)
Specify the number and type of speakers you have connected.

Surround back speaker setting (page 46)
Specify your surround back speaker/ surround back subwoofer setup.

Subwoofer setting (page 46)
Specify how the subwoofer is used.

Crossover frequency setting (page 46)
Determine which frequencies will be sent to the subwoofer (or large speakers).

LFE attenuator setting (page 47)
Choose the attenuator level for the LFE channel.

Front left speaker distance setting (page 47)
Specify the distance from your listening position to your front left speaker.

Center speaker distance setting (page 47)
Specify the distance from your listening position to your center speaker.

Front right speaker distance setting (page 47)
Specify the distance from your listening position to your front right speaker.

Surround right speaker distance setting (page 48)
Specify the distance from your listening position to your surround right speaker.

Surround back speaker distance setting (page 48)
Specifies the distance from your listening position to your surround back speakers.

Surround left speaker distance setting (page 48)
Specify the distance from your listening position to your surround left speaker.

Subwoofer distance setting (page 48)
Specify the distance from your listening position to your subwoofer.

Dynamic range control setting (page 48)
Compress the dynamic range of the sound track.

Dual mono setting (page 49)
Isolate one channel when listening to discs with dual mono encoding.

Component video input settings (page 49)
Specify the components to be assigned to the component video inputs (below).

- Component video 1 input setting
- Component video 2 input setting

Surround back channel input setting (page 49)
Specify the number of surround back analog inputs you have connected.

Digital input settings (page 49)
Specify the components to be assigned to the digital inputs (below).

- Coaxial digital input 1 setting
- Coaxial digital input 2 setting
- Optical digital input 1 setting
- Optical digital input 2 setting

4 Use ⇧ or ⇩ to adjust the setting.
The setting is entered automatically.

5 Repeat steps 3 and 4 to adjust other setup options.

6 When you're done, press ENTER to exit.

Note

- The setting display is automatically exited after 3 minutes of inactivity.

Speaker setting

- Default setting: **FL-CS-SS** (If a subwoofer is detected when you turn the receiver on, the default is **FS-CS-SS**.)

You must let the receiver know how many speakers you have, and how big they are. The size you choose (large or small) determines how much bass is sent from the receiver to the speakers.

In the display, **F**, **C**, and **S** refer to front, center, and surround speakers respectively. Speaker size is denoted as **L** for large speakers, **S** for small speakers, and ✱ (asterisk) if no speaker is connected.

Note

- If the cone size (diameter) of the speaker is larger than 5 inches, set the speaker size to **L**.
- If you're not using a subwoofer, we recommend setting the front speakers to **L**.

- **Cycle through the available choices using ⇧ or ⇩ and choose a configuration that matches your speaker setup.**

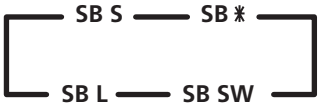
One of the following configurations should match your setup:

Surround back speaker setting

- Default setting: **S**

You must let the receiver know if surround back speaker(s) have been connected, and how big they are. The size you choose (large or small) determines how much bass is sent from the receiver to the speakers. If you have connected a surround back subwoofer, you should select the surround back subwoofer setting (**SB SW**) from the options. Choose ✱ (asterisk) if no speaker is connected.

- **Use ⇧ or ⇩ to select SB S, SB ✱, SB SW or SB L.**



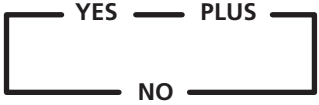
Note

- To select **SB L**, you must have **SL** selected in the *Speaker setting*.

Subwoofer setting

You can choose whether the subwoofer is used or not. Use the plus (**PLUS**) setting for extra bass.

- **Use ⇧ or ⇩ to select subwoofer YES, PLUS or NO.**



Note

- If you chose the small front speaker setting, **SW YES** is automatically set and locked.
- When you select the **PLUS** setting, you will get the bass sounds from the subwoofer even if the front speakers are set to **L**.

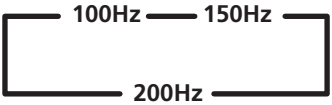
Crossover frequency setting

- Default setting: **100 Hz**

Crossover frequency is the point where the receiver divides the high and low sounds (the frequencies) between the speakers. Since most smaller speakers can't handle deep bass tones, you can send these sounds to the subwoofer (or if you don't have a subwoofer, the large (**L**) speakers in your system) instead of the speakers set to small (**S**) in your setup. Choose the point at which you want the frequency routed to the subwoofer (or **L** speakers).

We recommend setting this to **200 Hz** if your **S** speakers are smaller bookshelf-type speakers.

- **Use ⇧ or ⇩ to specify the crossover frequency for your small speakers (100 Hz, 150 Hz or 200 Hz).**



100 Hz
Sends bass frequencies below 100 Hz to the subwoofer (or **L** speakers).

150 Hz
Sends bass frequencies below 150 Hz to the subwoofer (or **L** speakers).

200 Hz
Sends bass frequencies below 200 Hz to the subwoofer (or **L** speakers).

Note

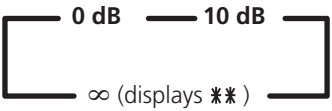
- If all speakers (front, center, and surround) are set to **L**, the crossover frequency can't be set because there are no **S** speakers (✱✱✱ appears in the display).

LFE attenuator setting

- Default setting: **0 dB**

Dolby Digital and DTS 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.

- **Use ⇧ or ⇩ to set the attenuation level (0 dB, 10 dB or ✱✱ dB(∞)).**



Note

- When ∞ is selected (✱✱ appears in the display), LFE is not available.

Front left speaker distance setting

- Default setting: **10 ft.**

Sets the distance from the front left speaker to the listening position.

- **Use ⇧ or ⇩ to set the distance of the front left speaker from the main listening position (within the range of 0.5 ft. to 45 ft.).**

Center speaker distance setting

- Default setting: **10 ft.**

The center speaker is normally placed directly in the front of the listening room and closer to the listening position than the front speakers. This means that the sound from the center speaker will be heard before the front speakers. To prevent this, set the center speaker distance setting to delay the sound from the center speaker so that the sound from the front and center speakers will be heard at the same time.

- **Use ⇧ or ⇩ to set the distance of the center speaker from the main listening position (within the range of 0.5 ft. to 45 ft.).**

Note

- When **C✱** is selected in the speaker setting, the center speaker distance can't be set.

Front right speaker distance setting

- Default setting: **10 ft.**

Sets the distance from the front right speaker to the listening position.

- **Use ⇧ or ⇩ to set the distance of the front right speaker from the main listening position (within the range of 0.5 ft. to 45 ft.).**

Surround right speaker distance setting

- Default setting: **10 ft.**

You should set the distance of the surround speakers accurately to hear sounds coming from all speakers at the same time.

- **Use ⇧ or ⇩ to set the distance of the surround right speaker from the main listening position (within the range of 0.5 ft. to 45 ft.).**

Note

- When **S✱** is selected in the speaker setting, the surround speaker distance can't be set.

Surround back speaker distance setting

- Default setting: **10 ft.**

You should set the distance of the surround back speakers accurately to hear sounds coming from all speakers at the same time.

- **Use ⇧ or ⇩ to set the distance of the surround back speakers from the main listening position (within the range of 0.5 ft. to 45 ft.).**

Note

- When **SB✱** or **SB SW** is selected in the surround back speaker setting, the surround back speaker distance can't be set.

Surround left speaker distance setting

- Default setting: **10 ft.**

You should set the distance of the surround speakers accurately to hear sounds coming from all speakers at the same time.

- **Use ⇧ or ⇩ to set the distance of the surround left speaker from the main listening position (within the range of 0.5 ft. to 45 ft.).**

Note

- When **S✱** is selected in the speaker setting, the surround speaker distance can't be set.

Subwoofer distance setting

- Default setting: **10 ft.**

Like your speakers, you should set the distance of the subwoofer accurately to hear sounds from all speakers at the same time.

- **Use ⇧ or ⇩ to set the distance of the subwoofer from the main listening position (within the range of 0.5 ft. to 45 ft.).**

Note

- When **NO** is selected in the subwoofer setting, the subwoofer distance can't be set.

Dynamic range control setting

- Default setting: **OFF**

Dynamic range is the difference between the loudest and softest sounds in any given signal. With this setting, you can compress the dynamic range, so that low level sounds can be heard more easily (sounding relatively louder) yet louder sounds won't be too overbearing.

- **Use ⇧ or ⇩ to set the dynamic range control (OFF, MAX, or MID).**

Note

- When listening at low volumes, set to **MAX** for maximum dynamic range compression.
- Dynamic range control is effective only when Dolby Digital and DTS signals are being played back.

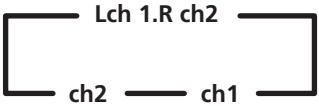
Dual mono setting

- Default setting: **ch1**

The dual mono setting can only be used when listening to Dolby Digital and DTS signals with dual mono encoding. It is sometimes used when it is necessary to have one language on one channel and a different language on the other. With this setting you can choose which channel in the dual mono setting you want to listen to.

If Dolby Digital mode is switched on, you will hear the channel you have selected (either **ch1** or **ch2**) through your center speaker. With Dolby Digital mode off, or if you don't have a center speaker, you will hear the channel you have selected through both front speakers. In the **Lch 1.R ch2** setting, the left front speaker will play channel 1 and the right front speaker will play channel 2.

- **Use ⇧ or ⇩ to cycle through the possible dual mono settings.**



Component video input settings

Here you tell the receiver what components you have hooked up to the component video jacks on the back of the receiver.

Component video 1:

- Default settings: **DVD**

1 Use ⇧ or ⇩ to assign the component video 1 input (DVD, TV, VCR or OFF).

Component video 2:

- Default setting: **TV**

2 Use ⇧ or ⇩ to assign the component video 2 input (DVD, TV, VCR or OFF).

Surround back channel input setting

- Default setting: **SB 2ch IN**

You only have to make this setting if you are using a seperate component for decoding DVDs, and the component has only one surround back channel output. If this is the case, select **SB 1ch IN**, otherwise leave it set to **SB 2ch IN**.

- **Use ⇧ or ⇩ to select SB 2ch IN or SB 1ch IN.**

Digital input settings

Here you tell the receiver what components you have hooked up to the coaxial and optical **DIGITAL IN** jacks on the back of the receiver.

After you assign a component to a digital jack, whenever you select that component, (for example, a DVD player) the receiver automatically changes to the digital input setting and **DIGITAL** shows in the display.

