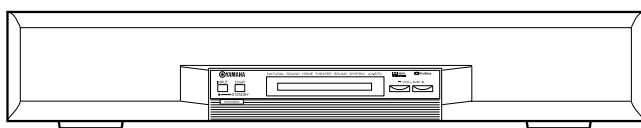YAMAHA

GB

AV-S70

Home Theater Sound System
Systèm audio home cinéma

OWNER'S MANUAL
MODE D'EMPLOI
BEDIENUNGSANLEITUNG
BRUKSANVISNING
MANUALE DI ISTRUZIONI
MANUAL DE INSTRUCCIONES
GEBRUIKSAANWIJZING

CAUTION: READ THIS BEFORE OPERATING YOUR UNIT.

1. **To assure the finest performance, please read this manual carefully. Keep it in a safe place for future reference.**

2. **Install this unit in a cool, dry, clean place — away from windows, heat sources, sources of excessive vibration, dust, moisture and cold. Avoid sources of humming (transformers, motors). To prevent fire or electrical shock, do not expose the unit to rain or water.**

3. **Never open the cabinet. If something drops into the unit, contact your dealer.**

4. **Do not use force on switches, controls or connection cables. When moving the unit, first disconnect the power cord and then the cables connected to other component. Never pull the cables themselves.**

5. **The openings on the cover assure proper ventilation of the unit. If these openings are obstructed, the temperature inside the unit will rise rapidly. Therefore, avoid placing objects against these openings, and install the unit in a well-ventilated area to prevent fire and damage.**

6. **The voltage used must be the same as that specified on this unit. Using this unit with a higher voltage than specified is dangerous and may result in fire or other accidents. YAMAHA will not be held responsible for any damage resulting from the use of this unit with a voltage other than that specified.**

7. **Digital signals generated by this unit may interfere with other component such as tuners, receivers and TVs. Move this unit farther away from such component if interference is observed.**

8. **Always set the volume to the minimum level before starting the audio source play. Increase the volume gradually to an appropriate level after playback has been started.**

9. **Do not attempt to clean the unit with chemical solvents; this might damage the finish. Use a clean, dry cloth.**

10. **Be sure to read the "TROUBLESHOOTING" section regarding common operating errors before concluding that the unit is faulty.**

11. **When not planning to use this unit for a long period of time (e.g., a vacation), disconnect the AC power cord from the wall outlet.**

12. **To prevent lightning damage, disconnect the AC power cord and disconnect the antenna cable when there is an electrical storm.**

13. **Grounding or polarization — Precautions should be taken so that the grounding or polarization of the unit is not defeated.**

14. **AC outlet — Do not connect audio component to the AC outlet on the rear panel if that component requires more power than the outlet is rated to provide.**

15. **Though this speaker is a magnetic shielding type, there may be some influence on a TV picture depending on the type of TV or the placement of the speaker. In such a case, place the speaker apart from the TV so that there is no influence on TV picture.**

This unit is not disconnected from the AC power source as long as it is connected to the wall outlet, even if this unit itself is turned off. This state is called the standby mode. In this state, this unit is designed to consume a very small quantity of power.

■ For U.K. customers

If the socket outlets in the home are not suitable for the plug supplied with this appliance, it should be cut off and an appropriate 3 pin plug fitted. For details, refer to the instructions described below.

Note

• The plug severed from the mains lead must be destroyed, as a plug with bared flexible cord is hazardous if engaged in a live socket outlet.

■ Special Instructions for U.K. Model

IMPORTANT

THE WIRES IN MAINS LEAD ARE COLOURED IN ACCORDANCE WITH THE FOLLOWING CODE:

Blue: NEUTRAL
Brown: LIVE

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:
The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or coloured BLACK. The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or coloured RED.
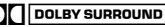Making sure that neither core is connected to the earth terminal of the three pin plug.

FEATURES

● **Home Theater Sound**

This system delivers a realistic and powerful sound experience like that found in a movie theater just by connecting the front speaker unit to the TV. You can also enjoy stronger bass and surround effects by adding the separately available YAMAHA NX-SW70, consisting of a subwoofer and two rear speakers.

● **Includes Dolby Digital* and Dolby Pro Logic Decoder**

This system can reproduce the sound field of the software with the DD DOLBY DIGITAL or DD DOLBY SURROUND logo mark.

● **Virtual Surround**

The front speaker unit can produce a virtual Dolby Surround sound field when playing software with the DD DOLBY DIGITAL or DD DOLBY SURROUND logo mark so that you can enjoy surround effects that give motion to sound and make you feel like you are inside the action.

● **Seven DSP programs including YAMAHA CINEMA DSP**

Connecting the YAMAHA NX-SW70 (sold separately) allows seven different DSP programs to be used to enhance the power and realism of various sources, from movies, to concerts, and sporting events.

● **Preset Remote Control**

The remote control can be used to control not only the front speaker unit, but component from other manufacturers as well merely by setting the proper manufacturer code.

CONTENTS

indicates a tip for your operation.

English

1

GETTING STARTED

Checking the Package Contents

Check that the following accessories are included in the package.

Remote control

Batteries (AAA, R03, UM-4 type)

Audio connection cord (2 pin, 3m)

Velcro strips (2 sets)

Connection guide
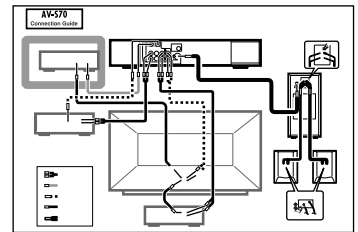
Readying the Remote Control

■ Inserting the batteries

1 **Remove the battery compartment cover.**
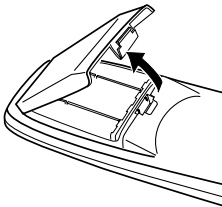
2 **Insert the four batteries (AAA, R03, UM-4 type) with + and – oriented properly.**
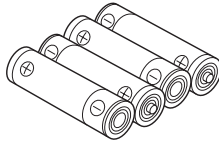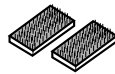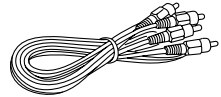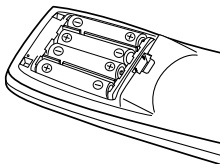

3 **Close the battery compartment cover.**
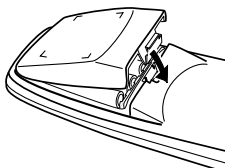
■ Precautions regarding batteries

Misuse of dry cell batteries may result in leakage or bursting. Be sure to follow the precautions given below.

• Insert batteries with (+) and (–) oriented according to the marking in the battery compartment.
• Do not mix old and new batteries.
• Do not mix different types of batteries as they may offer different voltage and performance even though they have the same shape.
• Remove all batteries when they can no longer be used or when the remote control will not be used for an extended period.
• Do not use rechargeable batteries.
• If leakage occurs, wipe away all battery fluid inside the compartment.

Preserving the manufacturer code

Replace batteries early before they become unusable. The manufacturer code set by the user will be preserved for about two minutes when batteries run out or when they are removed. Note that the manufacturer code setting may be lost if more than two minutes elapses.

Operational Area of the Remote Control

Front speaker

Approx. 20 cm – 6 m

30°   **30°**
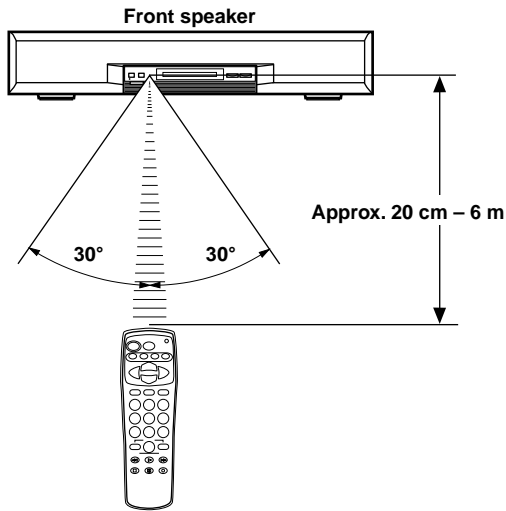
■ **Battery replacement cycle**

Replace all four batteries when the operational range of the remote control starts to become shorter.

■ **Precautions on handling the remote control**

• The remote control may not be able to operate the front speaker unit when an object blocks the remote control sensor on the unit.

• Do not subject the remote control to impact. Do not allow it to get wet or place it in a location subject to high humidity.

• The remote control operations become difficult when direct sunlight or other strong light (such as from an inverter fluorescent lamp) strikes the sensor. Adjust the relative positions of the light and the front speaker if this happens.

• Remote control operations may not be possible if another remote control is being operated at the same time.

PREPARATION

English

3

NAMES OF ALL PARTS

Front Speaker Unit (Front Panel)

INPUT selector button (page 17)

DSP selector button (page 20)

VOLUME +/– (page 17)

YAMAHA   NATURAL SOUND HOME THEATER SOUND SYSTEM   AV-S70

— VOLUME +

STANDBY indicator

POWER (page 17)
Turns the unit's power on and off. This button also turns off the subwoofer's power when a YAMAHA subwoofer and rear speakers NX-SW70 (sold separately) are connected. The STANDBY indicator will light when power is turned off using ⏻/l on the remote control.

Display

VIRTUAL indicator (page 20)

TRUBASS indicator (page 18)

ENHANCED indicator

VIRTUAL TRUBASS
DODIGITAL ENHANCED
SURROUND
DOPRO LOGIC DSP

Processing indicators (page 20)

Display used for DSP program name, level, and operational status

4

Remote Control

☉/Ι **(power)** (page 17) ————

DSP ON/OFF (page 20)

Transmission indicator

Remote control selector buttons
(page 23)

Not used with this unit.

VOL – (page 17) ————

VOL + (page 17)

▽ (page 23)

🔇 (page 18)

INPUT selector button (page 17)

SET/DSP (pages 20 and 23)

Numeric buttons (page 23)

MENU – (page 21)
MENU – (page 21)

MENU + (page 21)

SUBWOOFER + (page 18)

SUBWOOFER – (page 18)

TEST (page 15)

NIGHT MODE (page 18)

Not used with this unit.

TruBass (page 18)

☀

Of the buttons on the remote control, those used to control this unit
is colored in dark gray.

SPEAKER PLACEMENT

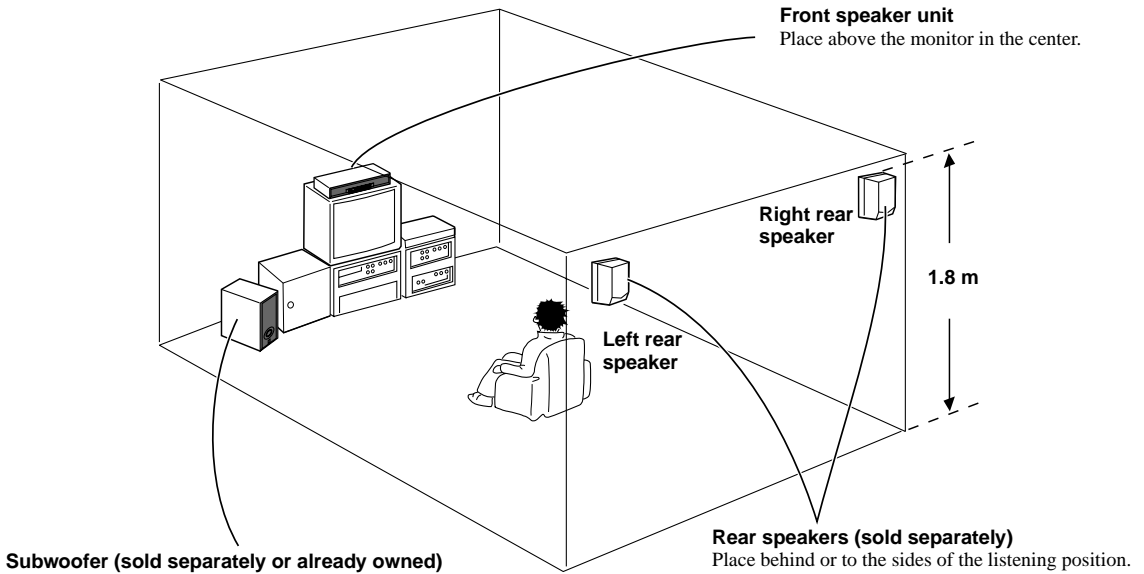Although speakers should ideally be placed as shown below, satisfactory effects may be obtained even if you do not strictly follow these guidelines.

Front speaker unit
Place above the monitor in the center.

Right rear speaker

1.8 m

Left rear speaker

Rear speakers (sold separately)
Place behind or to the sides of the listening position.

Subwoofer (sold separately or already owned)

■ Front speaker unit

Place the front speaker unit on top of the television and align the front surface of the speakers with the front surface of the television monitor. For details on placement, refer to page 7. If the system cannot be placed on top of the television, place it on a rack beneath the television as close to the television monitor as possible.

■ YAMAHA rear speakers NX-AVS70 (sold separately)

Depending on room conditions, it is possible to place YAMAHA rear speakers NX-AVS70 on shelves or hang them on the wall. Speakers should be placed about 1.8 m above the floor.

About 1.8 m
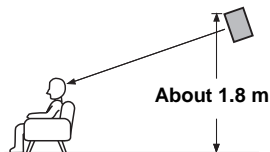
■ YAMAHA subwoofer SW-AVS70 (sold separately)

Place the subwoofer at the either right or left side of the front speaker unit and facing slightly toward the center of the room so that the sound from it and the sound reflected by the wall should not cancel out each other. Try altering the position of the subwoofer versus the listening position as the relative position will affect the way the bass sounds.

CAUTION

Although the speakers in this unit are magnetically shielded, they may still affect the color on the television monitor when using the speakers on top of the television. Adjust the relative positions of the speakers and the television if this happen. Perform the following steps if you are using a magnetically shielded television.
1 Turn off the television.
2 Wait awhile and turn the television back on.

INSTALLATION

To prevent the front speaker unit from falling, secure it with the provided velcro strip when placing it on a television or other device. Also, use the height adjustment bracket on the rear of the front speaker unit when there is not enough space for installation or when the surface is sloped.
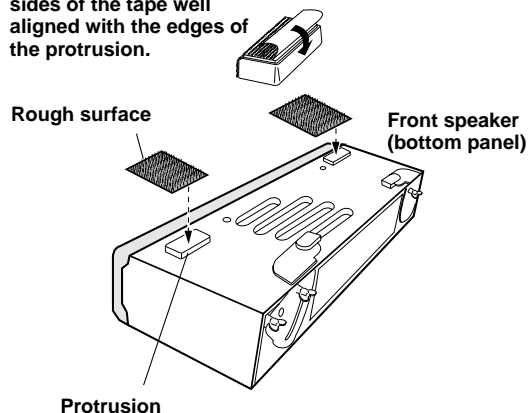
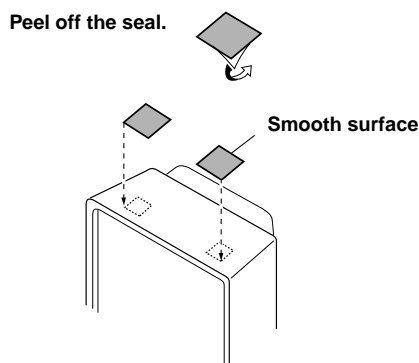## Using the Velcro Strips

Precautions before installation
- Do not touch the adhesive surface after peeling off the strip as this will weaken its adhesive strength.
- Thoroughly wipe clean the surface where the velcro strip is to be applied. Note that adhesive strength is weakened if the surface is dusty, oily or wet and that this may cause the front speaker unit to drop.

