SAFETY INSTRUCTIONS

READ BEFORE OPERATING EQUIPMENT

This product was designed and manufactured to meet strict quality and safety standards. There are, however, some installation and operation precautions which you should be particularly aware of.

1. Read Instructions - All the safety and operating instructions should be read before the appliance is operated.

2. Retain Instructions-The safety and operating instructions should be retained for future reference.

3. Heed Warnings-All warnings on the appliance and in the operating instructions should be adhered to.

4. Follow Instructions-All operating and use instructions should be followed.

5. Cleaning-Unplug this video product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

6. Attachments-Do not use attachments not recommended by the video product manufacturer as they may cause hazards.

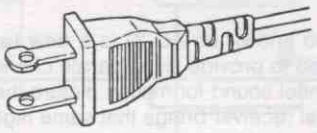
7. Water and Moisture-Do not use this video product near water-for example, near a bath tub, wash bowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool, and the like.

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

9. Ventilation-Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the video 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 video product on a bed, sofa, rug, or other similar surface. This video product should never be placed near or over a radiator or heat register. This video 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.

10. Power Sources-This video 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 appliance dealer or local power company. For video products intended to operate from battery power, or other sources, refer to the operating instructions.

11. Grounding or Polarization-This video product is equipped with a polarized alternating-current line plug (a plug having one blade wider than the other). This plug will fit into the power 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.



AC POLARIZED PLUG

12. 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 appliance.

13. Protective Attachment Plug - The appliance is equipped with an attachment plug having overload protection. This is a safety feature. See Instruction Manual for replacement or resetting of protective device. If replacement of the plug is required, be sure the service technician has used a replacement plug specified by the manufacturer that has the same overload protection as the original plug.

14. Outdoor Antenna Grounding-If an outside antenna or cable system is connected to the video product, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built up static charges. Section 810 of the National Electrical Code, ANSI/NFPA No. 70-1984, provides information with respect 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 1.

15. Lightning-For added protection for this video product receiver during a lightning storm, or when it is left un-attended 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 video product due to lightning and power-line surges.

16. 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.

17. Overloading-Do not overload wall outlets and extension cords as this can result in a risk of fire or electric shock.

18. Object and Liquid Entry-Never push objects of any kind into this video 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 th video product.

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

20. Damage Requiring Service-Unplug this video product from the wall outlet and refer servicing to qualified service personnel under the following conditions:

a. When the power-supply cord or plug is damaged.

b. If liquid has been spilled, or objects have fallen into the video product.

c. If the video product has been exposed to rain or water.

d. If the video 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 video product to its normal operation.

e. If the video product has been dropped or the cabinet has been damaged.

f. When the video product exhibits a distinct change in performance-this indicates a need for service.