Coaxial digital 1:

- Default settings: **DVD**

- **Use ⇧ or ⇩ to assign the coaxial digital 1 input (DVD, TV, CD, CDR, VCR or OFF).**

Coaxial digital 2:

- Default setting: **CD**

- **Use ⇧ or ⇩ to assign the coaxial digital 2 input (DVD, TV, CD, CDR, VCR or OFF).**

Optical digital 1:

- Default settings: **TV**

- **Use ⇧ or ⇩ to assign the optical digital 1 input (DVD, TV, CD, CDR, VCR or OFF).**

Optical digital 2

- Default setting: **CDR**

- **Use ⇧ or ⇩ to assign the optical digital 2 input (DVD, TV, CD, CDR, VCR or OFF).**

Note

- You can't assign two inputs to the same function. For example, assigning input 1 to the default setting of input 2 automatically switches input 2 to **OFF**.

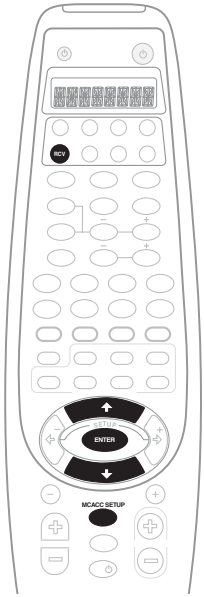
Manually calibrating your listening area (MCACC)

You can also use the Multi-Channel Acoustic Calibration (MCACC) system to manually fine tune your speaker levels and channel delay. These are calibrated according to the distance from your left front speaker to the listening position. You will hear a series of test tones that will allow you to set the speaker levels and channel delay to your liking. The advantage of doing this is that you can achieve an overall balance defined by the front speakers (the main speakers for home theater).

Important

- You must complete the *Speaker setting* on page 45 before using the MCACC setup.

- The microphone provided with your system must be disconnected from the front panel to to use the MCACC manual setup.



Caution

- These test tones can be loud, so take care that there is no one in the room who will be startled by the noise.

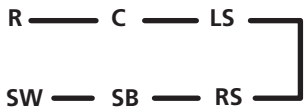
1 **Press RCV.**

2 **Press MCACC SETUP.**

The MCACC system uses the left front speaker as a reference point to calibrate the speaker level and channel delay.

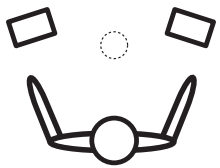
The front left speaker tone and the target speaker (the one that you're trying to adjust) tone will sound in turns, so you can judge which needs to be louder.

3 Use ⇧ and ⇩ to adjust each channel level in turn, pressing ENTER to go to the next channel when you're done.
The test tone is output in the following order (depending on the speaker setting):

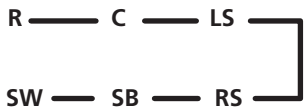


4 Specify the distance from the front left speaker to your listening position using ⇧ and ⇩ then press ENTER.

5 Use ⇧ and ⇩ to adjust the delay for each channel in turn, pressing ENTER to go to the next channel when you're done.
Listen to the reference channel and use it to measure the target channel. Stand facing 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.



The test tone for channel delay is output in the same order as step 5:



After you have completed all the channels in your speaker setup, the volume level returns to normal and **COMPLETE**, then **RESUME** shows in the display.

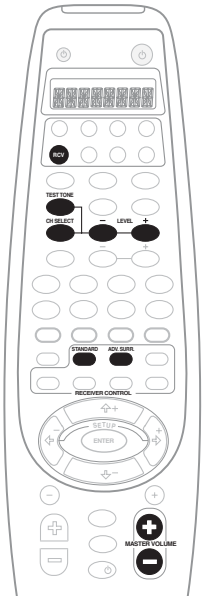
Note

- Using the MCACC system to set up your speaker system will overwrite any previous settings you had for the **STANDARD** or **ADVANCED SURROUND** modes.

Setting separate channel levels for listening modes

- Default setting: **0 dB**

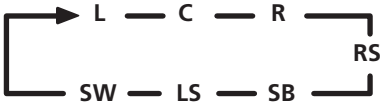
In addition to the MCACC setup, you can also set relative channel levels from the listening position using the method below. Using **CH SELECT** (see tip below), it is also possible to set separate channel levels for each of the listening modes.



1 Press RCV.

2 Press STANDARD or ADV. SURR. (ADVANCED SURROUND).

3 Press TEST TONE to output the test tone.
The test tone is output in the following order (depending on the speaker setting):



Note

- If you don't hear a test tone from one of your speakers, please refer to *Speaker setting* on page 45 and *Surround back speaker setting* on page 46 to make sure you have correctly specified your speaker setup.

4 Press MASTER VOLUME +/– to adjust the volume to an appropriate level.

5 Use LEVEL +/– to adjust the speaker levels in turn.
You should hear the test tone at the same volume from each speaker when seated in the main listening position. The channel level range is ± 10 dB.

6 When you're done, press TEST TONE to turn off the test tone.
The receiver returns to the Standard mode.

Tip

- The speaker volume can be adjusted without outputting the test tone by pressing **CH SELECT** and then using **LEVEL +/–**. However, you can only adjust the level of the speakers currently active in the mode you're listening to. You can set separate levels for the **STANDARD**, **STEREO** and **DVD 5.1 ch**/**DVD 7.1 ch** modes, as well as for each **ADVANCED SURROUND** mode.

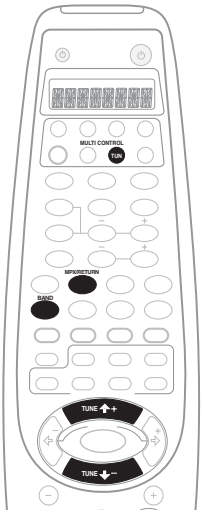
Note

- Since the subwoofer transmits an ultra-low frequency its sound may seem quieter than it actually is.
- Using test tones to set up your speaker system will overwrite any previous settings you had for the **STANDARD** or **ADVANCED SURROUND** modes.

Chapter 8:
Using the tuner

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* on page 54 for more on how to do this.



1 Press the TUN (TUNER) button to select the tuner.

2 Use the BAND button 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 stereo sound

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

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 the TUN (TUNER) button to select the tuner.

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

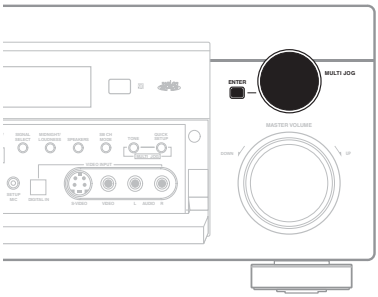
3 Press D.ACCESS (Direct Access).

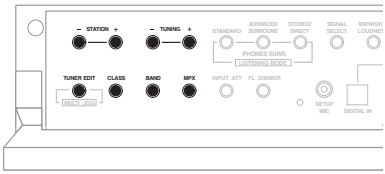
4 Use the number buttons to enter the frequency of the radio station.
For example, to tune to **106.00** (FM), press **1**, **0**, **6**, **0**, **0**.

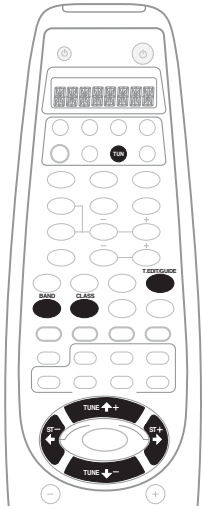
If you make a mistake halfway through, press **D.ACCESS** twice to cancel the frequency and start over.

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 unit can memorize up to 30 stations, stored in three banks, or classes, (A, B and C) of 10 stations each. When saving an FM frequency, the **MPX** setting (see page 53) is also stored. Use the front panel controls to store station presets.

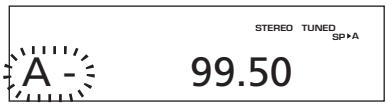






1 Tune to a station you want to memorize.
See *Listening to the radio* on page 53 for more on this.

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



3 Press CLASS to select one of the three classes then press ST +/– (STATION +/–) to select the station preset you want.
You can also use the the **MULTI JOG** dial (front panel) 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 **ST. NAME**, then a blinking cursor at the first character position.

3 Input the name you want.
Names can be up to four characters long.

- Use the **MULTI JOG** dial (front panel) or the **ST +/–** buttons (remote) to select characters.
- Press **ENTER** to confirm a character. If no character is input, a space is input.
- The name is stored when **ENTER** is pressed after choosing the fourth character.

Tip

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

Listening to station presets

You will need to have some presets stored to do this. See *Saving station presets* on page 54 if you haven't done this already.

1 Press TUN (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, B and C.

3 Press ST +/– (STATION +/–) to select the station preset you want.

Note

- If the receiver is left disconnected from the AC power outlet for an extended period, the station memories will be lost and will have to be reprogrammed.

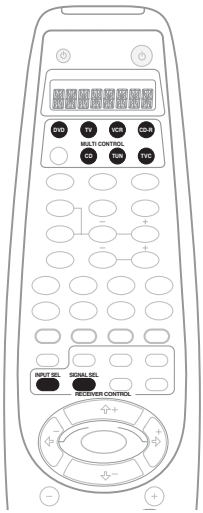
Chapter 9:
Making recordings

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).

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 up* on page 16 for more on connections).

If you want to record a video source, you also need use the same type of connection for the source as for the recorder. For example, you can't record a component hooked up to S-video jacks with a recorder hooked up to the component video outputs (see page 20 for more on video connections).



1 Select the source you want to record.
Use the **MULTI CONTROL** buttons (or **INPUT SEL**).

2 Select the input signal (if necessary).
Press **SIGNAL SEL** (**SIGNAL SELECT**) to select the input signal corresponding to the source component (see page 37 for more on this).

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

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

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.

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

Note

- The receiver's volume, balance, tone (bass, treble, loudness), and surround effects have no effect on the recorded signal.

Chapter 10:

Controlling the rest of your system

Setting the remote to control other components

There are several ways to set your remote to control the other components in your system. The easiest way to do this is to assign the component's manufacturer preset code (starting on page 66) to one of the **MULTI CONTROL** buttons on the remote control.

The buttons can be set to control the following components:

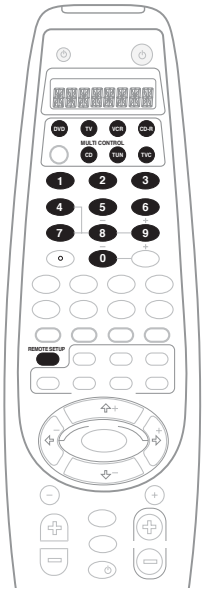
Button	Controllable Components
DVD:	DVD or LD player
TV:	TV or Satellite tuner
VCR:	VCR or Digital Video Recorder
CD:	CD player
CD-R:	CD Recorder, Tape deck or MD player
TVC:	TV or Cable TV tuner
TUN:	FM/AM tuner

You can do this directly, or by searching through different preset codes until you find the right one. 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 (page 59).