1 **Peel off the seal of the velcro strip with the rough surface and apply to the protrusions on the bottom of the front speaker unit.**

Wrap the strip tightly with sides of the tape well aligned with the edges of the protrusion.

Rough surface

Front speaker (bottom panel)

Protrusion

2 **Place the front speaker unit where it is to be installed (ex. on top of the television) to determine where to apply the velcro strip with the smooth surface.**

Position so that the position of the velcro strip stuck to the front speaker unit matches that of the velcro strip stuck to the top of the television.

3 **Peel off the seal of the velcro strip with the smooth surface and apply to the positions determined in step 2.**

Peel off the seal.

Smooth surface
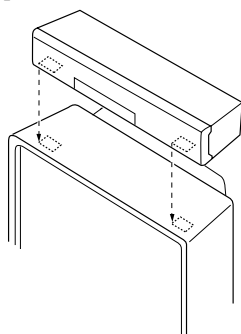
4 **Align both the velcro strip on both sides and firmly press downward on the top of the front speaker unit.**

Press down.
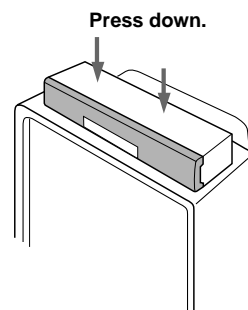
Note

- Once the front speaker unit is secured in this way, the paint on the television surface used for installation may peel off when velcro strip is removed later. Be sure to apply velcro strip after carefully checking the surface to be used for installation.

Using the Height Adjustment Brackets

1 **Loosen the screws securing the adjustment bracket.**
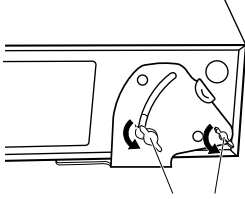
Loosen the screws.

2 **Lower the bracket so that the front speaker unit is level and securely tighten the screws.**
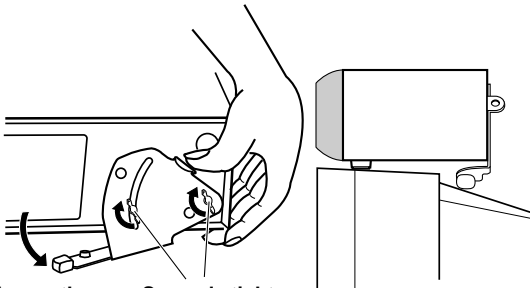
Lower the bracket and adjust.

Securely tighten the screws.

Place the front speaker unit so that it is level.

■ **To further stabilize and prevent falling**

Wire attachment hole
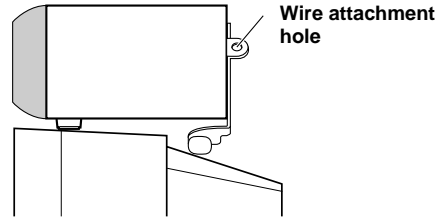
Secure the front speaker unit to the wall by attaching sufficiently strong wire to the wire attachment hole on the adjustment bracket. This prevents falling in two ways when this method is used together with velcro strip. This can prevent damage caused by the front speaker falling.

Note

• Please provide wire separately.

CAUTION

Never place anything on top of the front speaker unit.

CONNECTIONS

CAUTION

Always be sure to turn off the power of the main unit and any component to be connected when making connections.

To ensure proper connections

- Connect the white plug of the connection cord to the left "L" (white) audio signal terminal and connect the red plug to the right "R"(red) terminal.
- Insert the plug securely. If the plug is not inserted securely, noise may result or sound may not be output.
- Since the method of connection and terminal names differ depending on the component being used, be sure to refer to the instruction manuals for all components being connected.
- After connections have been made, check one more time that wiring has been made properly.

TV (monitor)   **VCR, etc.**

Pages 10 to 12

**DVD player,
LD player, etc.**

**YAMAHA subwoofer and
rear speakers NX-SW70
(sold separately)**

Front speaker unit

AC outlet

Page 14

Page 14
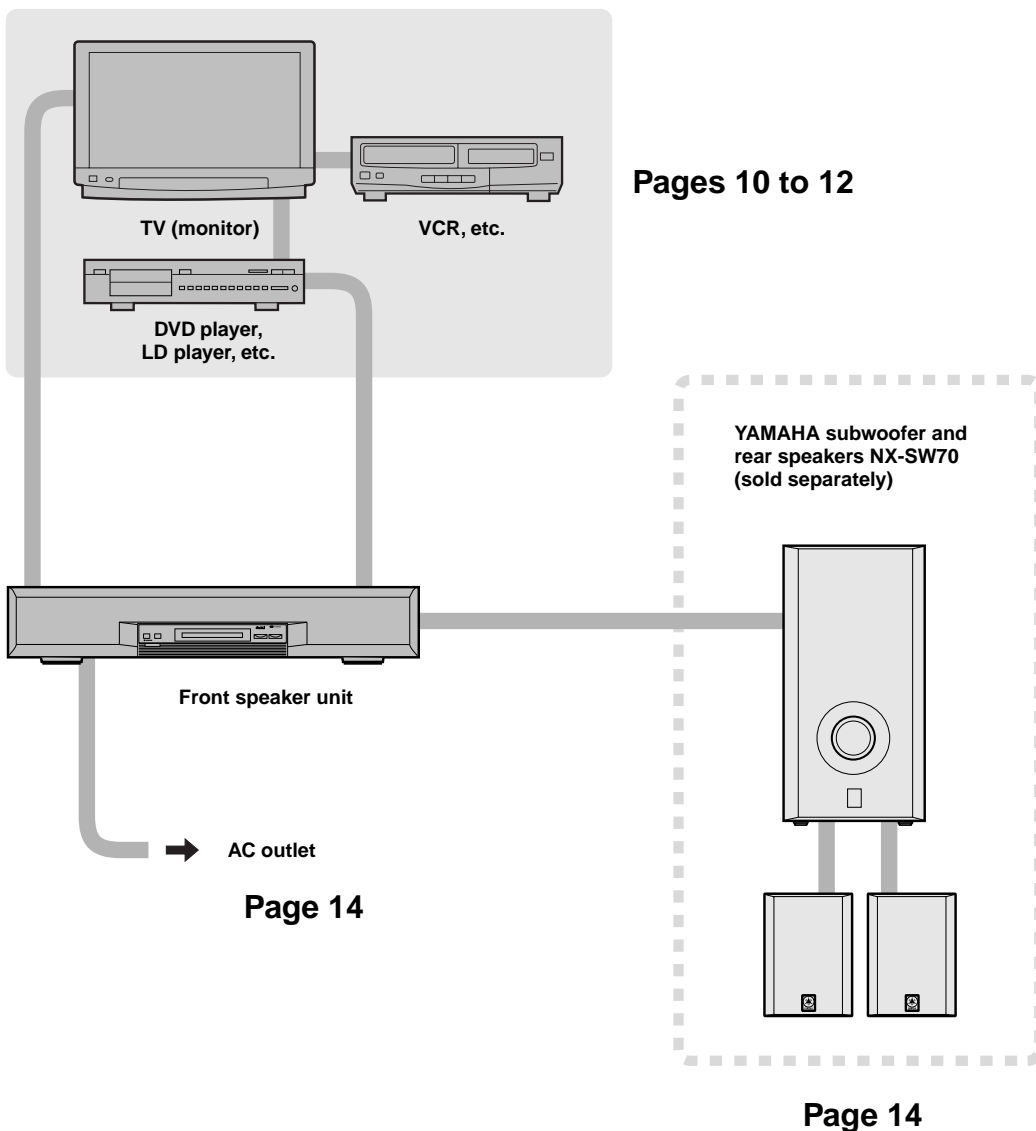
Connecting a TV or VCR

■ **Connecting a TV (monitor) with audio output terminals**
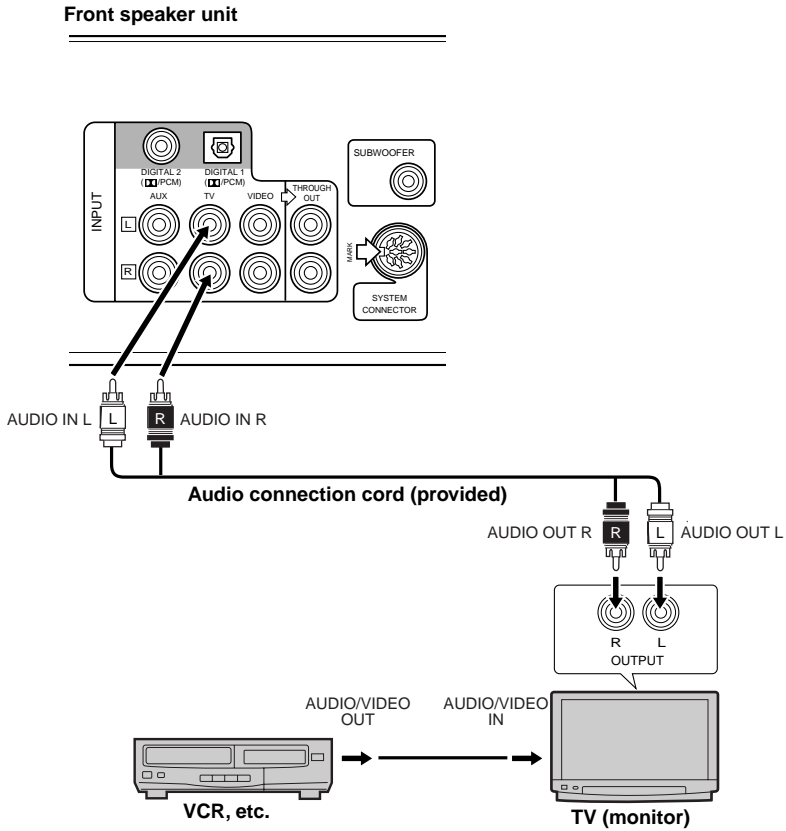
Front speaker unit

Connect the audio output terminal on the TV (monitor) to the TV terminal on the front speaker unit using the provided audio connection cord.

☼

Television audio can be heard using the front speaker unit. (Although you can also hear the audio using the TV speakers, we recommend you reduce the TV volume so that you may enjoy the full benefit of the front speaker unit.) Audio can be heard using the TV speakers when the front speaker unit is turned off.

■ **Connecting to a TV (monitor) without audio output terminals**

Front speaker unit
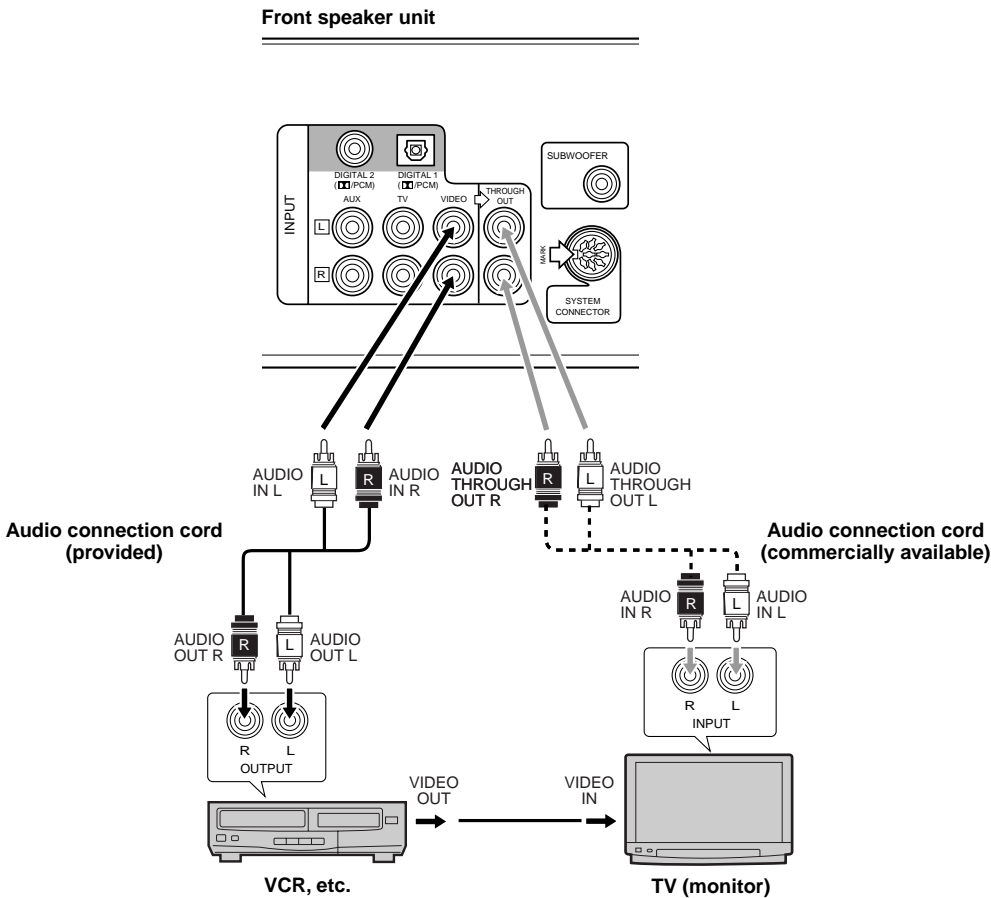
There are two methods of making connection:
1. connecting only the VIDEO terminals or
2. connecting the THROUGH OUT terminals in addition to the VIDEO terminals.

When only the VIDEO terminals are connected
Connect the audio output terminals on the VCR to the VIDEO terminals on the front speaker unit using the provided audio connection cord. VCR audio may always be heard using the front speaker unit. Audio cannot be heard when the front speaker unit's power is turned off. (Audio cannot be heard from the TV's speakers either.)

When VIDEO terminals and THROUGH OUT terminals are connected
Connect the THROUGH OUT terminals of the front speaker unit to the audio input terminals of the TV (monitor) using a commercially available audio connection cord. VCR audio can be heard using the front speaker unit when the front speaker unit is turned on. Audio can be heard using the TV speakers when the front speaker unit is turned off.