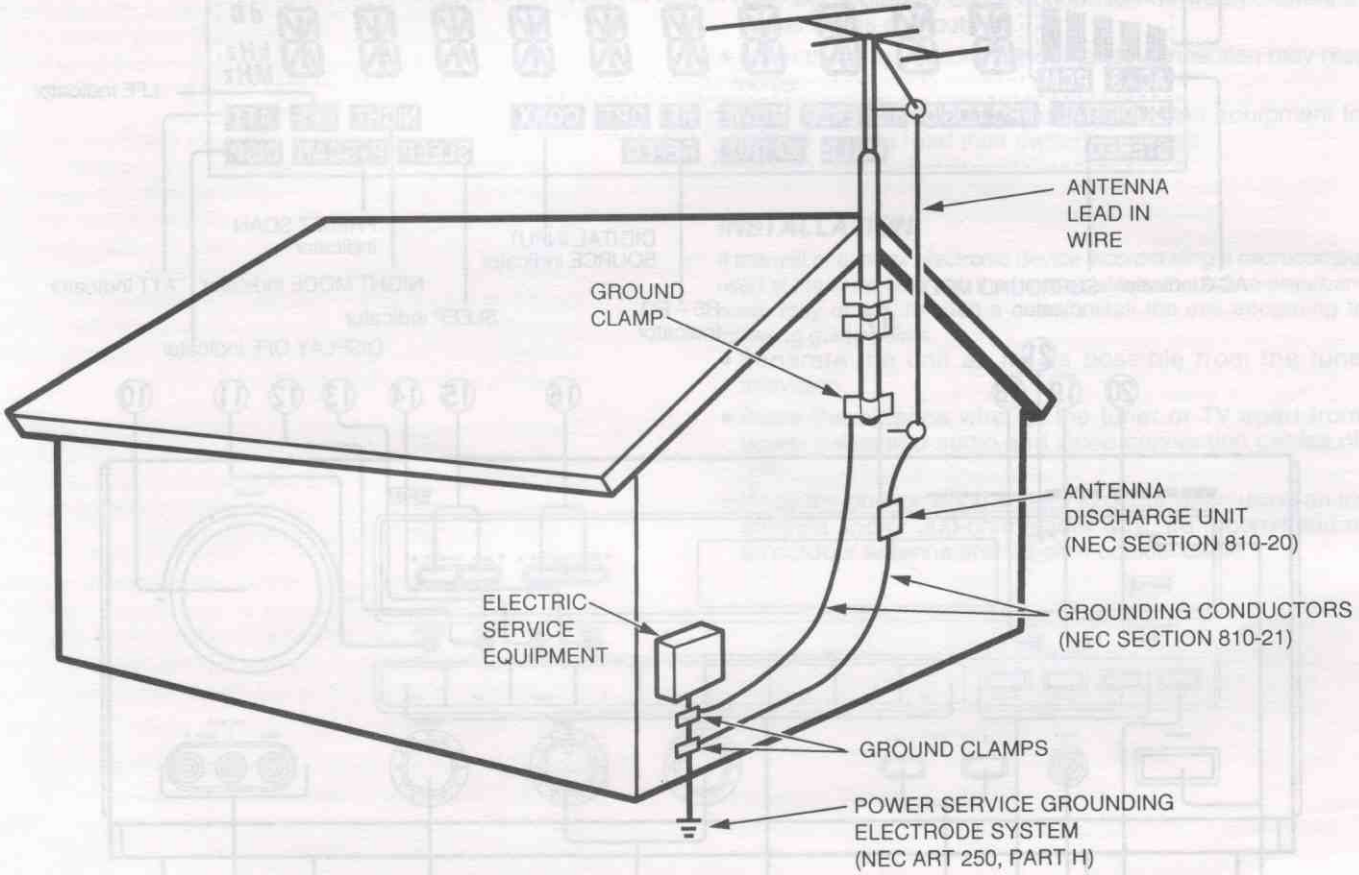
21. Replacement Parts-When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.

22. Safety Check-Upon completion of any service or repairs to this video product, ask the service technician to perform safety checks to determine that the video product is in proper operating condition.