Note

- You can cancel or exit any of the steps by pressing and holding **MUTE** for three seconds.

Selecting preset codes directly



1 Press and hold REMOTE SETUP for three seconds.
The LCD display shows **SETUP**.

2 Press the MULTI CONTROL button for the component you want to control.

3 Use ⇦ and ⇨ to select DIR SET then press REMOTE SETUP.
The LCD on the remote displays the component you want to control.

4 Use the number buttons to enter the 4 digit preset code (see page 66)
The LCD display shows the code as you enter it. If you make a mistake press ⇦ to go back one digit. The display shows **OK** once you have entered a valid code. If it's an invalid code or an error has occurred, **ERROR** shows in the display.

If you get an error message, check the preset code list and try again. If you can't find or properly enter a preset code, you can still teach the remote individual commands from another remote control (see *Programming signals from other remote controls* on page 59).

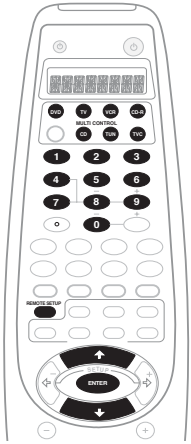
Note

- If you assign a preset code for the **TUN** button, you won't be able to control the built-in tuner of this receiver using the remote. Reset the remote to the built-in tuner by entering the preset code **7008**.

5 Repeat steps 1 through 4 for other components you want to control.

Searching for preset codes

Another way of entering preset codes is to use the search feature. The remote transmits batches of 10 codes; when you see the component you want to control respond (by turning on or off), you just scan through the last 10 codes until you find the right one.



1 Switch on the component you want to control.
If the component is some kind of player (CD player, VCR, etc.), start it playing.

2 Press and hold REMOTE SETUP for three seconds.
The LCD display shows **SETUP**.

3 Press the MULTI CONTROL button for the component you want to control.

4 Use ⇦ and ⇨ to select SEARCH.
The LCD display shows **SEARCH**.

5 Press and hold REMOTE SETUP for three seconds.
A batch of 10 codes is transmitted and the transmit icon blinks during transmission.

If you see the component respond by stopping (for playback components) or switching off, proceed to step 6. If not, keep repeating this step until the component responds.

To cancel and exit, wait until the 10 codes have been transmitted, then press and hold **MUTE** for three seconds.

6 Switch the component back on or restart playback.

7 Use ⇧ and ⇩ to scan step-by-step through the last 10 codes transmitted to identify the correct code.
Stop when you see the component stop or switch off. The LCD display shows the I.D.

You can also verify you have the correct code by pressing ►, ■, or another component control.

8 Press and hold ENTER for three seconds to save the preset code.
The LCD shows **OK** when you're done.

Searching for preset codes using brand names

Another way of assigning preset codes is to use Brand Search.

1 Switch on the component you want to control.
If the component is some kind of player (CD player, VCR, etc.), then start it playing.

2 Press and hold REMOTE SETUP for three seconds.
The LCD display shows **SETUP**.

3 Press the MULTI CONTROL button for the component you want to control.

4 Use ⇦ and ⇨ to select BRAND then press REMOTE SETUP.
The brand names are displayed in alphabetical order. The display starts by showing the letter **A**.

5 Use ⇧ and ⇩ to select the first letter of the brand of your component then press ENTER.
The LCD will show the brands that start from the letter you have selected.

If you make a mistake here, press ⇦ to go back to the previous step.

6 Use ⇧ and ⇩ to select the brand of your component then press ENTER.
The LCD shows the component type and codes relating to the brand.

7 Use ⇧ and ⇩ to select your component type and press ENTER.
If you see the component respond by stopping (for playback components) or switching off, proceed to step 6. If not, you may need to try another method of selecting preset codes (i.e. direct, search or learning).

8 Press and hold ENTER for three seconds to save the preset code.
The LCD shows **OK** when you're done.

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 Press REMOTE SETUP and hold for three seconds.
The LCD display shows **SETUP**.

2 Press the MULTI CONTROL button for the component you want to control.

3 Use ⇦ and ⇨ to select LEARN then press REMOTE SETUP.
The LCD display shows **PRES KEY**. The **LEARN** icon indicates the remote is ready to accept a signal.

Note

- To exit or cancel press and hold the **REMOTE SETUP** key for three seconds.

4 Point the two remote controls towards each other about 1-2 inches apart then press the button that will be doing the learning on this receiver's remote control (for example ►, ■, etc.).
The LCD display flashes **PRES KEY**.

5 Press the corresponding button on the other remote control that is sending (teaching) the signal to this receiver's remote control (for example ►, ■, etc.).
The LCD display will show **OK** if the operation has been learned.

If for some reasons the operation hasn't been learned the LCD will display **ERROR** for three seconds and then display **PRES KEY** again. If this happens, keep pressing the (teaching) button as you vary the distance between the two remotes, until the LCD display shows **OK**.

6 To program additional signals for the current component repeat steps 4 and 5.
To program signals for another component exit and repeat steps 1 through 5.

7 Press and hold the REMOTE SETUP button for three seconds to store the operation(s).

Note

- 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.
- Certain buttons represent operations that cannot be learned from other remote controls. These include: **RECEIVER⏻** , **REMOTE SETUP** and the **MULTI CONTROL**, **RECEIVER CONTROL** and **MASTER VOLUME** buttons.
- **TV CONTROL** buttons (**TV⏻**, **TV VOL +/–** and **TV INPUT**) can only be learned after selecting **TV** or **TVC**.

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 REMOTE SETUP and hold for three seconds.
The LCD display shows **SETUP**.

2 Press the MULTI CONTROL button relating to the button setting to be erased.

3 Use ⇦ and ⇨ to select ERASE then press REMOTE SETUP.
The LCD display flashes **PRES KEY**.

4 Press and hold the button to be erased for three seconds.
The LCD display shows **OK** to confirm the button has been erased or **NO CODE** if an error has occurred.

5 Repeat step 4 to erase other buttons.

6 Press and hold the REMOTE SETUP button for two seconds when you're done.

Clearing all the remote control settings

You can clear all presets and restore the factory default settings.

1 Press REMOTE SETUP and hold for three seconds.
The LCD display shows **SETUP**.

2 Press any MULTI CONTROL button.

3 Use ⇦ and ⇨ to select RESET then press REMOTE SETUP.
The LCD shows **OK** when you're done.

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 playback 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 **MULTI CONTROL** 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 REMOTE SETUP and hold for three seconds.
The LCD display shows **SETUP**.

2 Press the MULTI CONTROL button for the component you want to control.

3 Use ⇦ and ⇨ to select DIR SET then press REMOTE SETUP.
The LCD on the remote displays the component you want to control.

4 Use the number buttons to enter either 9990 (direct on) or 9995 (direct off).
The LCD will display **OK** to show the four digit code has been accepted.

Note

- You can't use direct function with the **TVC** function.

Confirming preset codes

Use this feature to check which preset code is assigned to a **MULTI CONTROL** button.

1 Press REMOTE SETUP and hold for three seconds.
The LCD display shows **SETUP**.

2 Press the MULTI CONTROL button of the component for which you want to check the preset code.

3 Use ⇦ and ⇨ to select READ ID then press REMOTE SETUP.
The preset code appears in the display for two seconds.

Controls for TVs

This remote control can control components after entering the proper codes or teaching the receiver the commands (see *Setting the remote to control other components* on page 57 for more on this). Use the **MULTI CONTROL** buttons to select the component.

Button(s)	Function	Components
TV⏻	Switches the DTV on or off.	DTV
	Switches the TV or CATV between standby and on.	Cable TV/Satellite TV/TV
TV INPUT	Switches the TV input. (Not possible with all models.)	TV
CH +/–	Selects channels.	Cable TV/Satellite TV/TV/ DTV
TV VOL +/–	Adjust the TV volume.	Cable TV/Satellite TV/TV/ DTV
SOURCE⏻	Press to switch the component assigned to the TVC button on or off.	DTV
⏮	Switches DTV on or off.	DTV
⏭	Press to display the DTV menu.	DTV
II	Use as the **GUIDE** button for navigating	DTV
●	Press to get information on DTV programs.	DTV
TOP MENU	Use to choose the BLUE commands on a DTV menu.	DTV
AUDIO	Use to choose the GREEN commands on a DTV menu.	DTV
SUBTITLE	Use to choose the RED commands on a DTV menu.	DTV
ANGLE	Use to choose the YELLOW commands on a DTV menu.	DTV
⏩	Selects between screen formats for widescreen TVs.	TV
⏪	Use to clear a TV channel selected using the number buttons.	Cable TV/TV
▶	Use to switch DTV audio tracks	DTV
■	Use to select closed captioning with DTV.	DTV
Number Buttons	Use to select a specific TV channel.	Cable TV/Satellite TV/TV/ DTV
+10 button	Use to add a decimal point when selecting a specific TV channel.	DTV

Button(s)	Function	Components
ENTER/ DISPLAY/ DISC	Use to enter a channel.	Cable TV/Satellite TV/TV/ DTV
MENU	Select different menus from the DTV functions.	DTV
	Select the menu screen.	Cable TV/Satellite TV/TV
⇦⇨⇧⇩ & **ENTER**	Select or adjust and navigate items on the menu screen. **ENTER** brings up the DTV menus.	DTV
	Press to select or adjust and navigate items on the menu screen.	Cable TV/Satellite TV/TV/ DTV
EFFECT +/–	For TV and cable TV use this button to immediately enter a new channel (**CHANNEL ENTER** function). For satellite TV use this button to exit the menu screen.	Cable TV/Satellite TV/TV/ DTV

Note

- The four **TV CONTROL** buttons on the remote control are dedicated to control the TV assigned to the **TVC** button. Thus if you only have one TV to hook up to this system assign it to the **TVC MULTI CONTROL** button. If you have two TVs, assign the main TV to the **TVC** button.

Controls for other components

This remote control can control these components after entering the proper codes or teaching the receiver the commands (see *Setting the remote to control other components* on page 57 for more on this). Use the **MULTI CONTROL** buttons to select the component.