■ Connecting a TV (monitor) to enjoy digital audio

Connect one of these

Optical fiber cable (EIA standard) (commercially available)

Audio connection cord (1 pin) (commercially available)

Front speaker unit

DIGITAL 2 (□□/PCM) DIGITAL 1 (□□/PCM)
INPUT AUX TV VIDEO THROUGH OUT
SUBWOOFER
L R MARK SYSTEM CONNECTOR

Anti-dust cap

Anti-dust cap
Remove the cap covering the DIGITAL 1 terminal (optical) when connecting an optical fiber cable. Safely store the cap and always re-insert it in the terminal when the terminal is not in use. (This cap prevents the entrance of dust.)

TV (monitor)

VIDEO IN

VIDEO OUT

COAXIAL DIGITAL
OUTPUT
OPTICAL DIGITAL

DVD player, LD player, etc.

Connect the optical terminal or coaxial terminal of the LD or DVD player to the DIGITAL 1 (optical) terminal or DIGITAL 2 (coaxial) terminal of the front speaker unit using a commercially available optical fiber cable or audio connection cord (1 pin).

Notes

• You need to make digital connection between this unit and your component to enjoy a Dolby Digital source.
• The audio of the LD or DVD player can be heard from the front speaker unit, but not from the TV speakers. The audio of the LD or DVD player cannot be heard when the front speaker unit's power is turned off.
• If your LD player has a Dolby Digital RF signal output terminal, be sure to use the RF demodulator (separately purchased).
• No sound will be heard when connecting your LD player's Dolby Digital RF signal output terminal directly to this unit's DIGITAL 2 terminal.

Connecting a CD Player or MD Recorder

Front speaker unit

Connect one of these

Optical fiber cable (EIA standard) (commercially available)

DIGITAL 2 (□□/PCM)   DIGITAL 1 (□□/PCM)

SUBWOOFER

INPUT   AUX   TV   VIDEO   THROUGH OUT

L   R   MARK

SYSTEM CONNECTOR

Anti-dust cap

Anti-dust cap
Remove the cap covering the DIGITAL 1 terminal (optical) when connecting an optical fiber cable. Safely store the cap and always re-insert it in the terminal when the terminal is not in use. (This cap prevents the entrance of dust.)

AUDIO IN L   L   R   AUDIO IN R

Audio connection cord (commercially available)

Audio connection cord (1 pin) (commercially available)

AUDIO OUT R   R   L   AUDIO OUT L

Use the analog audio output terminals if there is no digital output terminal.

R   L
OUTPUT

COAXIAL DIGITAL

OUTPUT

OPTICAL DIGITAL

CD player, MD recorder, etc.

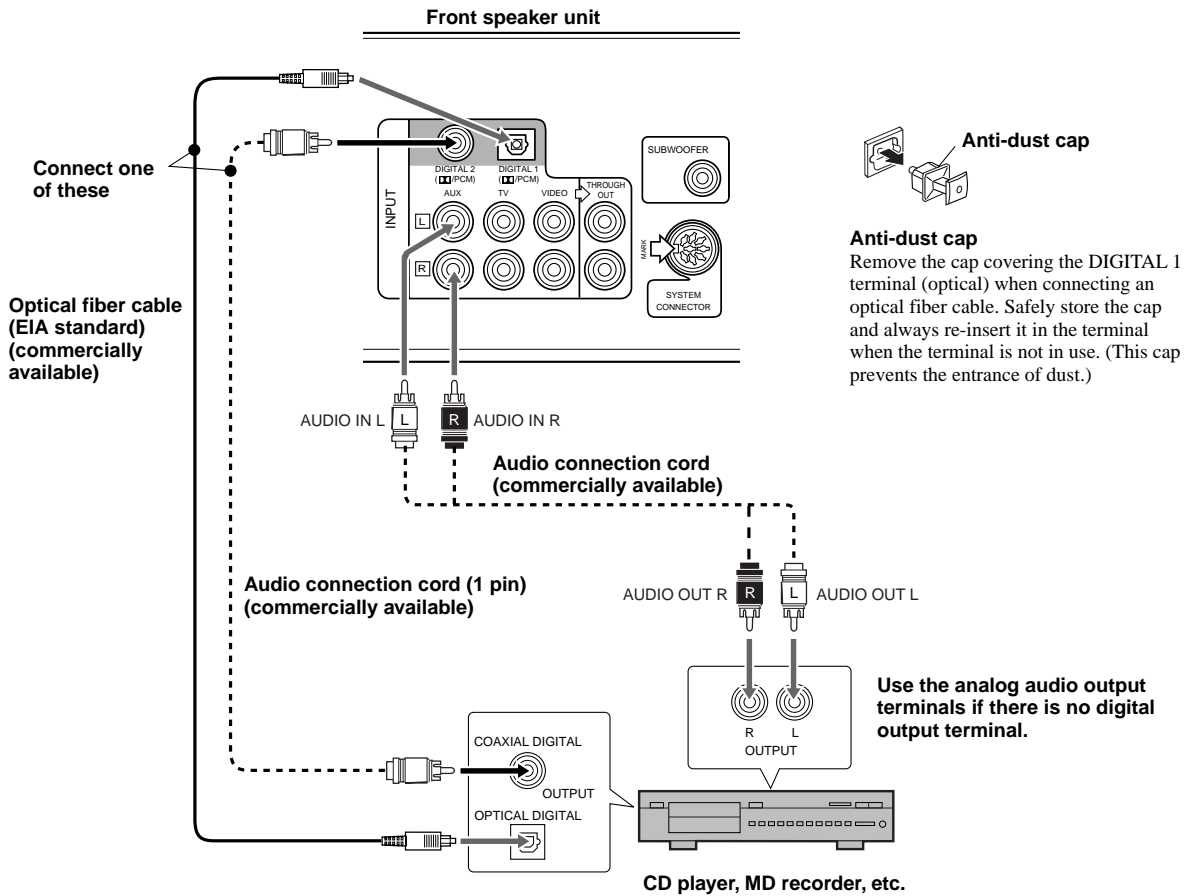If the CD player or MD recorder has a digital output terminal, connect the optical or coaxial terminal on the CD player or MD recorder to the DIGITAL 1 (optical) terminal or DIGITAL 2 (coaxial) terminal on the front speaker unit using a commercially available optical fiber cable or audio connection cord (1 pin).

If there is no digital output terminal, connect the analog audio output terminals on the CD player or MD recorder to the AUX input terminals on the front speaker unit using a commercially available audio connection cord (2 pin).

PREPARATION

English

13

Connecting the Front Speaker Unit and the Subwoofer

Although the front speaker unit alone can be used to reproduce rich, natural sounding audio, the additional use of a subwoofer allows you to enjoy powerful bass tones.

Connecting a YAMAHA subwoofer and rear speakers NX-SW70 (sold separately) not only increases bass sensitivity but improves the surround effect as well.
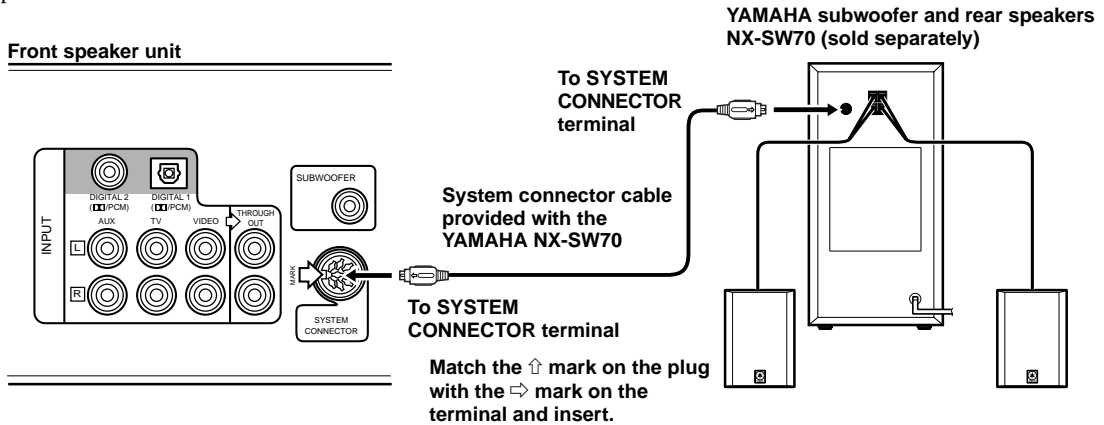

Note

• Turning off the front speaker unit's power will also turn off the YAMAHA subwoofer SW-AVS70.

☼

• When connecting your subwoofer, connect the input terminal on the subwoofer to the SUBWOOFER terminal on the front speaker unit using a commercially available audio connection cord (1 pin).
• For details regarding connections, please refer to the instruction manuals for your subwoofer or the owner's manual for the YAMAHA subwoofer and rear speakers NX-SW70 (sold separately).

## *Connecting the AC Power Supply Cord*
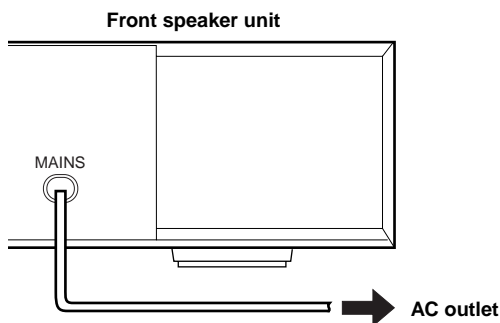
Once all connections have been made, check them one more time. Finally, insert the plug of the power supply cord for the front speaker unit into an AC outlet. Disconnect the power supply cord if you will not use the unit for an extended period.

ADJUSTING THE SPEAKER OUTPUT LEVELS

When reproducing a Dolby Surround source using a DSP program such as DOLBY PRO LOGIC or DOLBY DIGITAL ENHANCED, it is necessary to adjust each channel to the same output level in order to bring out the full digital effect of these sound fields. Even when a different DSP program is used, it is possible to bring out the particular flavor of the sound field in question.

Speaker output levels may be adjusted by using the remote control before playback by following the steps.
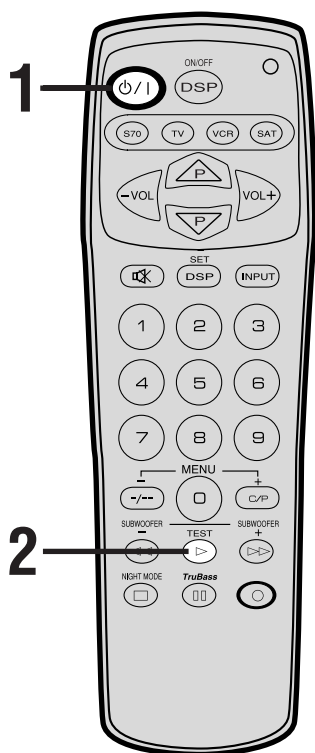
2 **Press TEST.**

Test tones (like pink noise) will be output in the following order.
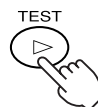
● **When only the front speaker unit is being used or the VIRTUAL SURROUND DSP program is selected:**

Front speaker unit

| LEFT | | RIGHT |

LEFT SURROUND **(Virtual)**   RIGHT SURROUND **(Virtual)**

● **When an NX-SW70 is connected:**

Front speaker unit

LEFT → CENTER → RIGHT

LEFT SURROUND ← RIGHT SURROUND

Rear speakers
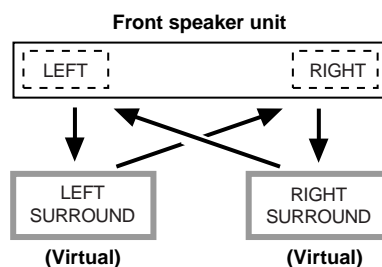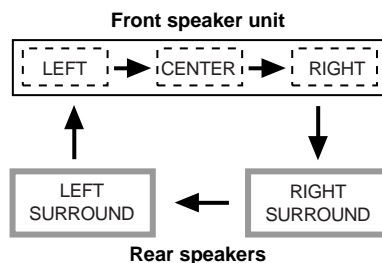
1 **Press ⏻/I to turn on the power.**

If the STANDBY indicator is lit, turn on the power using ⏻/I on the remote control. If the main power is off (when the STANDBY indicator is not lit), turn on the power by pressing POWER on the front speaker unit.
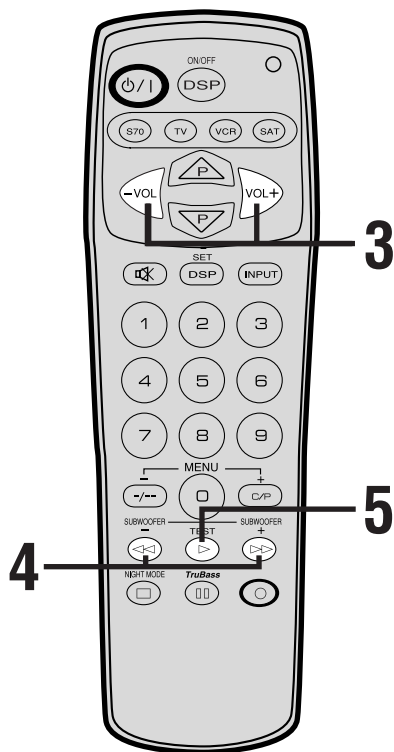
3 **Adjust the level of the test tone using VOL +/–. (This sets the standard audio level you will be using.)**

Pressing VOL + increases the level, while pressing VOL – decreases the level.
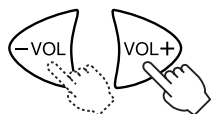
4 **Adjust the level of each channel while listening to the test tone.**

Pressing ▷▷ increases the level, while pressing ◁◁ decreases the level.

🔆
• If only the front speaker unit being used, be sure to adjust the level of the right and left rear virtual channels to match the level of the right and left main channels. (Rear virtual channels sound as if rear speakers are behind the listener.)
• If an NX-SW70 is connected, adjust so that the level of the center channel (built into the front speaker unit) and rear channels (NX-SW70 rear speakers) match the level of the right and left main channels (built into the front speaker unit).

Notes
• When an NX-SW70 is connected, you can adjust the center channel.
• If the right and left main channels have been adjusted, adjust the level of the center and right and left rear channels (or right and left rear virtual channels) one more time.
• The right and left rear virtual channels cannot be adjusted separately. Adjusting either of the virtual channels sets the other virtual channel to the same level.

5 **When the adjustment is complete, press TEST.**

A test tone will stop.

🔆
The level can be adjusted in the following range.
• When only the front speaker unit is being used or the VIRTUAL SURROUND DSP program is selected:
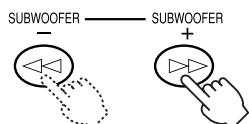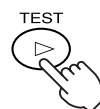 – Right and left main channels: –10 to ±0 dB
  – Rear virtual channels: –3 to +3 dB
  – The minimum level for the main channel is –10 dB, while that for the rear virtual channels is –3 dB.
• When an NX-SW70 is connected:
  – Right and left main channels: –10 to ±0 dB
  – Center channel: –20 to +3 dB
  – Right and left rear channels: –20 to +6 dB
  – The minimum level for the main channel is –10 dB, while that for the rear channels is –20 dB.