23. Carts and Stands-The appliance should be used only with a cart or stand that is recommended by the manufacturer.

24. An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

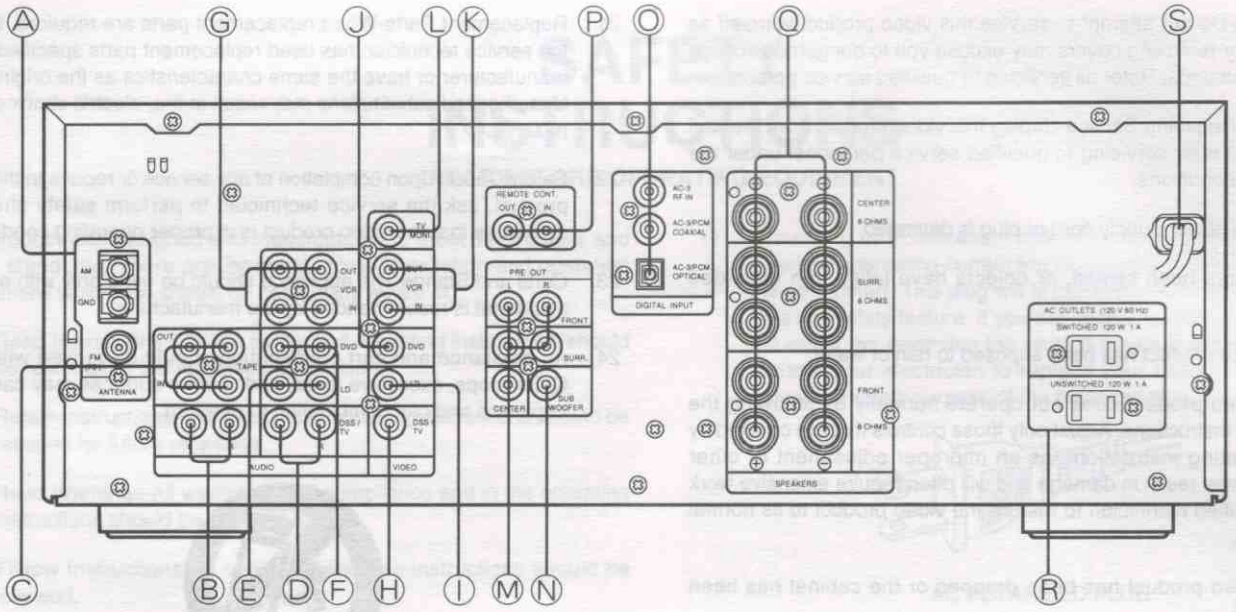
FIGURE 1
EXAMPLE OF ANTENNA GROUNDING ACCORDING TO NATIONAL ELECTRICAL CODE INSTRUCTIONS CONTAINED IN ARTICLE 810 - "RADIO AND TELEVISION EQUIPMENT"



NEC - NATIONAL ELECTRICAL CODE

This Class B digital apparatus meets all requirements of the Canadian Interference - Cansing Equipment Regulations.