Button (s)	Function	Components
SOURCE⏻	Press to switch the component between standby and on.	CD/MD/CD-R/VCR/DVD/LD/ DVR player/Cassette deck
⏮	Press to return to the start of the current track. Repeated presses skips to the start of previous tracks.	CD/MD/CD-R/DVD/LD player
	Go back channels (channel –).	VCR/DVR
	Play the reverse side of the tape on a reversible deck.	Cassette deck
⏭	Press to advance to the start of the next track. Repeated presses skips to the start of following tracks.	CD/MD/CD-R/DVD/LD player
	Go forward channels (channel +).	VCR
	Play the forward side of the tape on a reversible deck.	Cassette deck

Button (s)	Function	Components
❚❚	Pause playback or recording.	CD/MD/CD-R/VCR/DVD/LD/ DVR player/Cassette deck
►	Start playback.	CD/MD/CD-R/VCR/DVD/LD/ DVR player/Cassette deck
►►	Hold down for fast forward playback.	CD/MD/CD-R/VCR/DVD/LD/ DVR player/Cassette deck
◄◄	Hold down for fast reverse playback.	CD/MD/CD-R/VCR/DVD/LD/ DVR player/Cassette deck
■	Stops playback (on some models, pressing this when the disc is already stopped will cause the disc tray to open).	CD/MD/CD-R/VCR/DVD/LD/ DVR player/Cassette deck
●	Starts recording. To prevent accidental recording, this button must be pressed twice to take effect (the second press must be within 10 seconds of the first).	VCR/DVR player
Number buttons	Directly access tracks on a program source.	CD/MD/CD-R/VCR/LD player
	Use the number buttons to navigate the on-screen display.	DVD/DVR player
+10 button	Selects tracks higher than 10. (For example, press **+10** then **3** to select track 13.)	CD/MD/CD-R/VCR/LD player
ENTER/ DISPLAY/ DISC	Chooses the disc.	Multiple CD player
	Ejects the disc.	MD player
	Use as the **ENTER** button.	VCR
	Displays the setup screen for DVD/DVR players.	DVD/DVR player
	Changes sides of the LD.	LD player
MENU	Displays menus concerning the current DVD or DVR you are using.	DVD/DVR player
⇧	Pauses the tape.	Cassette deck
⇩	Stops the tape.	Cassette deck
ENTER	Starts playback.	Cassette deck
⇦/⇨	Fast rewinds/fast forwards the tape.	Cassette deck
⇦⇨⇧⇩ & **ENTER**	Navigates DVD menu/options.	DVD/DVR Player

Button (s)	Function	Components
CH +/–	Selects channels.	VCR/DVD/DVR Player
	Selects tracks.	CD/MD/CD-R/Cassette deck
TOP MENU	Displays the disc 'top' menu of a DVD.	DVD/DVR Player
AUDIO	Changes the audio language or channel.	DVD/DVR Player
SUBTITLE	Displays/changes the subtitles on multilingual DVDs.	DVD/DVR Player
ANGLE	Switches camera angles on discs with multi-angle scenes.	DVD/DVR Player

Preset Code List

You should have no problem controlling a component if you find the manufacturer in this list, but you can only set these codes for the button that is assigned to that component. So, for example, the TV codes can only be set to the **TV** or **TVC** button. Please note that there are cases where only certain functions may be controllable after assigning the proper preset code, or the codes for the manufacturer in the list will not work for the model that you are using.

TV (TV) (TVC)

Manufacturer Code

PHILIPS 1008, 1017, 1020, 1025, 1104, 1115
SONY 1001, 1007, 1016
PANASONIC 1023, 1054, 1055, 1075, 1076, 1082, 1087, 1121, 1124
TOSHIBA 1015, 1016, 1027, 1031, 1050, 1051, 1085
TELEFUNKEN 1005, 1026, 1034, 1038, 1042, 1046, 1075, 1097
SHARP 1016, 1019, 1041, 1056, 1124
SAMSUNG 1006, 1011, 1013, 1017, 1026, 1027, 1039, 1062, 1079, 1089, 1092, 1102
FERGUSON 1005, 1017, 1033, 1046, 1065, 1084, 1091
MITSUBISHI 1011, 1016, 1041, 1045, 1049, 1062, 1114
GOLDSTAR 1002, 1011, 1013, 1017, 1019, 1026, 1046, 1062, 1079, 1092
BLAUPUNKT 1066, 1068, 1071, 1075, 1115
RADIOLA 1008, 1017
JVC 1016, 1024, 1030, 1053, 1065, 1067, 1103, 1122
DAEWOO 1006, 1011, 1017, 1019, 1028, 1040, 1050, 1104, 1110, 1118, 1119
ORION 1017, 1063, 1083, 1095, 1098, 1099, 1112
SIEMENS 1017, 1052, 1066, 1068, 1071, 1075, 1115
ADMIRAL 1041, 1055, 1075, 1112
ADYSON 1014, 1079
AIKO 1040
AKAI 1013, 1074
AKURA 1080, 1089
ACURA 1006
ALARON 1063, 1078
ALBA 1006, 1016, 1017, 1080, 1103
ALLORGAN 1095
ANAM 1004, 1006, 1029, 1054, 1064, 1087, 1108
ANAM NATIONAL 1054, 1087, 1108
AMBASSADOR 1061
AMERICA ACTION 1064
AMPLIVISION 1079
AMPRO 1126
AMSTRAD 1006, 1017, 1103, 1105
ANITECH 1006, 1029, 1036
AOC 1011, 1013
ARCAM 1078, 1079
ASBERG 1036
ASUKA 1080
ATLANTIC 1073
AUDIOSONIC 1017, 1046
AUDIOVOX 1040, 1064, 1110 , 1118
AUTOVOX 1036, 1073
BANG & OLUFSEN 1116
BASIC LINE 1006, 1080
BAYSONIC 1064
BAUR 1007, 1017, 1114, 1115
BEKO 1102
BELCOR 1011
BELL & HOWELL 1009, 1050
BEON 1017
BINATONE 1079
BLUE SKY 1080
BLUE STAR 1090
BONDSTEC 1086
BOOTS 1079
BPL 1090
BSR 1095
BRADFORD 1064
BRANDT 1046, 1069, 1070, 1072
BRITANNIA 1078
BROCKWOOD 1011
BROKSONIC 1083, 1112
BTC 1080
BUSH 1006, 1016, 1017, 1080, 1090, 1095, 1103, 1104
CANDLE 1013, 1026
CARNIVALE 1013
CARREFOUR 1016
CARVER 1025, 1058
CASCADE 1006
CATHAY 1017
CENTURY 1075
CENTURION 1017
CELEBRITY 1001
CCE 1017
CGE 1034, 1036, 1038, 1086, 1097
CIMLINE 1006
CINERAL 1040, 1110
CITIZEN 1013, 1019, 1026, 1027, 1040
CLARIVOX 1017
CLATRONIC 1036, 1086, 1102
CME 1007, 1015, 1114
CONCERTO 1026
CONDOR 1098, 1102
CONTEC 1006, 1016, 1064, 1078
CONTINENTAL EDISON 1069, 1070, 1072
CRAIG 1054
CROSLEY 1025, 1034, 1036, 1038, 1075
CROWN 1006, 1017, 1019, 1036, 1064, 1102, 1106
CRYSTAL 1109
CS ELECTRONICS 1078
CTC 1086
CURTIS MATHES 1009, 1013, 1019, 1022, 1023, 1025, 1026, 1027, 1041, 1047, 1050, 1057, 1110, 1113, 1129, 1131
CYBERTRON 1080
CXC 1064
DAINICHI 1077, 1080
DANSAI 1017
DAYTRON 1006, 1011
DECCA 1017, 1032
DE GRAAF 1074
DENON 1047
DIXI 1006, 1017
DUAL TEC 1079
DUMONT 1010, 1011, 1031
DWIN 1125, 1127
ECE 1017
ELBE 1088
ELECTROBAND 1001
ELIN 1017
ELITE 1080, 1098
ELTA 1006
EMERSON 1011, 1018, 1019, 1050, 1061, 1062, 1063, 1064, 1075, 1083, 1090, 1112, 1118, 1119
ENVISION 1013
ERRES 1008, 1017
ETRON 1006, 1120
EXPERT 1073
FIDELITY 1078
FINLANDIA 1074
FINLUX 1017, 1031, 1032 , 1044
FISHER 1050, 1074, 1079, 1096, 1102
FLINT 1111