16

OPERATING THE UNIT

Enjoying the Home Theater Sound System

This section describes how to select audio output from A/V component such as a TV, VCR, or DVD, LD, CD player, or MD recorder as input source to the Home Theater Sound System AV-S70 and how to adjust levels.

First turn on the playback component and the TV, and then follow the steps given below.
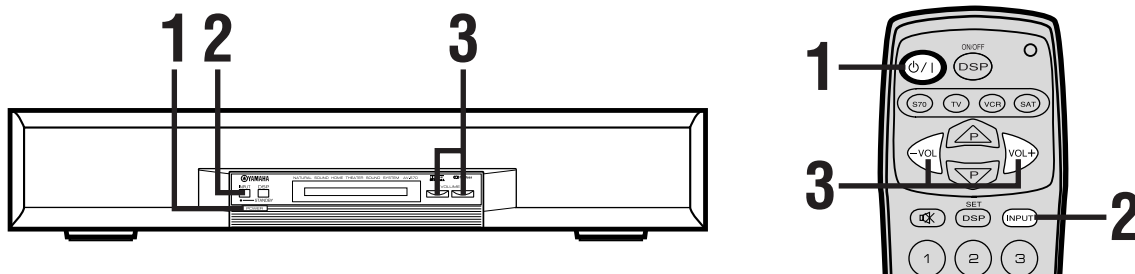
1 Press POWER (or ⏻/⎮ on the remote control) to turn on the power.

Front panel   or   **Remote control**
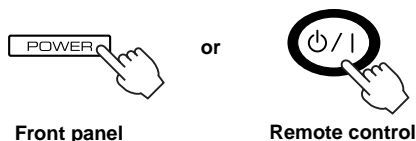
If the STANDBY indicator is lit, turn on the power using ⏻/⎮ on the remote control. If the main power is off (when the STANDBY indicator is not lit), turn on the power by pressing POWER on the front speaker unit.

2 Press the INPUT selector button.

Each time the button is pressed, the input source will be switched in the order: VIDEO → TV → AUX → DIGITAL 1 → DIGITAL 2.

Front panel   or   **Remote control**
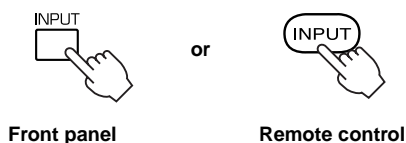
3 Adjust the level using VOLUME +/– (or VOL +/– on the remote control).

Pressing VOLUME + (or VOL + on the remote control) increases the level, while pressing VOLUME – (or VOL – on the remote control) decreases the level.

Front panel   or   **Remote control**
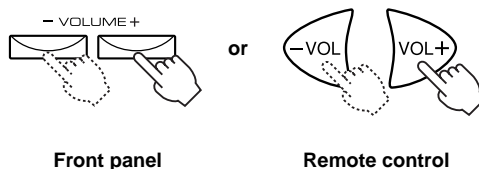
USING CONVENIENT FUNCTIONS

You can use convenient functions with the remote control during audio reproduction.
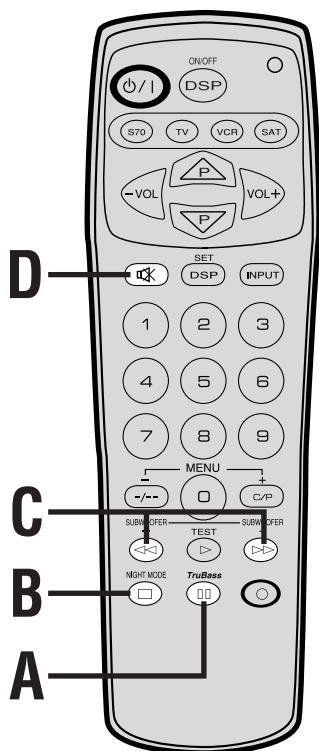
A Increasing the power of the mid-range

Press *TruBass*.
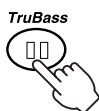
- The TRUBASS* indicator will light in the display.
- This will increase the level of the mid-range, giving more force to dialog and song lyrics.

To cancel TRUBASS mode, press **TruBass** again.

* **(●)TruBass**
TruBass and the (●) symbol are trademarks of SRS Labs, Inc. in the United States and selected foreign countries. TruBass technology is incorporated under license from SRS Labs, Inc.

B Listening to music clearly at low levels

Press NIGHT MODE.

- Sounds will be clear.
- Use this function when it is difficult to output high volumes such as late at night.

To cancel NIGHT MODE, press NIGHT MODE again.

Note
- Volume cannot be decreased using this button. To decrease the volume, press VOLUME – (or VOL – on the remote control).

C Adjusting the subwoofer level

Subwoofer level can be adjusted if a subwoofer is connected.

Pressing SUBWOOFER + increases the level, while pressing SUBWOOFER – decreases the level.
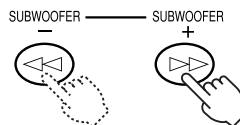
The level can be adjusted within the range –20 dB to +10 dB.

D Temporarily reducing the audio

Press ◻️☓.
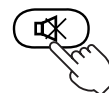
"Mute ON" is displayed while audio is reduced.

To return to the original volume level, press ◻️☓ again.

DSP PROGRAM (DIGITAL SOUND FIELD PROCESSOR EFFECT)

You can recreate the sound and feel of a movie theater, concert hall or other location by selecting from any of seven DSP programs best suited to the source being reproduced. This allows you to enjoy the full experience of digital systems such as DOLBY DIGITAL, DOLBY PRO LOGIC, or YAMAHA CINEMA DSP.

Description of DSP Programs

■ When only the front speaker unit is connected

No.	Program name	Features and applicable sources
1	**VIRTUAL SURROUND** **(input source: Dolby Digital or Dolby Surround)**	For enjoying the virtual surround field created using Dolby Digital or Dolby Pro Logic when using a front speaker unit.
7	**MONO MOVIE**	For old monaural movies.

■ When the front speaker unit and a YAMAHA subwoofer and rear speakers NX-SW70 (sold separately) are connected

| No.	Program name	Features and applicable sources
1	**VIRTUAL SURROUND** **(input source: Dolby Digital or Dolby Surround)**	For enjoying the virtual surround field created using Dolby Digital or Dolby Pro Logic when using a front speaker unit.
2	**DOLBY DIGITAL (input source: Dolby Digital)** **DOLBY PRO LOGIC**	For the straightforward reproduction of movie sound as accurately processed using a Dolby Digital or Dolby Pro Logic decoder.
3	**DOLBY DIGITAL ENHANCED** **(input source: Dolby Digital)** **DOLBY PRO LOGIC ENHANCED**	For adding sound field effects through digital signal processing of the Dolby Digital or Dolby Surround signal.
4	**DIGITAL MOVIE THEATER** **(input source: Dolby Digital)** **70 mm MOVIE THEATER**	For reproduction of the rich, full sound found in a movie theater using the latest movie sound design in which dialog and sound effects are handled separately.
5	**CONCERT**	For reproduction of the type of classical concert hall atmosphere. This sound field is optimally suited for the reproduction of operas and other classical pieces.
6	**SPORTS**	For the wide area sound field effect of a variety show or live broadcast program. Resonant sounds are restained so there is not much variation even when this sound field is used for an extended period of time.
7	**MONO MOVIE**	For old monaural movies. Sound field effects and moderate resonance processing are used to bring fuller life to the monaural audio.

Enjoying DSP Programs

DSP selector button

DSP ON/OFF

DSP
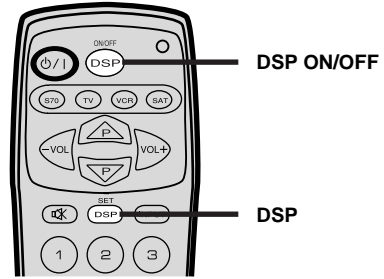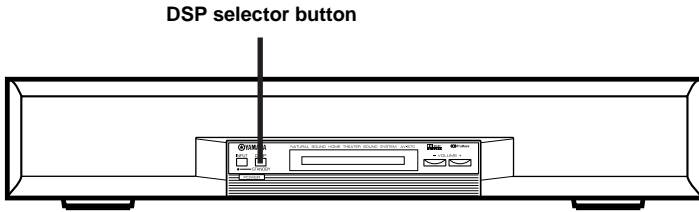
Press the DSP selector button (on the front speaker unit) or DSP (on the remote control).

DSP **or** SET DSP

Front panel   **Remote control**
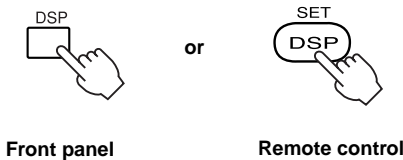
Each time this button is pressed, the DSP program will be selected in the following order and the currently selected DSP program name will be displayed.

● **When only the front speaker unit is connected:**

VIRTUAL SURROUND → MONO MOVIE
↑ _____ DSP OFF ← _____ |

● **When the front speaker unit and a YAMAHA subwoofer and rear speakers NX-SW70 are connected:**

VIRTUAL SURROUND → DOLBY DIGITAL/DOLBY PRO LOGIC
↑ DSP OFF ↓
↑ DOLBY DIGITAL ENHANCED/DOLBY PRO LOGIC ENHANCED
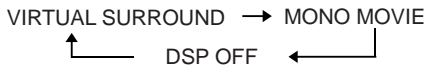MONO MOVIE ↓
↑ SPORTS
↑ CONCERT ← DIGITAL MOVIE THEATER/70 mm MOVIE THEATER
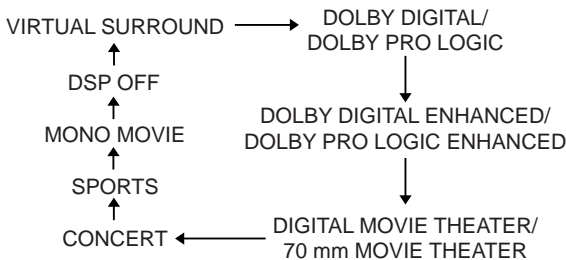
Notes

- The option "DSP OFF" only appears when using the DSP selector button on the front speaker unit.
- Be sure to select the DSP program best suited for the atmosphere of the source being listened to.
- The last DSP program used for each input source (AUX, TV, VIDEO, DIGITAL 1, and DIGITAL 2) is stored in memory so that the DSP program is automatically selected when the input source is selected.

■ To cancel sound field effects (using the remote control)

Press DSP ON/OFF.

Ordinary stereo reproduction will result and "DSP OFF" will be displayed when the sound field effect is canceled. Pressing this button again will cause the sound field effect to return.

■ Processing indicators

A processing indicator will light to show with the type of input signal when reproducing a source using a DSP program.

DD DIGITAL: Lights when reproducing a source encoded with Dolby Digital other than 2-channel.

VIRTUAL and SURROUND: Lights when using VIRTUAL SURROUND DSP program.

DD PRO LOGIC: Lights when reproducing a source encoded with Dolby Digital 2-channel, PCM or an analog source using DSP program No. 2 or 3.

DSP: Lights when reproducing a source using DSP program No. 3 through 7.

Notes

- The VIRTUAL SURROUND, DOLBY DIGITAL/DOLBY PRO LOGIC, DOLBY DIGITAL ENHANCED/DOLBY PRO LOGIC ENHANCED, DIGITAL MOVIE THEATER/70 mm MOVIE THEATER DSP programs are optimum for reproducing visual software encoded with Dolby Digital that displays the ▐▐ DIGITAL or ▐▐ DOLBY SURROUND logo marks.
- The volume level of the right and left main channels may differ based on the input source being used because, except in the case of Dolby Digital, sound field data as actually measured are used.
- Select the DSP program that you feel sounds best for a source regardless of its name.

☀️

- Be sure to minimize the volume level of the TV to maximize the virtual surround effect when reproducing a source with the VIRTUAL SURROUND program.
- Refer to the glossary on page 28.

MENU FUNCTIONS

The menu functions include: "Auto Power" for setting automatic power on/off, "Dimmer" for adjusting display brightness, "Input Name" for naming input, and "Delay Time" for adjusting the delay time used for surround sound.

Adjustments on the menu functions should be performed with the remote control.

Each time MENU on the remote control is pressed, the function displayed will cycle in the order: "Auto Power", "Dimmer", "Input Name", "Delay Time" (only appears when the selected DSP program is DOLBY DIGITAL/ DOLBY PRO LOGIC, or DOLBY DIGITAL ENHANCED/ DOLBY PRO LOGIC ENHANCED), and input display.

INPUT selector button

MENU +/–

MENU
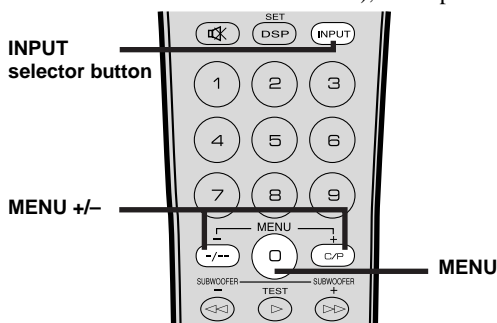
Setting Auto Power On/Off

Auto Power functions as described below.
1. No input signal and no buttons have been operated for 30 minutes.
2. Auto Power Off automatically shuts off the power. (The STANDBY indicator will slowly flash.)
3. If a signal is input, Auto Power On automatically turns the power on. (Or power can be turned on again using ⏻/I on the remote control.)

You can set sensitivity for the Auto Power function or turn the Auto Power function off completely.

1 Press MENU to display "Auto Power".
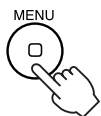
2 To set Auto Power On, use the MENU + or – to select the "Auto Power 2". To set Auto Power Off, use the MENU – to select the "OFF".
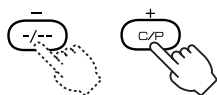
The Auto Power function may not function properly depending on the signal output level of connected component. In this case, you can refer to the table given below to change the sensitivity of the Auto Power function.

Pressing + will cycle through the selections from top to bottom, while pressing – will cycle through the selections from bottom to top.

Display	Setting/Symptom
OFF	Do not use the Auto Power function.
1	When Auto Power On does not function even though a signal arrives or when Auto Power Off results even though there is a continuing signal.
2	Ordinary setting when using the Auto Power function.
3	When Auto Power On results even though no signal has arrived, or when Auto Power Off does not result even though there is no current signal.

To cancel the menu functions, press MENU until the input display returns.

Adjusting Display Brightness

The display brightness of the front speaker unit can be adjusted as follows.