FORMENTI 1017, 1075, 1098
FORTRESS 1041
FRONTECH 1055, 1086, 1089, 1109
FUJITSU 1032, 1063, 1073
FUNAI 1059, 1063, 1064, 1089, 1095, 1096
FUTURETECH 1064
GE 1012, 1022, 1023, 1041, 1062, 1090, 1110, 1129, 1131
GEC 1017, 1020, 1032, 1072, 1079
GELOSO 1006, 1075
GENEXXA 1055, 1080
GIBRALTER 1010, 1011, 1013
GOODMANS 1016, 1017, 1032, 1079, 1103, 1104
GORENJE 1102
GPM 1080
GRAETZ 1055
GRANADA 1017, 1032, 1048, 1074, 1079, 1100
GRADIENTE 1024, 1026, 1058
GRANDIN 1090
GRUNDIG 1031, 1066, 1068, 1072, 1115
GRUNPY 1063, 1064
HALLMARK 1062
HANSEATIC 1017, 1098
HARLEY DAVIDSON 1063
HARVARD 1029, 1064
HARMAN/KARDON 1025
HCM 1006, 1090, 1105
HINARI 1006, 1016, 1017, 1080
HISAWA 1090, 1111
HITACHI 1014, 1016, 1018, 1020, 1021, 1026, 1044, 1046, 1047, 1055, 1069, 1070, 1079, 1081, 1097
HUANYU 1078, 1104
HYPSON 1017, 1089, 1090
ICE 1079, 1089, 1103
ICES 1080
IMPERIAL 1034, 1036, 1038, 1086, 1102, 1106
INDIANA 1017
INFINITY 1025
INGELEN 1055
INNO HIT 1032
INNOVA 1017
INTEQ 1010
INTERBUY 1029
INTERFUNK 1017, 1055, 1086, 1114
INTERVISION 1017, 1029, 1043, 1079, 1089
ISUKAI 1080
ITS 1103
ITT 1055
JBL 1025
JCB 1001
KAISUI 1006, 1078, 1079, 1080, 1090,
KAMP 1078
KAPSCH 1055, 1073
KAWASHO 1078
KEC 1064
KENDO 1017
KNEISSEL 1088
KENWOOD 1011, 1013
KINGSLEY 1078
KONIG 1114
KORPEL 1017
KOYODA 1006
KTV 1013, 1019, 1064
LEYCO 1017, 1032, 1089, 1095
LG 1026
LIESENK&TTER 1017
LLOYTRON 1014
LOEWE 1035, 1114
LOGIK 1009
LUMA 1073
LUXMAN 1026
LXI 1022, 1025, 1050, 1051, 1062
M ELECTRONIC 1006, 1017, 1029, 1044, 1046, 1055, 1079, 1091, 1104
MAGNAVOX 1013, 1016, 1025, 1063
MAGNADYNE 1043, 1086
MAGNAFON 1036, 1043, 1075
MAJESTIC 1009
MANESTH 1079, 1089, 1098
MARANTZ 1013, 1017, 1025
MARK 1017
MATSUI 1006, 1015, 1016, 1017, 1032, 1074, 1079, 1095, 1103
MATSUSHITA 1087
MCMICHAEL 1020
MEDIATOR 1008, 1017
MEGATRON 1047, 1062
MEMOREX 1006, 1009, 1026, 1049, 1050, 1062, 1087, 1112
METZ 1075
MGA 1011, 1013, 1049, 1062
MIDLAND 1010, 1019, 1022, 1023
MINERVA 1031, 1115
MINOKA 1105
MINUTZ 1012
MIVAR 1078, 1092, 1093, 1094
MOTION 1036
MOTOROLA 1041
MTC 1011, 1013, 1026, 1027, 1078, 1114
MULTITECH 1006, 1036, 1043, 1064, 1078
NAD 1051, 1057, 1062
NEC 1011, 1013, 1016, 1026, 1058
NECKERMANN 1017, 1066, 1075, 1115
NEI 1017, 1109
NETSAT 1017
NICAMAGIC 1078
NIKKAI 1014, 1015, 1017, 1032, 1078, 1080, 1089
NIKKO 1013, 1040, 1062
NOBLIKO 1036, 1043
NORDMENDE 1046, 1069, 1070, 1075, 1091
NTC 1040
OCEANIC 1055, 1077
ONWA 1064
OPTIMUS 1050, 1057, 1087
OPTONICA 1041, 1056
OSAKI 1014, 1032, 1079, 1080, 1089, 1105
OSO 1080
OSUME 1014, 1032, 1052
OTTO 1007, 1114
OTTO VERSAND 1007, 1016, 1017, 1066, 1075, 1079, 1098, 1115
PALLADIUM 1102, 1106
PANAMA 1079, 1089
PATHE MARCONI 1069, 1070, 1072
PATHE CINEMA 1075, 1078, 1084, 1098
PAUSA 1006
PENNEY 1003, 1011, 1012, 1013, 1019, 1022, 1023, 1026, 1027, 1051, 1062, 1131
PERDIO 1098
PHAPSODY 1078
PHASE 1014
PHILCO 1011, 1013, 1025, 1034, 1036, 1038, 1047, 1075, 1086, 1112
PHONOLA 1008, 1017
PILOT 1011, 1013, 1019
PORTLAND 1011, 1019, 1040
PRISM 1023
PROFEX 1006, 1037
PROLINE 1099
PROSOCAN 1022
PROTECH 1006, 1017, 1043, 1079, 1086, 1089, 1106, 1109
PROTON 1062, 1113
PULSAR 1010, 1011
PYE 1008
QUASAR 1023, 1056, 1087
QUELLE 1007, 1017, 1031, 1034, 1038, 1071, 1075, 1097, 1114, 1115
QUESTA 1016
R-LINE 1017
RANK ARENA 1016
RBM 1031
RCA 1011, 1018, 1022, 1023, 1039, 1041, 1128, 1129, 1130, 1131, 1132
REALISTIC 1011, 1013, 1019, 1026, 1050, 1056, 1062, 1064
REX 1055, 1073, 1088, 1089
REVOX 1017
ROADSTAR 1006, 1080, 1089, 1106
RUNCO 1010, 1013, 1117
SABA 1035, 1046, 1055, 1069, 1070, 1072, 1075, 1091
SACCS 1084
SAISHO 1006, 1089, 1109
SALORA 1055
SAMBERS 1036, 1043, 1075
SAMPO 1013, 1019
SAMSUX 1019
SANDRA 1078

SANSEI 1110
SANSUI 1112
SANYO 1016, 1032, 1048, 1050, 1052, 1074, 1075, 1100
SBR 1008, 1017, 1020
SCHNEIDER 1017, 1080, 1086, 1096, 1103
SCIMITSU 1011
SCOTCH 1062
SCOTT 1011, 1062, 1063, 1064, 1083
SEARS 1022, 1025, 1026, 1050, 1051, 1059, 1062, 1063
SEG 1016, 1036, 1079, 1089
SEI 1043, 1075, 1095
SEI-SINUDYNE 1007
SELECO 1055, 1073, 1088
SEMIVOX 1064
SEMP 1051
SENTRA 1015
SHOGUN 1011
SHORAI 1095
SSS 1011, 1064
SIAREM 1043, 1075
SINDYNE 1043, 1075, 1095
SIGNATURE 1009
SILVER 1016
SKY 1017
SKY-WORTH 1017
SOLAVOX 1014, 1055
SONITRON 1074
SONOKO 1006, 1017
SONOLOR 1055, 1074, 1077
SONTEC 1017
SOUNDESIGN 1062, 1063, 1064
SOUNDWAVE 1017, 1106
SQUAREVIEW 1059
STANDARD 1006, 1079, 1080
STARLITE 1064
STERN 1055, 1073, 1088
SUNKAI 1095, 1099
SUPERTECH 1078
SUPREME 1001
SUSUMU 1080
SYLVANIA 1013, 1025
SYMPHONIC 1059
SYSLINE 1017
TANDY 1032, 1041, 1055, 1079, 1080
TASHIKO 1016, 1020, 1079
TEC 1079, 1086
TECHNEMA 1098
TECHNICS 1023, 1087, 1121
TECHNOL ACE 1063
TECHWOOD 1023, 1026
TEKNIKA 1009, 1011, 1019, 1025, 1026, 1027, 1040, 1049, 1063, 1064
TELEAVIA 1072
TELEMEISTER 1098
TELETECH 1006
TELETON 1016, 1073, 1079
TENSAI 1080, 1095, 1098
TEXET 1078, 1080
THOMSON 1046, 1069, 1070, 1072, 1091
THORN 1015, 1017, 1032, 1034, 1038, 1065, 1067, 1114
TMK 1026, 1061, 1062
TOMASHI 1090
TOTEVISION 1019
TRIUMPH 1085
TUTUNG 1017, 1032, 1079
UHER 1073, 1096, 1098
ULTRA 1067
ULTRAVOX 1043
UNIVERSUM 1017, 1044, 1089, 1102
VECTOR RESEARCH 1013
VESTEL 1017
VICTOR 1016, 1024, 1053, 1087
VIDEOSAT 1086
VIDEOTECHNIC1079
VIDIKRON 1025
VIDTECH 1011, 1016, 1062
VISION 1098
VOXSON 1055
WALTHAM 1079
WATSON 1017, 1098
WATT RADIO 1043
WARDS 1009, 1011, 1012, 1013, 1025, 1026, 1056, 1062, 1063
WEGA 1016
WHITE WESTINGHOUSE 1017, 1078, 1098, 1112, 1118, 1119
YAMAHA 1011, 1013
YOKO 1017, 1079, 1101, 1109
ZANUSSI 1073
ZENITH 1009, 1010, 1040, 1112
PIONEER 1018, 1046, 1055, 1057, 1060, 1091, 1107, 1123, 1124

MD player CD-R CD

Manufacturer Code
SONY 5401
KENWOOD 5402, 5407
SHARP 5403
ONKYO 5404
ORION 5406
DENON 5405
PIONEER 5408

LD player DVD

Manufacturer Code
AKAI 5222
BBK 5224
CYRUS 5207
DENON 5202
DISCO VISION 5201
FUNAI 5217
HITACHI 5201
HONG DENG 5213
IDALL 5219
KEBAO 5215
MARANTZ 5203, 5205
MITSUBISHI 5202
NAD 5202
PANASONIC 5210
PHILIPS 5203, 5207, 5209
RADIOLA 5207
ROWA 5212
SALORA 5203
SEGA 5201
SHARP 5221
SHINCO 5211
SMC 5220
SONY 5204, 5206, 5216, 5218
SUPER 5215
TELEFUNKEN 5202
TOSHIBA 5223
PIONEER 5201, 5202, 5208, 5214

CD player CD CD-R

Manufacturer Code
AIWA 5016, 5021
AKAI 5014, 5020, 5032
ANAM 5041
ARCAM 5021
AUDIOLAB 5021
AUDIOMECA 5021
AUDIO TON 5021
BESTAR 5022
BURMESTER 5045
CALIFORNIA AUDIO LABS 5004
CARVER 5021, 5025, 5046
CONDOR 5018, 5022
CURTIS MATHES 5004
CYRUS 5021

DENON 5002, 5006, 5040, 5060
DKK 5001
DUAL 5031
DYNAMIC BASS 5025
EMERSON 5038
EROICA 5053, 5054
FANTASIA 5051
FISHER 5024, 5025
GARRARD 5044, 5045
GENEXXA 5005, 5038
GOLDSTAR 5043, 5051
GRUNDIG 5021
HARMAN/KARDON 5021, 5023
HITACHI 5005
INKEL 5015, 5026, 5046
JVC 5011
KENWOOD 5003, 5008, 5029, 5056, 5057, 5062
KRELL 5021
LINN 5021
LUXMAN 5036
LXI 5038
MAGNAVOX 5021, 5038
MARANTZ 5004, 5009, 5017, 5021, 5026
MATSUI 5021
MCS 5004
MEMOREX 5022
MERIDIAN 5021
MICROMEGA 5021
MISSION 5021
MITSUBISHI 5014, 5020
MTC 5045
NAD 5001
NAIM 5021
NIKKO 5024, 5041, 5051
NSM 5021
ONKYO 5012, 5013, 5042, 5059
OPTIMUS 5001, 5005, 5008, 5019, 5025, 5038, 5045, 5046, 5048
ORION 5061
PANASONIC 5004, 5037
PARASOUND 5045
PHILIPS 5021, 5055
PMG 5022
POPPY 5022
PROTON 5021
QED 5021
QUAD 5021
QUASAR 5004,
RCA 5010, 5025, 5038
REALISTIC 5025, 5026, 5045
REVOX 5021
ROTEL 5021, 5045
SAE 5021
SANSUI 5021, 5033, 5038
SANYO 5025, 5039
SCHNEIDER 5018
SCOTT 5038
SEARS 5038
SHARP 5008, 5026, 5058
SHERWOOD 5015, 5026, 5031
SONY 5001, 5027, 5050
SOUDESIGN 5019
TASCAM 5045
TEAC 5024, 5026, 5044, 5045
TECHNICS 5004, 5034, 5037
THORENS 5021
TOSHIBA 5049
UNIVERSUM 5021
YAMAHA 5007, 5028
YORX 5047
VICTOR 5011
WARDS 5010, 5021
PIONEER 5005, 5030, 5035, 5038, 5048, 5052, 5063