1 Press MENU to display "Dimmer".
The currently brightness level (such as "Dimmer: ±0") will be displayed.
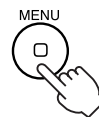
2 Press MENU + or – to adjust the brightness.
Pressing + will brighten the display, while pressing – will dim the display. Brightness can be adjusted from –3 (dimmest) to +3 (brightest).
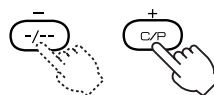
To cancel the menu functions, press MENU until the input display returns.

Naming Input

It is possible to give names to the AUX, DIGITAL 1 and
DIGITAL 2 input terminals. (It is not possible to change the
input names for the TV or VIDEO input terminals.)

This function makes selecting input source easier by
allowing you to give a name that quickly allows you to see
which component is connected to the terminal in question.
For example, if an MD recorder is connected to the AUX,
you can name that source "MD", or if a DVD player is
connected to the DIGITAL 1 terminal, you can name that
source "DVD".

1 **Press MENU to display "Input Name".**
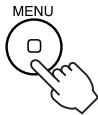
MENU

2 **Press the INPUT selector button and select the
input you want to name (AUX, DIGITAL 1 or
DIGITAL 2).**

INPUT
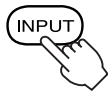
3 **Press MENU + or – to select the name.**

– +
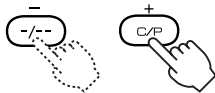
If you select AUX under step 2 above, names will be
displayed in the following order when you press +.

AUX ⟶ AUX: VIDEO2 ⟶ AUX: CABLE
↑   ↓
AUX: GAME   AUX: SAT
↑   ↓
AUX: MD ⟵ AUX: CD ⟵ AUX: LD ⟵ AUX: DVD
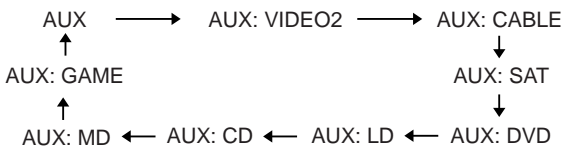
If you select DIGITAL 1 or 2 under step 2 above,
names will be displayed in the following order when
you press +.

DIGITAL 1 ⟶ D1: DVD ⟶ D1: LD
↑   ↓
D1: MD ⟵ D1: CD ⟵ D1: SAT
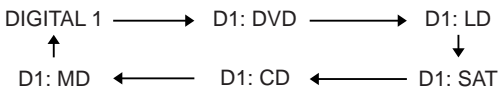
Notes

- "D1:" is displayed before the name when DIGITAL 1 has been
  selected, while "D2:" is displayed before the name when
  DIGITAL 2 has been selected.
- Pressing – displays the names in reverse order.

4 **You can repeat steps 1 through 3 to give
names to AUX, DIGITAL 1 and DIGITAL 2 input
terminals.**

To cancel the menu functions, press MENU until the input
display returns.

Adjusting the Delay Time

When the selected DSP program is DOLBY DIGITAL/
DOLBY PRO LOGIC or DOLBY DIGITAL ENHANCED/
DOLBY PRO LOGIC ENHANCED, it is possible to adjust
the delay time. The delay time is that time difference
between when the main channel sound can be heard and the
surround sound can be heard. Although it is possible to set
the delay time separately for Dolby Digital and Dolby
Surround input, if the Dolby Digital (or Dolby Surround)
delay time is adjusted, the level for Dolby Surround (or
Dolby Digital) will also be raised or lowered accordingly.

Setting a longer delay time makes the sound field feel
larger, while setting a shorter delay time makes it feel
smaller.

1 **Press MENU to display "Delay Time".**
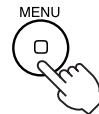
MENU

2 **Press MENU + or – to adjust the delay time.**

– +

☀
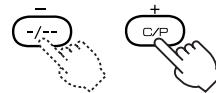
- Adjustable range
  – For Dolby Digital input: 0 to +15 ms
  – For Dolby Surround input: 15 to 30 ms

To cancel the menu functions, press MENU until the input
display returns.

CAUTION

The variable sound intensity range is large in the case of
CDs and MDs. Listening for an extended period of time
at or near maximum volume to music that includes
sudden changes from soft to loud noises may damage the
speakers.

22

OPERATING OTHER COMPONENTS USING THE REMOTE CONTROL

Setting the manufacturer code for your TV, VCR or satellite tuner/cable TV on the remote control allows you to operate the front speaker unit and your TV, VCR or satellite tuner/cable TV by remote control. Note that there are two methods for setting the code: manual preset and auto preset.

Notes

• Remote control of some component may not be possible depending on the model and the year of make even though its manufacturer is listed on page i (at the end of this manual).
• Depending on the model in question, some component from other manufacturers cannot be controlled, or only limited functions can be controlled, even though the proper manufacturer code has been set. If you encounter this problem, please use the remote control supplied with the component in question.
• Setting the manufacture code can not be performed if your component to be controlled does not support remote control operation.

Setting the Manufacturer Code

■ Using manual preset
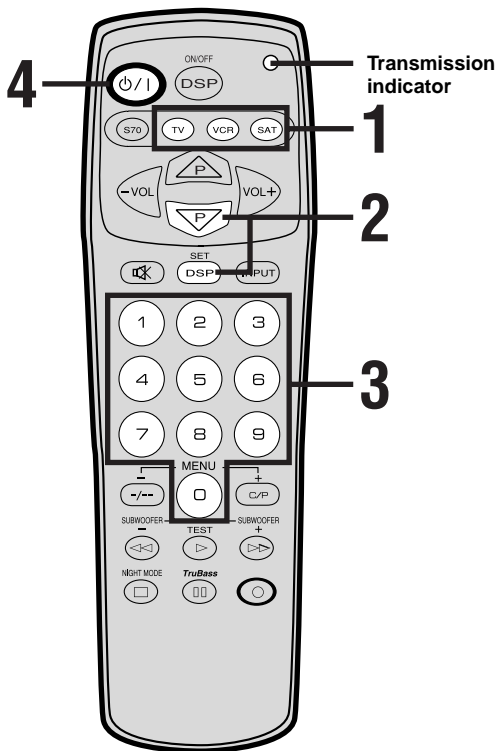
1 Press the remote control selector button (TV, VCR or SAT) for which the manufacturer code is to be set.

The signals for controlling the front speaker unit have already been set for the S70 button so that only the manufacturer code for the TV, VCR or SAT needs to be set. A manufacturer code can be set for a single button if necessary.

2 Hold down SET and press ▽ until the transmission indicator lights.

The indicator will light.
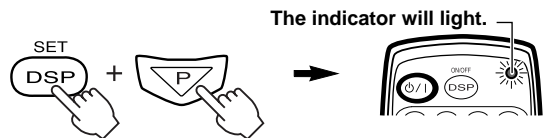
3 While the transmission indicator is lit, use the numeric buttons to enter the 4-digit manufacturer code for the component to be controlled.

The indicator will go out.
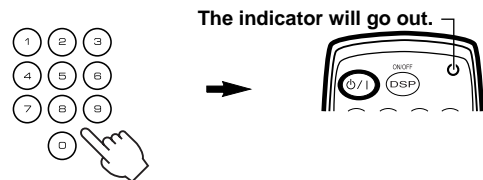
The transmission indicator will go out, the code has been set properly. (The code has not been set properly if the indicator flashes and then goes out.)
Refer to page i at the end of this manual for a list of manufacturer codes.

4 Press ⏻/| and check that the component to be controlled turns on and off.

REMOTE CONTROL

English

23

■ Using auto preset

Transmission indicator

2

3,5

4

3 Hold down SET and press $\bigtriangledown$ until the transmission indicator lights.

SET

DSP + P ➡ **The indicator will light.**

4 While the transmission indicator is lit, using the numeric buttons, if you selected "TV" under step 2, enter "0001"; if you selected "VCR", enter "0002"; and if you selected "SAT", enter "0003" for satellite tuner or "0004" for cable TV.

The indicator will go out.

5 Hold down SET and press $\bigtriangledown$ until the transmission indicator lights.

SET

DSP + P ➡ **The indicator will light.**

1 Turn on the power of the component (TV, VCR or satellite tuner/cable TV) to be controlled by the remote control.

2 Press the remote control selector button corresponding to the component for which auto preset is to be performed. (Press "TV" for TV, "VCR" for VCR, and "SAT" for satellite tuner/cable TV.)

The signals for controlling the front speaker unit have already been set for the S70 button so that only the manufacturer code for the TV, VCR or SAT needs to be set. A manufacturer code can be set for a single button if necessary.

TV   VCR   SAT

24

7 **Press the remote control selector button you pressed in step 2.**

The indicator will go out.
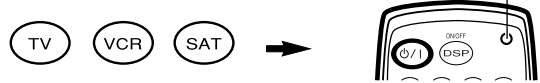
The transmission indicator will go out once auto preset has been performed properly.

Note

• During step 6, if you press ⏻/I about 300 times and the transmission indicator flashes twice slowly and the component's power still has not turned off, this indicates that auto preset cannot be performed for the component in question. Check that the component to be controlled supports remote control operation. You may also try performing manual preset.

■ **Precautions when performing preset**

The transmission indicator will go out once the manufacturer code has been set properly.

If the transmission indicator does not go out, or if it flashes and then goes out, repeat the procedure from step 1. Pay attention to the following points when you repeat the preset procedure.

• Check the manufacturer code number.
• Check that the correct remote control selector button has been selected when setting the manufacturer code.
• If more than one code is given for a manufacturer, try entering each code in the order given.
• Remove and replace the remote control's batteries (complete this step within 2 minutes) and then repeat the procedure.

■ **To clear a manufacturer code**

Perform the procedure "Using manual preset" described on page 23 and enter the following codes when you reach step 3.

• To clear the "TV" button: 0000
• To clear the "VCR" button: 0000
• To clear the "SAT" button: 0000
• To clear all buttons for "TV", "VCR" and "SAT": 9990

Transmission indicator

6 **Point the remote control at the component to be controlled (the component turned on in step 1) and press ⏻/I repeatedly until the component's power turns off.**

If the transmission indicator flashes twice, this indicates that you have cycled through all the codes stored in the memory of the remote control. Up to 300 manufacturer codes (for TV) may be stored in the memory of the remote control. Since a manufacturer code is set by pressing ⏻/I and cycling in order through these codes, you may need to press ⏻/I up to 300 times to reach the proper code.

🔆

Up to 120 manufacturer codes for VCR, 170 for satellite tuner and 20 for cable TV may be stored in the memory of the remote control.

Note

• If you accidentally press ⏻/I too many times after the power is turned off, you may press 🔇 the same number of times to go through the manufacturer codes in reverse order. The correct manufacturer code will not be set unless you do this.

REMOTE CONTROL

English

25

Controlling a TV

You can control your TV by setting the corresponding manufacturer code for the remote control selector button "TV".

Press TV.

TV power ON/OFF

Decreases TV volume

Selects the next lower channel

Mutes the TV

Selects the next higher channel

Increases TV volume

Selects TV input

Used to select the channel

Used to select the channel/program

Used to select 2-digit channels

Rewinds the VCR*

Stops the VCR*

Pauses the VCR*

Fast forwards the VCR*

Plays the VCR*

Records on the VCR*
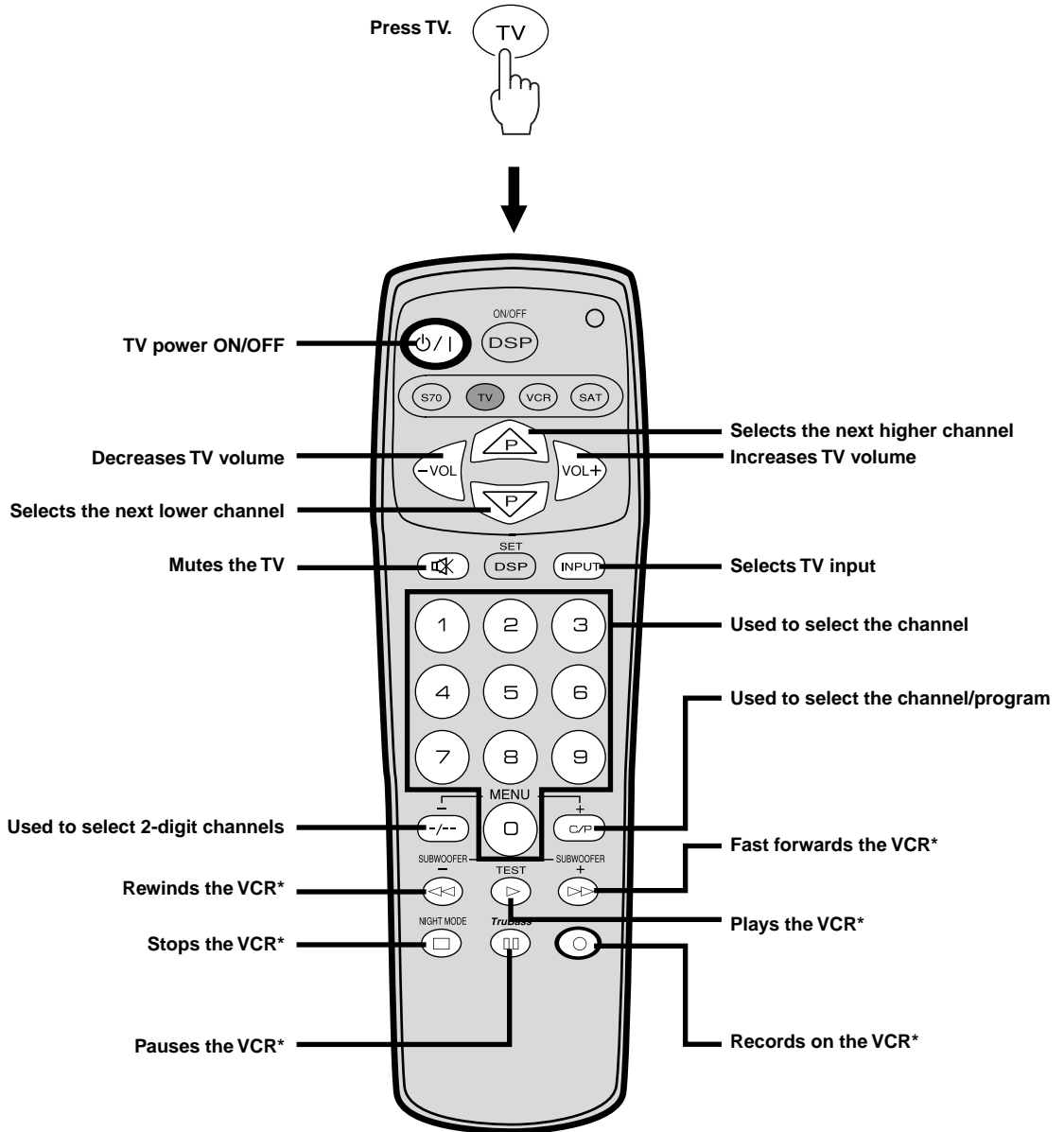
A VCR can be controlled using * marked buttons once the manufacturer code for that VCR has been set for the remote control selector button "VCR".