Tape deck CD-R CD

Manufacturer Code

ADC 6013
AIWA 6002, 6022, 6017, 6018
AKAI 6015, 6016
ANAM 6035
ARCAM 6005
CARVER 6002, 6028
DENON 6005, 6039
DUAL 6037
DYNAMIC BASS 6028
EROICA 6041
FISHER 6028
GARRARD 6036
GOLDSTAR 6036
GRUNDIG 6002
HARMON/KARDON 6002, 6014
INKEL 6003
JVC 6027, 6030, 6031
KENWOOD 6003, 6004, 6019, 6024, 6025
KYOCERA 6013
LOTTE 6034
LUXMAN 6029
MAGNAVOX 6002
MARANTZ 6002
MEMOREX 6008, 6009
MITSUBISHI 6016
NAKAMICHI 6020
NIKKO 6035
OLYMPUS 6029
ONKYO 6010, 6011, 6032
OPTIMUS 6001, 6021
PANASONIC 6023
PHILIPS 6002
RCA 6028
RENAISSANCE 6040
REVOX 6002
SAMSUNG 6038
SANSUI 6002
SANYO 6028
SHARP 6019
SONIC 6036
SONY 6012, 6026, 6033
TEAC 6038
TECHNICS 6023
THORENS 6002
VICTOR 6027, 6030
WARDS 6001
YAMAHA 6006, 6007, 6019
PIONEER 6001, 6008, 6009, 6021

DVD player DVD

Manufacturer Code

TOSHIBA 5302
SONY 5306
PANASONIC 5301, 5322
KENWOOD 5307
JVC 5311, 5318
SAMSUNG 5313
AKAI 5316
HARMAN/KARDON 5314
MAGNAVOX 5302
MITSUBISHI 5303
ONKYO 5302, 5317, 5319
PROSCAN 5304
RCA 5304
SHARP 5320
THETA DIGITAL 5312
TECHNICS 5301
THOMSON 5310
YAMAHA 5301, 5309
PHILIPS 5302, 5308
ZENITH 5302, 5315
PIONEER 5305, 5312, 5321, 5322

Amplifier (TUN)

Manufacturer Code
AUDIOLAB 8005
DENON 8002
GRUNDIG 8005
MARANTZ 8005
MICROMEGA 8005
PHILIPS 8005
PIONEER 8004
REVOX 8005
TANBERG 8003
THORENS 8005
YAMAHA 8001, 8006

Misc. Audio (TUN)

Manufacturer Code
JERROLD 8201, 8203
STARCOM 8201
SCIENTIFIC ATLANTA 8202

Receivers (TUN)

Manufacturer Code
ADC 7042
AIWA 7012, 7023, 7031, 7055, 7064
AKAI 7011, 7027
ANAM 7010, 7046
ARCAM 7018, 7048
AUDIOLAB 7059
CAPETRONIC 7042
CARVER 7055, 7059
CURTIS 7008
DAEWOO 7032
DENON 7001, 7056, 7058
DUAL 7040
EROICA 7005
FANTASIA 7037
FERGUSON 7042
FINE ARTS 7059
FISHER 7028
GARRARD 7032, 7034, 7035
GOLDSTAR 7010
GOODMANS 7027
GP AUDIO 7033
GRUNDIG 7018, 7059
HARMAN/KARDON 7009, 7051
INKEL 7038, 7040
JBL 7009
JVC 7007, 7036, 7042
KENWOOD 7003, 7017, 7025, 7026, 7044, 7053, 7063, 7066
LOTTE 7037, 7039
LUXMAN 7021
MAGNAVOX 7030, 7042, 7055, 7059
MARANTZ 7004, 7018, 7055, 7059
MCINTOSH 7020
MCS 7004
MCSILVER 7037
MICROMEGE 7018, 7059
NIKKO 7032, 7037, 7046
OPTIMUS 7017, 7034, 7042, 7049, 7052
ONKYO 7013, 7029
PALLADIUM 7050
PANASONIC 7004, 7024, 7041
PHILIPS 7018, 7030, 7045, 7048, 7051, 7055, 7059
PHONOTREND 7038
QUASAR 7004
RCA 7006, 7042
RENAISSANCE 7043
REVOX 7018
ROADSTAR 7027
SABA 7042
SAISHO 7027
SAMSUNG 7010
SANSUI 7027, 7055
SANYO 7028
SCHNEIDER 7042
SHARP 7017
SHERWOOD 7038
SOUNDESIGN 7049
SONY 7015, 7054, 7057, 7060
TAE KWANG 7034
TEAC 7010, 7035
TECHNICS 7004, 7062, 7065
TELEFUNKEN 7019, 7024, 7041, 7061, 7062, 7065
THORENS 7018, 7059
UHER 7027, 7042, 7050
VICTOR 7007
WARDS 7002, 7006, 7008
YAMAHA 7016, 7017
PIONEER 7002, 7008, 7014, 7022, 7042, 7047, 7050, 7052

VCR (VCR)

Manufacturer Code
PHILIPS 2015, 2035, 2074, 2075
PANASONIC 2015, 2042, 2053, 2054, 2055, 2087
THOMSON 2021, 2064, 2074
SONY 2001, 2009, 2012, 2013, 2014, 2015
JVC 2008, 2021, 2033, 2049, 2050, 2074, 2080
GRUNDIG 2003, 2005, 2007, 2010, 2034, 2035, 2048, 2050, 2054, 2069, 2071, 2075
AKAI 2021, 2029, 2038, 2060, 2063
HITACHI 2001, 2004, 2021, 2022, 2043, 2056, 2057
TOSHIBA 2021, 2023, 2024, 2035, 2074
MITSUBISHI 2023, 2027, 2033, 2035, 2045
SHARP 2027, 2073
ORION 2002, 2004, 2016, 2036, 2046, 2052, 2070, 2072, 2078
SANYO 2025, 2026, 2037, 2057
FERGUSON 2021, 2039, 2064, 2065
BLAUPUNKT 2003, 2005, 2010, 2014, 2041, 2042, 2048, 2054, 2055, 2075
NOKIA 2025, 2037, 2038, 2057
ADMIRAL 2027, 2052
ADVENTURA 2001
AIKO 2059
AIWA 2001, 2017, 2062, 2070, 2072
AKIBA 2034
ALBA 2011, 2034, 2052, 2059, 2063, 2072
AMBASSADOR 2011
AMERICA ACTION 2059
AMERICAN HIGH 2015
AMSTRAD 2001, 2059, 2067, 2068
ANAM 2017, 2042, 2054, 2057, 2059, 2082, 2084
ANAM NATIONAL 2042, 2054, 2087
ANITECH 2034
ASA 2017, 2035
ASHA 2057
ASUKA 2017
AUDIOVOX 2017
BAIRD 2001, 2021, 2037, 2039
BASIC LINE 2011, 2034, 2059
BEAUMARK 2057

BELL & HOWELL 2037
BRANDT 2047, 2064, 2065
BRANDT ELECTRONIC 2021
BROKSONIC 2002, 2040, 2046, 2052, 2078
BUSH 2034, 2052, 2059, 2072
CALIX 2017
CANON 2015
CAPEHART 2011
CARVER 2035
CATRON 2011
CCE 2034, 2059
CGE 2001
CIMLINE 2034
CINERAL 2059
CITIZEN 2017, 2059
CLATRONIC 2011
COLT 2034
COMBITECH 2072
CONDOR 2011
CRAIG 2017, 2026, 2034, 2057, 2058
CROWN 2011, 2034, 2059
CURTIS MATHES 2015, 2021, 2032, 2042
CYBERNEX 2057
CYRUS 2035
DAEWOO 2011, 2024, 2025, 2059, 2083
DANSAI 2034
DAYTRON 2011
DECCA 2001, 2035
DE GRAAF 2022, 2043
DENON 2022
DUAL 2021
DUMONT 2001, 2035, 2037
DYNATECH 2001
ELBE 2018
ELCATECH 2034
ELECTROHOME 2017
ELECTROPHONIC 2017
EMEREX 2012
EMERSON 2001, 2002, 2017, 2023, 2040, 2046, 2051, 2052, 2059, 2078, 2083
ESC 2057, 2059
FIDELITY 2001
FINLANDIA 2035, 2037
FINLUX 2001, 2022, 2035, 2037
FIRSTLINE 2017, 2023, 2024, 2034, 2052
FISHER 2025, 2026, 2030, 2037
FRONTECH 2011
FUJI 2015
FUNAI 2001
GARRARD 2001
GE 2015, 2027, 2032, 2057
GEC 2035
GENERAL 2011, 2028
GOLDHAND 2034
GOLDSTAR 2017, 2018, 2053, 2079
GOODMANS 2001, 2017, 2034, 2059, 2075
GO VIDEO 2077, 2081
GRAETZ 2005, 2021, 2037, 2057
GRANADA 2025, 2035, 2037
GRADIENTE 2001, 2008
GRANDIN 2001, 2017, 2034
HANSEATIC 2017
HARMAN/KARDON2018, 2035
HARLEY DAVIDSON 2001
HARWOOD 2034
HCM 2034
HEADQUARTER 2025
HINARI 2004, 2034, 2057, 2072
HI-Q 2026
HUGHES NETWORK SYSTEMS 2022
HYPSON 2034
IMPERIAL 2001
INGERSOL 2004
INTERFUNK 2035
ITT 2005, 2021, 2025, 2037, 2038, 2057, 2074
ITV 2017, 2059
JENSEN 2021
KAISUI 2034
KEC 2017, 2059
KENDO 2038, 2052
KENWOOD 2018, 2021, 2033
KLH 2034
KODAK 2015, 2017
KORPEL 2034
LAYCO 2034
LENCO 2059
LG 2079
LLOYD'S 2001, 2051
LOEWE 2004, 2005, 2017, 2035
LOGIK 2004, 2034, 2057
LUXOR 2023, 2025, 2027, 2037, 2038
LXI 2017
M ELECTRONIC 2001
MAGNASONIC 2059
MAGNAVOX 2001, 2015, 2019, 2035
MAGNIN 2057
MANESTH 2024, 2034
MARANTZ 2003, 2005, 2015, 2035
MARTA 2017
MATSUI 2004, 2016, 2036, 2052, 2070, 2072
MATSUSHITA 2015, 2042, 2055
MEI 2015
MELECTRONIC 2018
MEMOREX 2001, 2015, 2017, 2019, 2025, 2026, 2027, 2037, 2052, 2057, 2062, 2085, 2087, 2088
MEMPHIS 2034
METZ 2003, 2005, 2017, 2042, 2048, 2055, 2069
MGA 2023, 2057
MGN TECHNOLOGY 2057
MINCRVA 2048
MINERVA 2005, 2010, 2048
MINOLTA 2022
MOTOROLA 2015, 2027
MTC 2001, 2057
MULTITECH 2001, 2034
MURPHY 2001
NAD 2031
NATIONAL 2054
NEC 2018, 2020, 2021, 2033, 2037
NECKERMANN 2035
NESCO 2034
NIKKO 2017
NIKON 2014
NOBLEX 2057
NOKIA 2021, 2025, 2037, 2038, 2057
NORDMENDE 2021, 2061, 2064, 2065, 2074
OCEANIC 2001, 2021
OKANO 2063, 2070
OLYMPUS 2015, 2054
OPTIMUS 2017, 2027, 2031, 2037, 2042, 2077, 2086, 2087, 2088
OSAKI 2001, 2017, 2034
OTTO VERSAND 2035
PALLADIUM 2005, 2017, 2021, 2034
PATHE MARCONI 2021
PATHE CINEMA 2016
PENTAX 2022
PENNY 2015, 2017, 2018, 2020, 2022, 2057
PERDIO 2001
PHILCO 2015, 2018, 2052, 2078
PHONOLA 2035
PILOT 2017
PORTLAND 2011
PROFEX 2066
PROFITRONIC 2057
PROLINE 2001
PROSCAN 2032
PROTEC 2034
PULSAR 2019
PYE 2035
QUARTER 2025
QUARTZ 2025
QUASAR 2015, 2042, 2087
QUELLE 2035
RADIO SHACK 2001, 2085
RADIOLA 2035
RADIX 2017
RANDEX 2017
RCA 2015, 2022, 2027, 2032, 2038, 2057
REALISTIC 2001, 2015, 2017, 2025, 2026, 2027, 2037
REX 2021, 2074
RFT 2075
RICOH 2014
ROADSTAR 2017, 2034, 2057, 2059
RUNCO 2019
SABA 2021, 2049, 2050, 2061, 2064, 2065, 2074
SAISHO 2004, 2016, 2036, 2052
SALORA 2023, 2025, 2038
SANKY 2019, 2027
SANSUI 2001, 2021, 2033, 2052, 2058, 2078
SAMSUNG 2024, 2057, 2076, 2077
SAVILLE 2072

SBR 2035
SCHAUB LORENZ 2001, 2005, 2021, 2037
SCHNEIDER 2001, 2034, 2035
SCOTT 2023, 2024, 2040, 2046
SEARS 2001, 2015, 2017, 2022, 2025, 2026, 2037
SEG 2057, 2066
SEI 2004, 2035
SELECO 2021
SEMP 2024
SENTRA 2011
SHINTOM 2034, 2037
SHOGUN 2057
SHORAI 2004
SIEMENS 2003, 2005, 2010 2017, 2030, 2035 2037, 2048
SILVA 2017
SINGER 2024, 2034
SINUDYNE 2004, 2035
SOLAVOX 2011
SONOLOR 2025
SONTEC 2017
STS 2022
SUNKAI 2070
SUNSTAR 2001
SUNTRONIC 2001
SYLVANIA 2001, 2015, 2023, 2035
SYMHONIC 2001
TASHIKO 2001
TATUNG 2001, 2021, 2035
TEAC 2001, 2021
TEC 2011
TECHNICS 2015, 2042, 2054
TEKNIKA 2001, 2015, 2007, 2017, 2028
TELEAVIA 2021
TELEFUNKEN 2021, 2047, 2058, 2064, 2074
TENOSAL 2034
TENSAI 2001, 2066
THOMAS 2001
THORN 2016, 2021, 2037
TMK 2051, 2057
TOTEVISION 2017, 2057
TOWADA 2066
UHER 2057
UNITECH 2057
UNIVERSUM 2001, 2006, 2010, 2017, 2035, 2038, 2048, 2057, 2067
VECTOR 2024
VECTOR RESEARCH 2018, 2020
VICTOR 2008, 2021, 2033
VIDEO CONCEPTS 2020, 2024
VIDEOSONIC 2057
WARDS 2001, 2015, 2022, 2026, 2027, 2032, 2034, 2035, 2057
WHITE WESTINGHOUSE 2052, 2059
XR-1000 2001
XR-1001 2015
XR-1002 2034
YAMAHA 2018
YAMISHI 2034
YOKAN 2034
YOKO 2011, 2057
ZENITH 2001, 2014, 2019, 2052, 2078
PIONEER 2031, 2033, 2035, 2044, 2056

Satellite tuner TV TVC

Manufacturer Code
ABSAT 4006
AST 4027
ALBA 4029, 4034, 4037, 4052
ALDES 4019
AMSTRAD 4003, 4016, 4025, 4038, 4039, 4042
ANKARO 4013, 4019, 4030, 4044
ANTTRON 4009, 4034
ARMSTRONG 4015
ASTRA 4005
ASTRO 4008, 4039, 4045
AVALON 4031
AXIS 4030, 4046
BT 4053
BEKO 4010
BEST 4030
BLAUPUNKT 4008
BOCA 4015, 4043
BRAIN WAVE 4022
BRITISH SKY BROAD-CASTING 4058
BUSH 4002
CNT 4045
CAMBRIDGE 4024
CANAL SATELLITE 4059
CANAL+ 4059
CHANNEL MASTER 4029
COMLINK 4019
CONNEXIONS 4031
CROWN 4015
CYRUS 4011
D-BOX 4054
DDC 4029
DNT 4011, 4031
ECHOSTAR 4031, 4036, 4061
EMANON 4034
FTE HUMAX 4060
FERGUSON 4002, 4009, 4010, 4023
FIDELITY 4016
FINLUX 4005, 4024, 4032, 4037
FRACARRO 4061
FREECOM 4034
FUBE 4030, 4031, 4034
G-SAT 4009
GALAXIS 4019, 4057, 4060
GENERAL INSTRUMENT 4012
GOLD BOX 4059
GOODING 4048
GOODMANS 4010
GRUNDIG 4008, 4010, 4048
HINARI 4009
HIRSCHMANN 4008, 4032, 4039, 4040, 4049
HITACHI 4037
HOUSTON 4053
HUTH 4013, 4015, 4019, 4026
ITT 4005
INVIDEO 4061
INTERVISION 4050
JVC 4048
JOHANSSON 4022
KATHREIN 4004, 4006, 4008, 4011, 4035, 4041
KREISELMEYER 4008
KYOSTAR 4034
LA SAT 4043, 4045
LENCO 4034
LENNOX 4050
LUPUS 4030
LUXOR 4005, 4049
MANHATTAN 4037, 4045, 4050
MARANTZ 4011
MASPRO 4004, 4023
MATSUI 4024, 4048
MEDIASAT 4059
MEDIAMARKT 4015
MINERVA 4048
MORGAN'S 4015, 4043
NAVEX 4022
NEUHAUS 4039
NEUSAT 4057
NEWHAUS 4013
NIKKO 4028
NOKIA 4005, 4032, 4037, 4049, 4054, 4063
NORDMENDE 4029
ORBITECH 4039
OXFORD 4024
PACE 4002, 4009, 4014, 4023, 4037, 4055, 4058
PALLADIUM 4048
PALSAT 4039
PANDA 4037
PHILIPS 4007, 4011, 4020, 4037, 4048, 4059
PHONOTREND 4019, 4050
PIONEER 4021, 4059
PLANET 4061
PROMAX 4037
PROSAT 4019
QUADRAL 4029, 4044
RADIOLA 4011
RADIX 4031, 4064
RFT 4011, 4013, 4019
SAT 4027, 4038
SABA 4023, 4045
SABRE 4037
SAGEM 4056
SALORA 4005
SATCOM 4026, 4051
SATEC 4009
SATMASTER 4026
SATPARTNER 4022, 4034, 4040, 4045

SCHWAIGER 4009, 4041
SEEMANN 4031, 4046
SEG 4030, 4034
SIEMENS 4008
SKYMASTER 4019, 4044, 4051
SONY 4017, 4018
STRONG 4062
SUNSTAR 4043
TPS 4056
TANTEC 4023, 4037
TECHNISAT 4001, 4039
TECHNILAND 4026
TELEFUNKEN 4034
TELEKA 4015, 4052
TELESAT 4051
THOMSON 4037, 4059
TONNA 4026, 4053
TRIAD 4027
TRIASAT 4040
UNITOR 4022
UNIVERSUM 4008, 4049
VENTANA 4011
VORTEC 4034
VTECH 4027
WINERSAT 4022
WISI 4008, 4027, 4031, 4037
XSAT 4006, 4065
XCOM MULTIMEDIA 4065
ZEHNDER 4033, 4045, 4047

Cable TV TV TVC

Manufacturer Code

ABC 3002, 3003, 3004, 3006, 3008
ANDOVER 3037
BELL & HOWELL 3006
BIRMINGHAM CABLE COMMUNICATION 3020
BRITISH TELECOM 3002, 3012
CABLETIME 3016, 3019, 3025, 3029
CONTEC 3009
CLYDE 3011
CRYPTOVISION 3038
DAEHAN 3043
DAERYUNG 3003
DECSAT 3027
EVERQUESST 3007
FILMNET 3028
FRANCE TELECOM 3030
GEC 3011
GEMINI 3007
GENERAL INSTRUMENT 3004, 3020, 3031, 3046
GOLDSTAR 3014, 3047
GRUNDIG 3035
HITACHI 3004
JASCO 3007
JERROLD 3002, 3004, 3005, 3006, 3007, 3020, 3031, 3046
LG ALPS 3044
MEMOREX 3001
MNET 3009, 3028
NOW 3041
OAK 3009
PACIFIC 3039
PANASONIC 3001, 3013
PARAGON 3001
PULSAR 3001
PVP STEREO VISUAL MATRIX 3002
PIONEER 3010, 3014, 3018, 3036
QUASAR 3001
RADIO SHACK 3007
REMBRANDT 3004
RUNCO 3001
SAMSUNG 3014, 3040
SATBOX 3024
SIGNAL 3007
SIGNATURE 3004
STS 3015
SALORA 3026
SCIENTIFIC 3003, 3032, 3049
SCIENTIFIC ATLANTA 3003, 3008, 3021
SEAWOO 3045
STARCOM 3002, 3007
STARGATE 3007
STARQUEST 3007
TAIHAN 3043
TELESERVICE 3022
TELE+1 3028
TUDI 3023
TUSA 3007
TOCOM 3005
TONGKOOK 3042, 3048
TOSHIBA 3001
UNITED CABLE 3002
VIDEOWAY 3017
VISICABLE+ 3033
WESTMINSTER 3012
WOLSEY GENE 3037
ZENITH 3001, 3034

Chapter 11:
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 service center or your dealer to carry out repair work.