Controlling a VCR

You can control your VCR by setting the corresponding manufacturer code for the remote control selector button "VCR".

Press VCR. (VCR)

VCR power ON/OFF

Decreases TV volume*

Selects the next lower channel

Mutes the TV*

Selects the next higher channel

Increases TV volume*

Selects TV input*

Used to select the channel

Rewind

Fast forward

Stop

Play

Pause

Record
This button needs to be pressed twice in the case of some models for the VCR to begin recording.
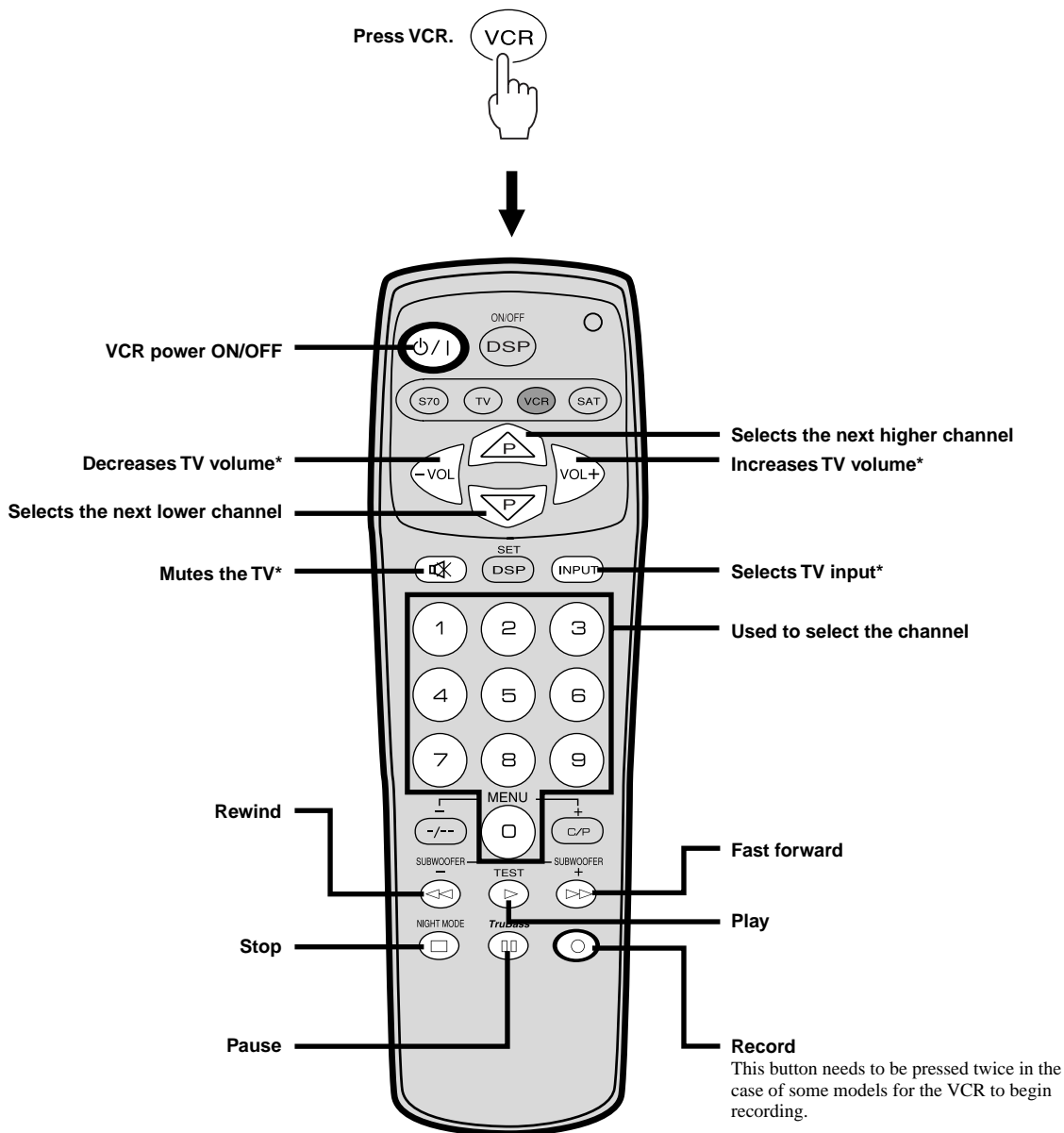
A TV can be controlled using * marked buttons once the manufacturer code for that TV has been set for the remote control select button "TV".

REMOTE CONTROL

English

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GLOSSARY

■ Encode/Decode

When a signal or other information is processed, compressed and digitized, this is called encoding. Encoding can be used to record an extremely large amount of information on a single CD or DVD.

An encoded signal cannot be listened to directly. It must be returned to its original state (i.e. audible sound) and this is called decoding.

■ Sound field

Not all sound travels from the sound source directly into the human ear, but instead reflects off of walls, ceilings and other objects to arrive at the ear slightly delayed (early reflection). It may also reflect repeatedly in a complicated manner before reaching the ear (subsequent reverberation). A human is able to perceive the size and shape of a location based on the various sounds heard in this way. The specific acoustic space of a particular building is called a sound field.

■ Dolby Surround

In movie theaters and in live theaters, the spectators are surrounded by many speakers and sound effects geared to each scene are used to make sound move from front to back and right to left. This gives the sound a three dimensional feel that surrounds the entire body. Dolby Surround is used to implement this realistic effect. Originally, the Dolby Surround system consisted of a total of four channels: two front channels (right and left), one center channel, and one rear channel. Later, two-channel stereo compatibility was added to for broadcast and video media used in the home. The ability to easily set up a home AV system capable of stereo reproduction is one of the biggest features of Dolby Surround.

■ Dolby Digital

Dolby Digital consists of a total of five channels: three front channels and two rear channels, plus a distinct LFE channel for low frequency effect. It is therefore commonly referred to as a 5.1 channel system. Using digital compression technology for all 5.1 channels, Dolby Digital can be used for completely independent audio reproduction. Dolby Digital offers superior sound quality and a more three dimensional surround effect in comparison to the older Dolby Surround, which mixes four channels (three front and one rear) into two-channel stereo and separates them using a matrix circuit.

■ Virtual surround

We basically perceive the direction from which sounds come to us based on the difference in time they reach the right and left ears and differences in sound level. Virtual technology is based on this property of the human ear. A DSP (digital sound field processor — a form of digital signal processing) and right and left front speakers are used so that the listener feels like he or she is hearing sounds that come from virtual speakers located in directions other than just the two physical speakers. This allows the listener to experience surround effects as if rear speakers were present as in a five-speaker system.

■ YAMAHA DSP (Digital Sound Field Processor)

YAMAHA technicians traveled to world famous concert halls, opera houses and other locations just to measure acoustical information such as the direction, intensity, band characteristics, and delay time of reflected sounds. This wealth of information was then put on a ROM.

Using a built-in YAMAHA DSP (digital sound field processor) to create sound fields, this front speaker unit allows you to freely select various sound field programs created from this actual acoustical data so that you can reproduce the sound field of famous halls and live houses right in your listening room.

Movie makers design sounds for a movie so that the sound and screen become one. Dialog is positioned right on the screen, sound effects behind the screen, music behind that, and surround effects wrap around the audience.

CINEMA DSP is a program for use in AV reproduction that has evolved from YAMAHA DSP. Fusing the movie sound decoders, Dolby Pro Logic and Dolby Digital, with YAMAHA DSP, allows you to reproduce the type of surround sound field of the quality found on a dubbing stage designed to optimize movie surround conditions. (A dubbing stage is the final mix used to complete the final sound design for a movie.)

By adding YAMAHA DSP processing to both the right and left front channels and the center channel, the CINEMA DSP program wraps the audience in a surround sound field that not only makes dialog real, but penetrates and surrounds the screen to give depth to sound effects and music as well as a smooth sense of movement to sound sources.

TROUBLESHOOTING

Be sure to investigate thoroughly before requesting repairs or after service. If it cannot be corrected, or if the problem is not listed in the SYMPTOM column, disconnect the power cord and contact your authorized YAMAHA dealer or service center.

Notes

• Sometimes the unit may cease to recognize operations due to a mistaken operation or as a result of strong external noise (such as irregular voltage due to shock of impact, excessive static electricity, or lightning strike). If this happens, first disconnect the power cord, wait about 30 seconds, re-connect the power cord, and try the desired operation again.

• When requesting repairs or after service of the YAMAHA subwoofer and rear speakers NX-SW70 (sold separately), be sure to bring along with this unit.

■ General

SYMPTOM	CHECK	Refer to page
No sound output at all.	• Is the AC power supply cord connected?	14
	• Is the TV or VCR connected correctly?	10 – 12
	• Is the input source selected correctly?	17
	• Has this unit's audio temporarily been lowered?	18
A "humming" noise is present.	• Hum caused by external electromagnetic waves may be generated. Try inverting the right-left polarity of the power cord and re-insert into the AC outlet.	14
The STANDBY indicator flashes slowly.	• The unit is in Auto Power Off mode. Turn off the main power if the unit is not to be used for an extended period of time.	21
There is noise in the tuner or TV and the video image is unstable.	• Is a tuner or TV that uses an indoor antenna located near the unit? Use of an outdoor antenna is recommended.	—

■ When using a DSP program

SYMPTOM	CHECK	Refer to page
Movie dialog and other audio is difficult to hear.	• Are you using one of the DSP programs CONCERT or SPORTS? Select the other program.	19, 20

■ When using the remote control

SYMPTOM	CHECK	Refer to page
The remote control does not function properly.	• Are the batteries used up?	3
	• Is the remote control pointed at the sensor?	3
	• Is the remote control too far from or too close to the sensor?	3
	• Is direct sunlight or other intense light (such as an inverter fluorescent lamp) striking the sensor?	3
	• Is another remote control being used at the same time?	3
	• Have the batteries been inserted in the correct direction?	2
	• Has the remote control selector button "S70" been pressed? Press "S70" when you want to control this unit after controlling another component.	—
Cannot control other component.	• Has the correct manufacturer code been set?	23
	• Has the remote control selector button corresponding to the component to be controlled been pressed?	26, 27

APPENDIX

English

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SPECIFICATIONS

Amplifier Section

Rated Output
      Front .... 30 W + 30 W (1 kHz, 10% THD, 6 ohms)

Signal-to-Noise Ratio .... 85 dB (AUX, IHF-A)

Total Harmonic Distortion
      .... 0.08% (Input: AUX, 1 kHz, 12.5 W/6 ohms)

Input Sensitivity/Impedance .... AUX, 200 mV/50 k-ohms

Speaker Section

Front Speakers
      Type .... Bass reflex
      Speakers .... 8-cm cone x 2, magnetically shielded
      Maximum Input Power .... 30 W x 2
      Impedance .... 6 ohms

General

Power Supply .... AC 230 V, 50 Hz

Power Consumption .... 68 W

Dimensions (W x H x D) .... 600 x 110 x 243 mm

Weight .... 7.0 kg

Accessories .... Remote control
      .... UM-4 batteries (x 4)
      .... Audio connection cable (2 pin, 3 m)
      .... Connection guide
      .... Velcro strips (two sets)

Specifications are subject to change without notice.

INDEX

APPENDIX

English

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LIST OF MANUFACTURER'S CODES
LISTES DES CODES FABRICANT
VERZEICHNIS DER HERSTELLERCODES
LISTA ÖVER TILLVERKARKODER
ELENCO DEI CODICI DEL FABBRICANTE
LISTA DE CÓDIGOS DE FABRICANTES
LIJST VAN CODES VAN FABRIKANT

TV

ADMIRAL	0411, 0451, 0911, 1021, 1081
AIKO	0891
AKAI	0061, 0101, 0231, 1191, 1351, 1591, 1641, 1791, 1891, 1981
AKURA	1331
ALBA	1241, 1331, 2361
ALBIRAL	1971
AMSTRAD	1301, 1511
ANAM	1171
ARC EN CIEL	0571
ARCAM	0571, 0761
ARISTONA	0751
ARTHUR MARTIN	0451, 1641
ASA	0411, 0451, 0521, 0781, 0871, 1021, 1081, 1421, 2051, 2091, 2151, 2551
ASTRA	1511
ATANTIC	0761
ATLANTIC	0761
ATORI	1511
AUDIOSONIC	1181, 1321, 1411
AUSIND	0491, 1411
AUTOVOX	0091, 0351, 0481, 0491, 0601, 0781, 0951, 1051, 1081, 1391, 1421
BAIRD	1101, 1351
BANG & OLUFSEN	1081
BASIC LINE	1321, 1331
BAUER	1451
BAUR	0041, 0061, 0121, 0131, 0221, 1561
BEKO	2491, 2501
BLAUPUNKT	0221, 0231, 0241, 0251, 0471, 0741, 2201, 2211, 2221, 2231, 2241, 2261, 2571, 2581
BRANDT	0571, 0651, 0731, 0901, 1821
BRIGMTON	1321, 1511
BRIONVEGA	1021, 1051, 1081
BRITANNIA	0761
BRUNS	0821, 0991, 1021, 1081
BSR	0391, 0691, 1621, 1901, 1981
BUSH	0451, 1241, 1331, 1641, 1741, 2131, 2151
BUSH(UK)	0481, 1561, 1611
CANDLE	0791
CENTURY	1021, 1081

CGE	0491, 0811, 0981, 1401, 1531, 1611, 1621, 1981, 2201, 2251, 2271
CITIZEN	0791
CLARIVOX	0821, 0961, 1971
CLATRONIC	1181, 1331
CONCERTO	0791
CONDOR	0761
CONTEC	0151, 1171
CONTINENTAL EDISON	0571, 0651, 0901
CRAIG	1171
CROSLEY	0021, 0491, 1021, 1081, 1401, 1981, 2201, 2251, 2271
CROWN	2541
CTC CLATRONIC	0261
CXC	1171
DAEWOO	0101, 1501, 1511, 2611
DANSAI	0101
DECCA	0271, 0581, 0601, 0971, 1101, 1691
DECCA(UK)	0271, 0581, 0601, 1101, 1681
DEGRAAF	0451, 1351
DIXI	0991, 1511
DOMEOS	0101
DORIC	1031
DUAL	0091, 0601, 1611, 1641, 2101
DUAL-TEC	0601, 1511, 1621, 2111
DUMONT	0261, 0521, 0781, 1021, 1081, 1981, 2121, 2151
DYNATRON	0101
ELBE	1551, 1971, 2031
ELECTRO TECH	1511
ELEKTRONSKA	0771
ELMAN	0261, 1621
ELTA	1511
EMERSON	0921, 1021, 1081, 1121, 1171, 1261, 1301
ERRES	0101
ETRON	1981
EUROPHON	0261, 0581, 0601, 0771, 1091, 1621, 2001
FENNER	0101, 1511
FERGUSON	0281, 0371, 0551, 0651, 0781, 0861, 0881, 1131, 1181, 1361, 1461, 1971, 1991, 2281, 2311, 2341
FIDELITY	0451, 0761, 2281

FIDELITY(UK)	0561, 0591, 1931, 2281
FILMNET	1141
FINLANDIA	0451, 2321
FINLUX	0021, 0261, 0491, 0521, 0781, 0811, 0871, 1081, 1411, 1421, 1981, 2051, 2091, 2121, 2151, 2551
FIRST LINE	1511, 1981
FISHER	0021, 0091, 0141, 0511, 0601, 0801, 0821, 0981, 1021, 1081, 1981, 2091
FORGESTONE	2281
FORMENTI	0451, 0491, 0761, 1081, 1451, 1541, 1981
FORMENTI-PHOENIX	0021, 0431, 0451, 0591, 1411
FORTRESS	1081
FRONTECH	0451, 1181, 1981
FUJITSU	1261
FUNAI	0391, 0691, 1171, 1181, 1261
FUTURETECH	1171
GBC	0021, 0141, 1321, 1511, 1621, 1981
GEC	0451, 1101, 1281, 2321
GEC(UK)	0031, 0081, 0581, 0601, 1101, 1281, 1561
GELOSO	0021, 0411, 0451, 1321, 1511, 1621, 1981
GENERAL TECHNIC	2681
GENEXXA	0451, 1331
GOLDSTAR	0591, 0601, 0761, 0791, 1371, 1491, 1511, 1561, 1621, 1641
GOODMANS	O141, 1101, 1371, 1641, 2301
GORENJE	0981, 1061
GRAETZ	0451
GRANADA	0141, 0451, 0491, 0581, 0601, 1101, 1111, 1351, 1981, 2321
GRANADA(UK)	0081, 0141, 0451, 0491, 0581, 0601, 1031, 1311, 1521, 1561, 1641

GRUNDIG	0221, 0231, 0471, 0491, 0711, 0741, 1381, 2021, 2041, 2141, 2151
HANSEATIC	0021, 0121, 0141, 0431, 0591, 1561
HANTAREX	0581
HEMMERMANN	0061
HIFIVOX	0331, 0571
HINARI	0071, 0141, 0451, 1261, 1351, 1511, 1641, 1981, 2011
HITACHI	0001, 0011, 0031, 0081, 0141, 0291, 0331, 0341, 0451, 0601, 0631, 0701, 1281, 1561, 1601, 1821, 1831, 1841, 1861, 1871, 1881, 1891, 1941, 1981, 2051, 2321, 2341
HYPER	0591, 0601, 1511, 1621
IMPERIAL	0451, 0491, 0811, 0981, 1401, 1611, 1621, 2201, 2251, 2271
INGERSOL	1511
INNO HIT	0581, 0601, 0841, 1101, 1331, 1371, 1511, 2011
INNOVATION	2591, 2601, 2611, 2621, 2641, 2651, 2661, 2711, 2721, 2761, 2771, 2781
INTERFUNK	0031, 0041, 0061, 0121, 0181, 0451, 0491, 1081, 1641, 1791, 1821, 1981, 2231
IRRADIO	0491, 1321, 1331, 1371, 1411, 1511, 2011
ISUKAI	1331
ITT	0031, 0041, 0051, 0061, 0071, 0081, 0181, 0411, 0451, 0491, 1241, 1291, 1351, 1501, 1601, 1641, 1741, 1921, 1981, 2091, 2331, 2431
ITT-NOKIA	0031, 0041, 0051, 0061, 0071, 0081, 0181, 0411, 0451, 0491, 1241, 1291, 1351, 1501, 1601, 1641, 1741, 1921, 1981, 2091, 2331, 2431

Brand	Codes
JVC	0071, 0721, 1441, 1581, 1591, 1741, 1791
KAISUI	0591, 1321, 1331
KAMOSONIC	0601
KARCHER	0591, 0601, 0841, 1091, 1321, 1511, 1561, 2051
KAWASHO	0761
KENDO	0261
KENNEDY	0021, 0351, 0951, 1981
KNEISSEL	2911
KONKA	2701
KORTING	0431, 1011, 1021, 1081, 1541
KTV	0601, 1171
LENOIR	0601, 1511
LEYEO	1181
LIFETEC	2591, 2601, 2611, 2621, 2641, 2651, 2661, 2671, 2681, 2691, 2711, 2761, 2771, 2781
LOEWE OPTA	0121, 0131, 0581, 0611, 1081
LOGIC	1691, 2281
LOGIK	0551, 1681, 2281
LOWEWE	0831
LUMA	0351, 0451, 1901
LUXMAN	0791
LUXMAN STEREO TUNER	0791
LUXOR	0001, 0061, 0181, 0341, 0421, 0451, 0461, 0491, 0601, 0671, 1351, 1371, 1561, 1601, 1911, 1921, 1981
LYCO	1181
MAGNADYNE	0021, 0061, 0261, 0581, 0641, 0771, 1021, 1081, 1621, 1981
MAGNAFON	0261, 0491, 0581, 0591, 0641, 0761, 1091, 2001
MAGNUM	2851, 2871, 2881, 2891, 2901
MANESTH	0101
MARANTZ	0101
MARELLI	1081
MARK	0101
MATSUI	0061, 0451, 0601, 0691, 1101, 1151, 1241, 1271, 1301, 1511, 1561, 1681, 1691
MAXIMAL	0071, 1981
MCMICHAEL	1281
MEDION	2591, 2601, 2611, 2621, 2641, 2651, 2661, 2671, 2681, 2691, 2711, 2721, 2761, 2771, 2781
MEMOREX	1511
METRO	2851, 2861
METZ	0231, 0741, 1001, 1041, 1081, 1481, 2071, 2081
MGA	1231
MICROMAXX	2591, 2621, 2641, 2651, 2711, 2761, 2771, 2781
MINERVA	0221, 0231, 0491, 1381, 2141, 2151
MISTRAL	2281
MITSUBISHI	0141, 0201, 0231, 0661, 1191, 1201, 1231, 1671, 1691, 1741
MIVAR	0491, 0501, 0581, 0591, 0761, 0771, 1371, 1431, 2031, 2801, 2811, 2831
MTC	0791
MULTITECH	0261, 0581, 0601, 0641, 0981, 1321, 1511
MURPHY	0451, 2091
MURPHY(UK)	0081, 1031
N.E.I.	0101, 0961
NAD	1341
NEC	0141, 1721, 1731
NECKERMANN	0451, 0601, 0981, 1081, 1561, 1931, 1981, 2211, 2231, 2241
NEDIATOR	0101
NICAMAGIC	0761
NIKKAI	1101, 1331, 1641, 1701, 2011
NOBLIKO	0261, 0491, 0591, 0641, 1381, 1411
NOGAMATIC	0571
NOKIA	0031, 0041, 0051, 0061, 0071, 0081, 0181, 0411, 0451, 0491, 1241, 1291, 1351, 1501, 1601, 1641, 1741, 1921, 1981, 2091, 2331, 2431, 2461, 2791
NORDMENDE	0031, 0291, 0331, 0451, 0531, 0541, 0571, 1051, 1131
NORDMENDE	1591, 1791, 1811, 1821, 1891, 1941, 2631
OCEANIC	0321, 1651, 1981
OCEANIC(F)	0031, 0061, 0321, 0441, 1661
ONCEAS	0601
ONWA	1171
ORION	0061, 0391, 0691, 0851, 1211, 1241, 1251, 1301, 1481, 1511, 1681, 1691, 1981, 2371, 2421
OSAKA	2011
OSAKI	1101, 1331, 2011
OSUME	0151
OTTO VERSAND	0021, 0121, 0141, 0221, 0601, 1561, 1741, 1981
PAEL	0591, 1411
PANASONIC	0031, 0201, 0211, 0451, 0701, 1311, 1751, 1961, 2561, 2741
PANORAMIC	2351
PATHE MARCONI	0571
PATHE' CINEMA(F)	0431, 0591, 1621, 1661, 1971
PAUSA	1511
PAUZA	1511
PERDIO	0891, 1101
PHILCO	0021, 0491, 0811, 0981, 1021, 1081, 1401, 1611, 1621, 1751, 2201, 2251, 2271, 2451, 2471
PHILIPS	0101, 0361, 0591, 0621, 0681, 0751, 0761, 1021, 1081, 1281, 2031, 2281, 2291, 2431, 2441, 2511, 2731
PHOENIX	1081
PHONOLA	0751, 1081
PIONEER	0291, 0451, 1341, 1821
PRANDONI-PRINCE	0411, 0451, 0491, 0581, 1411
PRANDONI-PROMCE	0451, 0491, 0581
PRIMA	0451
PROFEX	1981
PROTECH	0641, 1181, 1981
QUELLE	0041, 0061, 0121, 0221, 0231, 0391, 0491, 0521, 0601, 0781, 1371, 1381, 1411, 1421, 1641, 1681, 2051, 2091, 2141, 2151, 2201, 2211, 2231, 2241, 2251, 2271, 2551, 2571, 2581
RADIOMARELLI	0101, 0451, 0661, 0771, 1081
RADIONETTE	0031, 2051, 2091
RADIOLA	2291
RANK	0481, 2151
RBM	2131, 2151
RBM(UK)	0481
REDIFFUSION	0451, 0661, 1641, 1981, 2331
REDIFFUSION(UK)	0061, 0081, 1031
REX	0071, 0101, 0351, 0411, 0451, 0951, 1901, 2061, 2101, 2111
RFT	0991, 2511
ROADSTAR	1321, 1511
ROTEL	0151
SABA	0291, 0331, 0421, 0451, 0531, 0541, 0571, 0581, 0651, 0731, 0931, 1021, 1071, 1081, 1131, 1791, 1811, 1821, 1891, 1941, 2631
SACCS	1971
SAISHO	0451, 0601, 1161, 1241, 1301, 1511, 1671, 1681, 1691
SALORA	0011, 0041, 0061, 0071, 0341, 0451, 0671, 1291, 1351, 1521, 1561, 1601, 1641, 1911, 1921, 1931, 1981, 2321
SAMBERS	0261, 0491, 0581, 0641, 1091, 1371, 1411, 2001
SAMSUNG	0101, 0601, 0841, 0981, 1101, 1181, 1371, 1511, 2011, 2841
SANYO	0141, 0151, 0401, 0601, 0801, 0821, 0981, 1021, 1101, 1111, 1291, 1351, 1691, 1741, 2051, 2091, 2551
SBR	0681, 0751, 1281, 2281
SCHAUB LORENZ	0451
SCHNEIDER	0021, 0071, 0091, 0451, 0511, 0591, 0601, 0751, 1321, 1361, 1621, 1641, 2101, 2111, 2291
SCOTT	1171, 1261
SEG	0261, 0601, 0821, 0991
SEI	0641, 0691, 1081, 1301, 1481, 1981
SELECO	0071, 0101, 0351, 0411, 0451, 0951, 1901, 2061, 2101, 2111
SENTRA	1601
SHARP	0141, 0151, 0191, 1761, 1781
SIAREM	0021, 0261, 0581, 0641, 1021, 1081, 1981
SICATEL	1971
SIEMENS	0151, 0221, 0231, 0451, 0741, 2011, 2201, 2211, 2221, 2231, 2241, 2261, 2571, 2581
SILVER	1181
SINGER	0021, 0261, 1021, 1081
SINUDYNE	0101, 0021, 0061, 0261, 0391, 0641, 0691, 0851, 0941, 1021, 1081, 1241, 1301, 1321, 1481, 1631, 1981
SKANTIC	0451
SOLAVOX	0451, 1641, 2011
SONOKO	1181, 1511, 0101
SONY	0141, 0171, 1121, 1681, 1691, 2751, 2821
SOUNDESIGN	1171
SSS	1171
STERN	0071, 0101, 0351, 0411, 0451, 0951, 1901, 2061, 2101, 2111
SUNKAI	0691
SUPRA	0791
TANDBERG	0161, 0331, 0611, 1021, 1421, 1771, 1791, 2081
TANDY	0451, 0191, 1331, 1531
TASHIKO	0141
TATUNG	0271, 0581, 0601, 0971, 1101, 1681, 1691
TCM	2621, 2641, 2711, 2761, 2771, 2781
TECHNICS	1311

Brand	Codes
TECHWOOD	0791
TEKNIKA	1171, 1231, 1261
TELE	1141
TELEAVIA	0571, 0651, 0731, 1821
TELEFUNKEN	0291, 0301, 0311, 0551, 0731, 1131, 1471, 1591, 1791, 1801, 1811, 1821, 1991, 2161, 2171, 2181, 2191, 2201, 2251, 2271, 2521, 2631
TELETECH	1511
TEMPEST	2381, 2391, 2401, 2411
TENSAI	1331, 2091
TEXET	0601
THOMSON	0331, 0481, 0531, 0571, 0631, 0651, 0731, 0901, 1241, 1571, 1791, 1811, 1821, 1891, 1941, 2531
THORN	0741, 0861, 2091, 2251, 2271, 2281
THORN-FERGUSON	0281, 0371, 0551, 0651, 0781, 0861, 0881, 1131, 1181, 1361, 1461, 1971, 1991
TMK	0141, 0791, 1471
TOSHIBA	0141, 0381, 0481, 1221, 1271, 1701, 1711, 1741, 1851, 2151
TRANS CONTINENS	0451
TRISTAR	2281
TRIUMPH	0481, 0581, 2121
UHER	0431, 0451, 0481, 0491, 0511, 1311, 1541
ULTRAVOX	0021, 0261, 0591, 1021, 1081, 1981
UNIVERSUM	1181, 2051
UNIVOX	1971
VEGAVOX	0811
VEXA	0101, 1511
VICTOR	1441, 1591
VIDEOTON	2481
VORTEC	0101, 0651
VOXSON	0411, 0451, 0491, 1021, 1081
WALTHAM	0451
WATSON	0431, 2201, 2241
WATT RADIO	0021, 0061, 0261, 0591, 0641, 0761, 1091, 1971, 1981, 2001
WEGA	0141, 1081, 1981
WEGA COLOR	1021
WELTBLICK	0101
WESTON	1621
WHITE WESTINGHOUSE	0101, 0261, 0431, 0591, 0761, 1401, 1541
YOKO	0601, 1511
ZANUSSI	0071, 0101, 0351, 0411, 0451, 0951, 1901, 2061, 2101, 2111
ZOPPAS	0451