Problem	Remedy
The power does not turn on.	• Connect the power plug to the wall outlet. • Disconnect the power plug from the outlet, and insert again. • Make sure there are no loose strands of speaker wire touching the rear panel. This could cause the receiver to shut off automatically. • If the **STANDBY** indicator blinks and the power shuts off automatically, take the unit to your nearest Pioneer authorized service center or your dealer for servicing.
No sound is output when a function is selected.	• Make sure the component is connected correctly (refer to *Connecting up* on page 16). • Press **MUTE** on the remote control to turn muting off. • Adjust the **MASTER VOLUME**.
No image is output when a function is selected.	• Make sure the component is connected correctly (refer to *Connecting up* on page 16). • Select the correct component (use the **MULTI CONTROL** buttons).
Considerable noise in radio broadcasts.	• Tune in the correct frequency. • Connect the antenna (refer to page 21). • Route any loose cables away from the antenna terminals and wires. • Fully extend the FM wire antenna, position for best reception, and secure to a wall. • Connect an outdoor FM antenna (refer to page 21). • Adjust the direction and position for best reception. • Connect an additional internal or external AM antenna (refer to page 21). • Turn off the equipment causing the noise or move it away from the receiver. • Place the antenna farther away from the equipment causing the noise.

Problem	Remedy
Broadcast stations cannot be selected automatically.	• Connect an outdoor antenna (refer to page 21).
No sound from surround or center speakers.	• Refer to *Speaker setting* on page 45 to check the speaker settings. • Refer to the *Quick surround sound setup* on page 14 or *Manually calibrating your listening area (MCACC)* on page 50 to check the speaker levels. • Connect the speakers properly (refer to page 22).
No sound from surround back speakers.	• Refer to *Surround back speaker setting* on page 46 to check the surround back speaker settings. • Refer to the *Quick surround sound setup* on page 14 or *Manually calibrating your listening area (MCACC)* on page 50 to check the speaker levels. • Refer to *Using the Surround Back Channel (SB CH)* on page 40 to make sure the **SB CH MODE** and the sound mode are set for surround back sound.
No sound from subwoofer.	• Make sure the subwoofer is switched on. • If the subwoofer has a volume knob, make sure it's turned up. • Switch the *Subwoofer setting* on page 46 to **YES** or **PLUS**. • Switch the *LFE attenuator setting* on page 47 to **0 dB** or **10 dB**. • The Dolby Digital or DTS source you are listening to does not have an LFE channel.
Noise during playback of a cassette deck.	• Move the cassette deck further from your receiver, until the noise disappears.
Sound is produced from other components, but not from LD or DVD player.	• Set the **SIGNAL SELECT** to **AUTO**, **DIGITAL** or **ANALOG** according to the type of connections made. (refer to page 37). • Set the digital input settings correctly (refer to page 49). • Make digital connections (refer to page 17) and set the **SIGNAL SELECT** to **DIGITAL** (refer to page 37). • Refer to the instruction manual supplied with the DVD player.
No sound is output or a noise is output when software with DTS is played back.	• Set the digital volume level of the player to full, or to the neutral position.
When a search is performed by a DTS compatible CD player during playback, noise is output.	• This is not a malfunction, but be sure to turn the volume down to prevent the output of loud noise from your speakers.

Problem	Remedy
Can't operate the remote control.	• Replace the batteries (refer to page 6). • Operate within 23 feet (7 m), 30° of the remote sensor on the front panel (refer to page 7). • Remove the obstacle or operate from another position. • Avoid exposing the remote sensor on the front panel to direct light.
The display is dark or off.	• Press **FL DIMMER** on the remote control repeatedly to return to the default.

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.

Resetting the main unit

Use this procedure to reset all the receiver's settings to the factory default. Use the front panel controls to do this.

1 Switch the receiver on.

2 While holding down the TONE button, press and hold the ⏻ STANDBY/ON button for about three seconds.

3 When you see RESET? appear in the display, press the TONE button.
OK? shows in the display.

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

Specifications

Amplifier section

Continuous average power output of 110 watts* per channel, min., at 8 ohms, from 20 Hz to 20,000 Hz with no more than 0.2 %** total harmonic distortion (front).

Continuous power output (stereo)

Front . . . . . 110 W per channel (20–20,000 Hz, THD 0.2 %, 8 Ω)

Continuous power output (surround)

Front . . . . . 110 W per channel (1kHz, 1.0 %, 8 Ω)
Center . . . . . 110 W (1kHz, 1.0 %, 8 Ω)
Surround . . . . . 110 W per channel (1kHz, 1.0 %, 8 Ω)
Surround Back . . . . . 110 W per channel (1kHz, 1.0 %, 8 Ω)

Input (Sensitivity/Impedance)

CD, VCR/DVR, CD-R/TAPE/MD, DVD/LD, TV/SAT. . . . . 200 mV/47 kΩ

Frequency response

CD, VCR/DVR, CD-R/TAPE/MD, DVD/LD, TV/SAT . . . . . 5 Hz to 100,000 Hz $^{+0}_{-3}$ dB

Output (Level/Impedance)

VCR/DVR REC, CD-R/TAPE/ MD REC . . . . . .200 mV/2.2 kΩ

Tone control

Bass . . . . . ± 6 dB (100 Hz)
Treble . . . . . ± 6 dB (10 kHz)
Loudness . . . +6.5 dB/+3 dB (100 Hz/10 kHz) (at volume level -50 dB)

Signal-to-Noise Ratio (IHF, short circuited, A network)

CD, VCR/DVR, CD-R/TAPE/MD, DVD/LD, TV/SAT. . . . . 96 dB

Signal-to Noise Ratio [EIA, at 1 W (1 kHz)]

CD, VCR/DVR, CD-R/TAPE/MD, DVD/LD, TV/SAT . . . . . .79 dB

Video Section

Input (Sensitivity/Impedance)

VCR/DVR, DVD/LD, TV/SAT . . . . . .1 Vp-p/75 Ω

Output (Level/Impedance)

VCR/DVR, MONITOR OUT . . . . . .1 Vp-p/75 Ω

Frequency response

VCR/DVR, DVD/LD, TV/SAT ⇨ MONITOR . . . . .5 Hz to 7 MHz $^{+0}_{-3}$ dB
Signal-to-Noise Ratio . . . . . .55 dB

Component video section

Input (Sensitivity)

DVD/LD, TV/SAT . . . . . .1 Vp-p/75 Ω

Output (Level/Impedance)

MONITOR OUT . . . . . .1 Vp-p/75 Ω

Frequency response

DVD/LD, TV/SAT ⇨ MONITOR . . . .5 Hz to 40 MHz $^{+0}_{-3}$ dB
Signal-to-Noise Ratio . . . . . .55 dB

FM Tuner Section

Frequency Range . . . . . .87.5 MHz to 108 MHz
Usable Sensitivity . . . . . Mono:13.2 dBf, IHF (1.3 μV/ 75 Ω)
50 dB Quieting Sensitivity . . . . . Mono: 20.2 dB . . . . . Stereo: 38.6 dBf
Signal-to-Noise Ratio . . . . . Mono: 73 dB (at 85 dBf)
Stereo: 70 dB (at 85 dBf)
Distortion. . . . . Stereo: 0.5 % (1 kHz)
Alternate Channel Selectivity . . . . . .60 dB (400 kHz)

Stereo Separation . . . . . 40 dB (1 kHz)
Frequency Response . . . . . .30 Hz to 15 kHz (±1 dB)
Antenna Input (DIN) . . . . . 75 Ω unbalanced

AM Tuner Section

Frequency Range . . . . . 530 kHz to 1,700 kHz
Sensitivity (IHF, Loop antenna) . . . . . .350 μV/m
Selectivity . . . . . .25 dB
Signal-to-Noise Ratio . . . . . .50 dB
Antenna . . . . . Loop antenna

Miscellaneous

Power Requirements . . . . . .AC 120 V, 60Hz
Power Consumption . . . . . 300W, 420 VA
In Standby . . . . . 0.5 W
AC Outlet . . . . . .100 W MAX. (SWITCHED)
Dimensions . . . 420 (W) x 158 (H) x 401 (D) mm (16-9/16 (W) x 6-4/16 (H) x 15-6/16 (D) in.)
Weight (without package) . . . . 10.5 kg (23.1 lb)

Furnished Parts

AM loop antenna 1
FM wire antenna 1
AA/LR6 dry cell batteries 2
Remote control 1
Microphone 1
Microphone stand 1
These operating instructions 1

Note

- Specifications and the design are subject to possible modifications without notice, due to improvements.

* Measured pursuant to the Federal Trade Commission's Trade Regulation rule on Power Output Claims for Amplifiers.
** Measured by Audio Spectrum Analyzer.

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.

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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Should this product require service in the U.S.A. and you wish to locate the nearest Pioneer Authorized Independent Service Company, or if you wish to purchase replacement parts, operating instructions, service manuals, or accessories, please call the number shown below.

8 0 0 – 4 2 1 – 1 4 0 4

Please do not ship your product to Pioneer without first calling the Customer Support Division at the above listed number for assistance.

Pioneer Electronics (USA) Inc.
Customer Support Division
P.O. BOX 1760, Long Beach,
CA 90801-1760, U.S.A.

For warranty information please see the Limited Warranty sheet included with your product.

Should this product require service in Canada, please contact a Pioneer Canadian Authorized Dealer to locate the nearest Pioneer Authorized Service Company in Canada.
Alternatively, please contact the Customer Satisfaction Department at the following address:

Pioneer Electronics of Canada, Inc.
Customer Satisfaction Department
300 Allstate Parkway, Markham, Ontario L3R OP2
(905)479-4411
1(877)283-5901

For warranty information please see the Limited Warranty sheet included with your product.

Si ce produit doit être réparé au Canada, veuillez vous adresser à un distributeur autorisé Pioneer du Canada pour obtenir le nom du Centre de Service Autorisé Pioneer le plus près de chez-vous. Vous pouvez aussi contacter le Service à la clientèle de Pioneer:

Pioneer Electroniques du Canada, Inc.
Service à la clientèle
300, Allstate Parkway, Markham, Ontario L3R OP2
(905)479-4411
1(877)283-5901

Pour obtenir des renseignements sur la garantie, veuillez vous reporter au feuillet sur la garantie restreinte qui accompagne le produit.

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