VCR

Brand	Codes
AIWA	0042, 0352, 0432
AKAI	0042, 0422, 0492, 0582, 0612, 0642, 0652, 0762, 0912
ALBA	0002, 0112, 0282, 0332, 0342, 0972
AMSTRAD	0322, 0432, 0452
ANITECH	0002
ANITSCH	1002
ASA	0012, 0052
AUDIOSONIC	0002
BAIRD	0042, 0282, 0492
BANG & OLUFSEN	0042
BAUR	0052, 0062, 0812
BLAUPUNKT	0062, 0092, 0252, 0462, 0672, 0992
BRIONVEGA	0032
BUSH	0002, 0282, 0332, 0342, 0512, 0972
BUSH(UK)	0812
CAPEHART	0112
CGE	0042, 0432, 0762
CRAIG	0072, 0482
CROWN	0112, 0282, 0622
DAEWOO	0112, 0282, 0622
DANSAI	0012
DAYTRON	0112
DECCA	0042, 0052, 0432, 0942
DECCA(UK)	0052
DEGRAAF	0052, 0132, 0432, 0532, 0602
DIXI	0442
DUAL	0042, 0632
DUMONT	0052, 0432, 0532
DYNATECH	0432
DYNATRON	0012
ELBE	0122
ELIN	0072
EMERSON	0012, 0162, 0202, 0432, 0512, 0522
ERRES	0012
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GBC	0002
GEC(UK)	0022, 0052
GELOSO	0002
GENERAL TECHNIC	1172
GOLDSTAR	0012, 0122, 0812, 0952
GOODMANS	0002, 0072, 0282, 0432, 0502
GOODMANS(UK)	0002
GRAETZ	0022, 0042
GRANADA	0052, 0132, 0532, 0572
GRANADA(UK)	0052, 0092, 0462, 0602, 0812, 0822
GRUNDIG	0052, 0062, 0092, 0232, 0252, 0262, 0752, 0802
HANSEATIC	0052, 0812
HARMAN/KARDON	0122, 0922
HCM	0002
HINARI	0002, 0202, 0412, 0442, 0522
HITACHI	0042, 0172, 0292, 0432, 0602, 0662, 0812, 1022
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JENSEN	0042
JVC	0042, 0102, 0142, 0272, 0742, 0762, 0782, 0902
KARCHER	0052, 0072, 0812
KENDO	0492
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MAGNASONIC	0572
MANESTH	0012
MARANTZ	0012, 0052, 0092, 0122, 0502
MARK	0012
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MATSUI	0012, 0442, 0512, 0522, 0812, 0972
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MEMOREX	0012, 0132, 0432, 0482, 0532, 0572
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ORION	0162, 0202, 0312, 0442, 0512, 0522, 0982
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RICOH	0952
SABA	0042, 0142, 0192, 0222, 0242, 0392, 0632, 0732, 0742, 0762, 0772, 0782, 0792, 0872
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TENOSAL	0002
THOMSON	0042, 0102, 0142, 0192, 0402, 0632, 0762
THORN	0042, 0902
THORN-FERGUSON	0042, 0222, 0302, 0712, 0722, 0742, 0762, 0852, 0862, 0872, 0902
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TONSAI	0002
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Cable TV

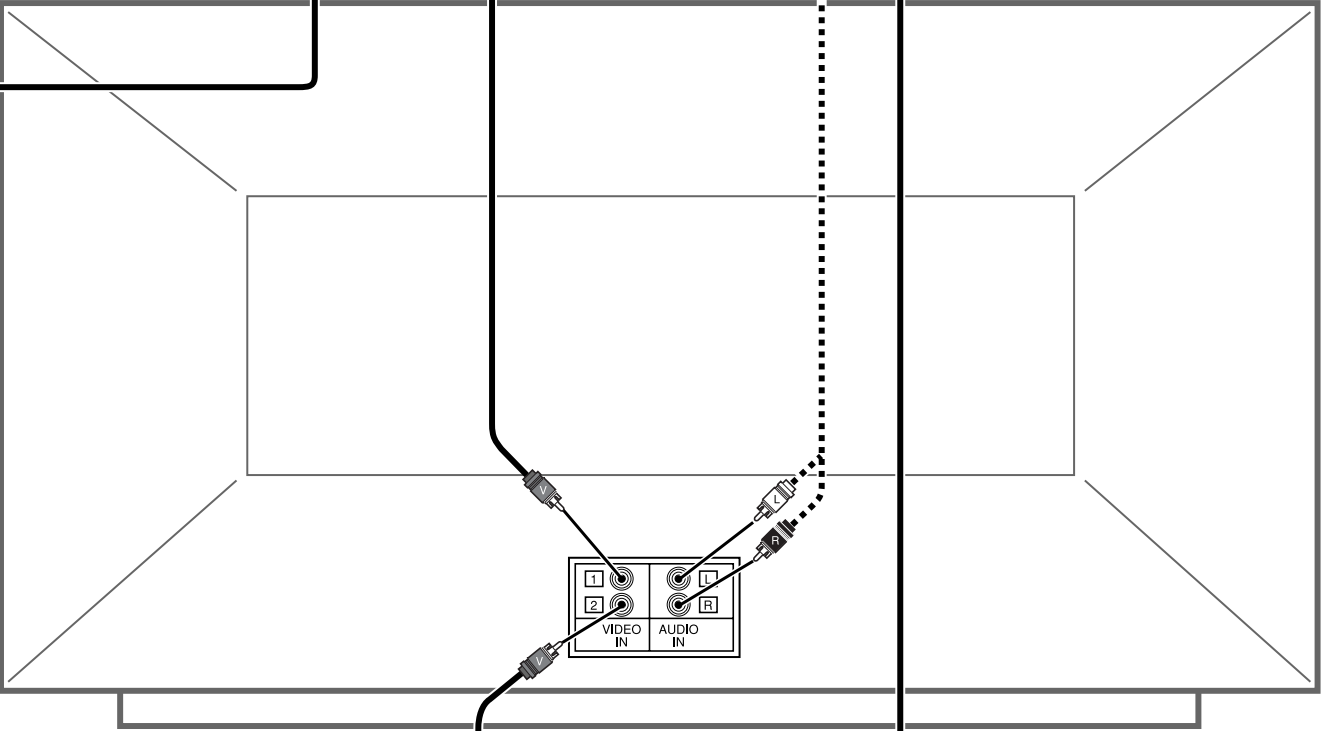|	
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Connecting to a TV (monitor) without audio output terminals

When enjoying digital audio
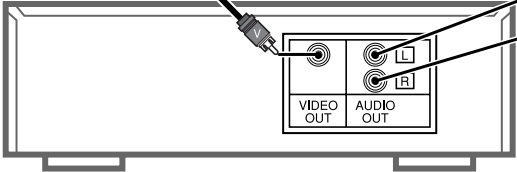
DVD/LD

VIDEO OUT   COAXIAL

Front speaker unit AV-S70

DIGITAL 2 (PCM) DIGITAL 1 (PCM) THROUGH OUT
AUX   TV   VIDEO   OUT
INPUT
L   R
SYSTEM CONNECTOR

SUBWOOFER

YAMAHA subwoofer and rear speakers (sold separately) NX-SW70

REAR SPEAKER
R   L

Subwoofer SW-AVS70

REAR SPEAKERS
REAR R   REAR L

CD/MD

OPTICAL   AUDIO OUT
L   R

TV (monitor)

VIDEO IN   AUDIO IN
1   2   L   R

Rear speaker NX-AVS70 Right

Rear speaker NX-AVS70 Left

VCR

VIDEO OUT   AUDIO OUT
L   R

Analog signal

Digital signal (coaxial)

Digital signal (optical)

Video signal

System connector

V586160

AV-S70
Connection Guide

Connecting to a TV (monitor) with audio output terminals

When enjoying digital audio
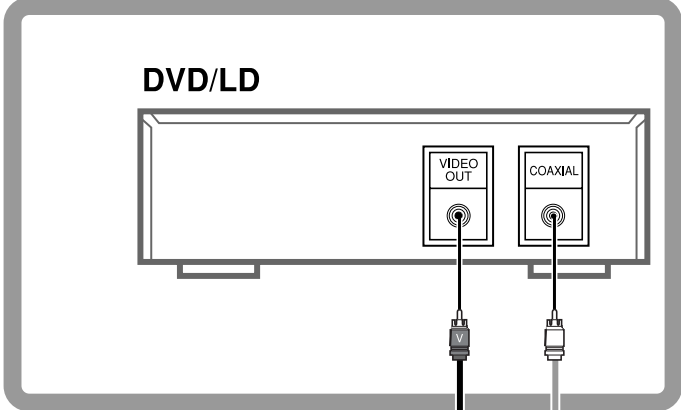
Front speaker unit AV-S70

YAMAHA subwoofer and rear speakers
(sold separately NX-SW70)

DVD/LD

VIDEO OUT
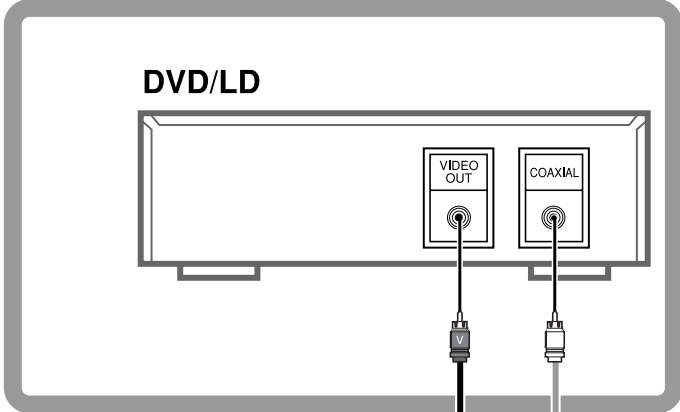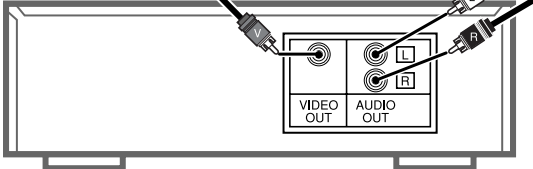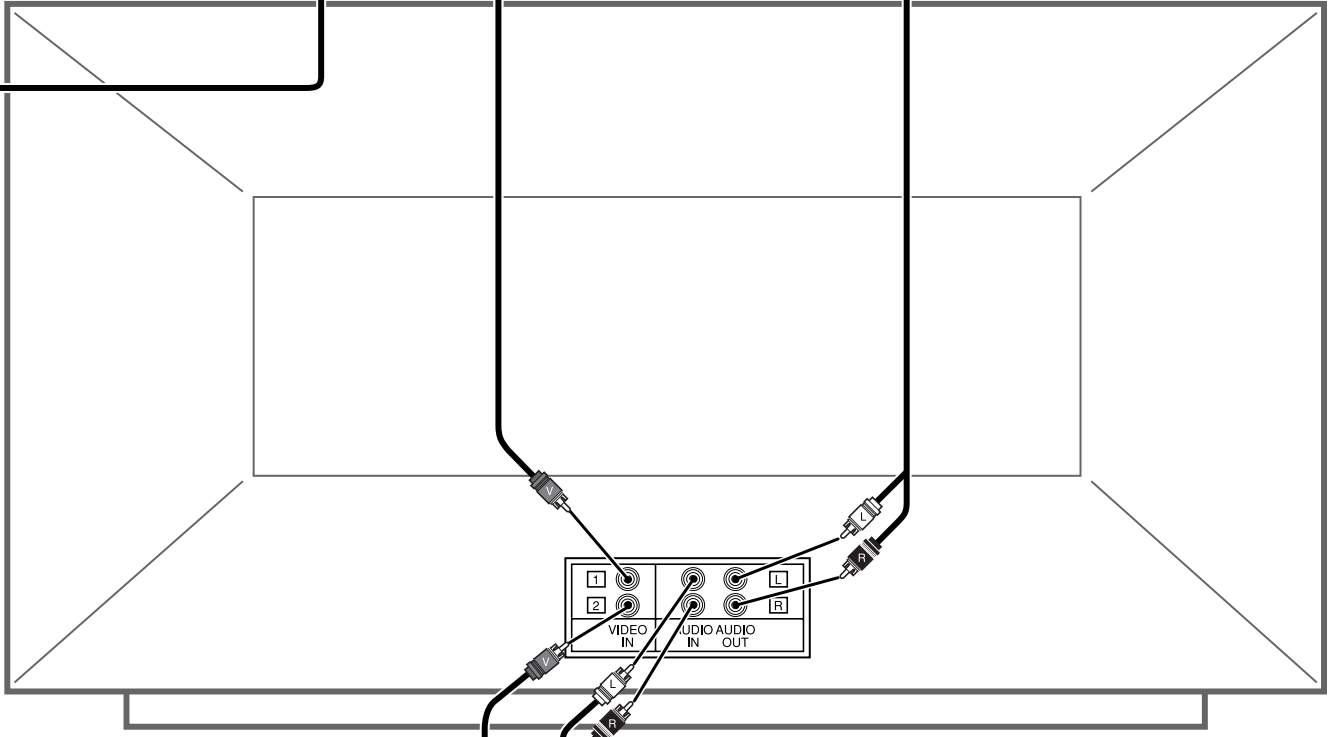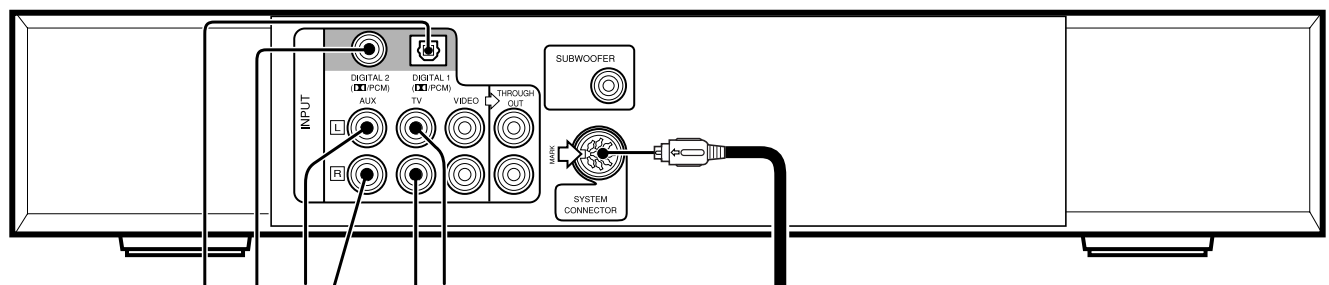
COAXIAL

INPUT

DIGITAL 2 (PCM) AUX

DIGITAL 1 (PCM) TV

VIDEO

THROUGH OUT

SUBWOOFER

L

R

L

R

SYSTEM CONNECTOR

DO NOT CONNECT THIS UNIT TO SPEAKERS OTHER THAN NX-AVS70

REAR SPEAKER

R

L

+ −

CD/MD

OPTICAL

AUDIO OUT

L

R

Subwoofer
SW-AVS70

REAR R

REAR L

Analog signal

Digital signal (coaxial)

Digital signal (optical)

Video signal

System connector

VIDEO IN

AUDIO IN

AUDIO OUT

L

R

1

2

TV (monitor)

Rear speaker
NX-AVS70
Right

Rear speaker
NX-AVS70
Left

− +

VIDEO OUT

AUDIO OUT

L

R

VCR

V586160