Cet appareil numérique de la Classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.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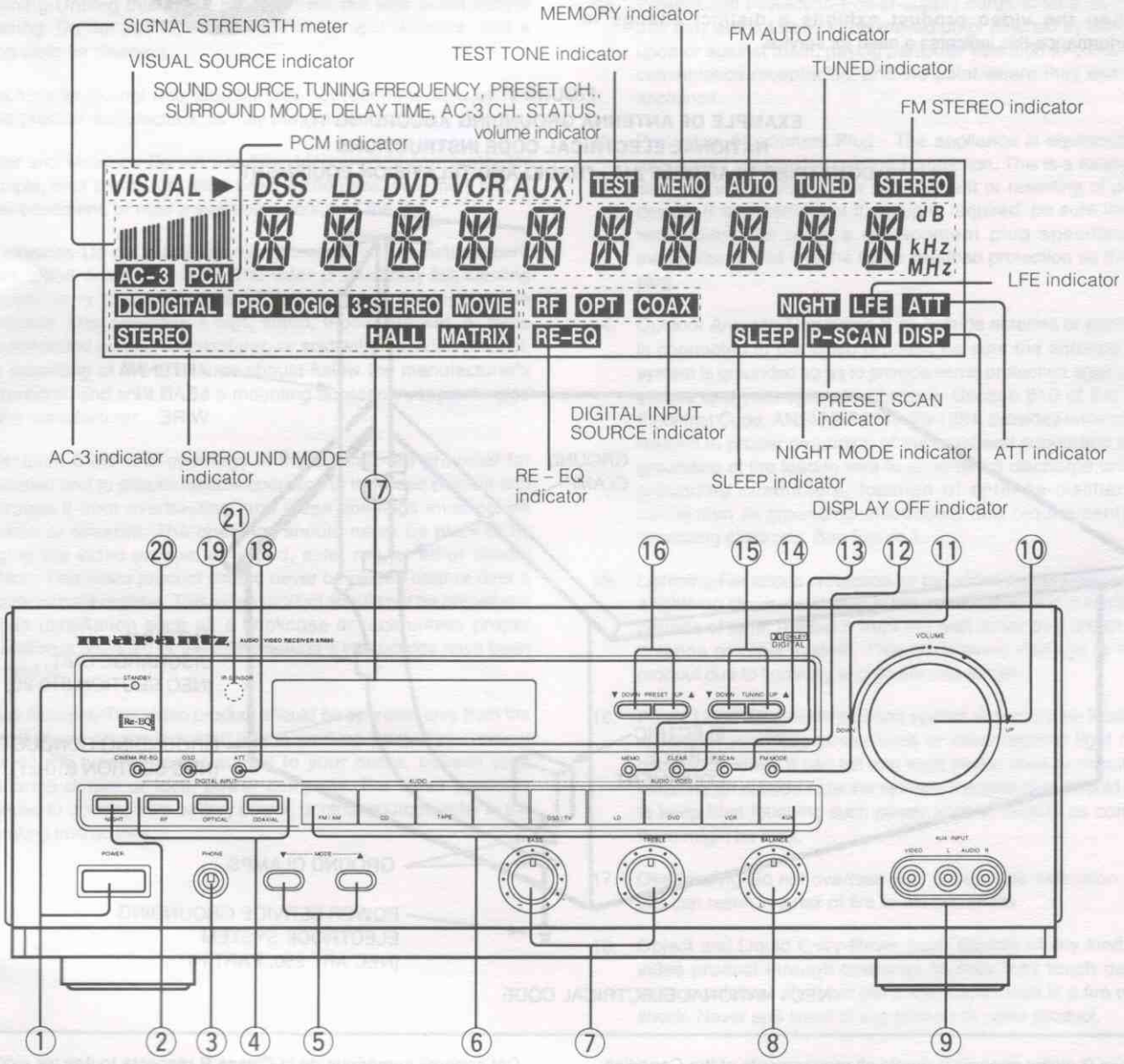
SIGNAL STRENGTH meter
VISUAL SOURCE indicator
SOUND SOURCE, TUNING FREQUENCY, PRESET CH., SURROUND MODE, DELAY TIME, AC-3 CH. STATUS, volume indicator
PCM indicator
MEMORY indicator
TEST TONE indicator
FM AUTO indicator
TUNED indicator
FM STEREO indicator
VISUAL ▶ DSS LD DVD VCR AUX
TEST MEMO AUTO TUNED STEREO
dB
kHz
MHz
AC-3 PCM
DIGITAL PRO LOGIC 3-STEREO MOVIE
STEREO HALL MATRIX
RF OPT COAX
RE-EQ
NIGHT LFE ATT
SLEEP P-SCAN DISP
LFE indicator
AC-3 indicator
SURROUND MODE indicator
17
RE – EQ indicator
DIGITAL INPUT SOURCE indicator
SLEEP indicator
PRESET SCAN indicator
NIGHT MODE indicator
ATT indicator
DISPLAY OFF indicator
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ENGLISH

INTRODUCTION

Thank you for purchasing the Marantz SR680 Dolby Digital Surround receiver. This remarkable component has been engineered to provide you with many years of home theater enjoyment. Please take a few minutes to read this manual thoroughly before you connect and operate the SR680. As there are a number of connection and configuration options, you are encouraged to discuss your own particular home theater setup with your Marantz A/V specialist dealer.

DESCRIPTION

Dolby Digital (also known as AC-3) is a new technology that was originally developed to provide six separate channels of high quality discrete multi-channel sound for motion picture theaters. The Marantz SR680 Dolby Digital receiver brings that same high quality sound into your home when used with a compatible laser disc player, as well as from future Dolby Digital sources such as DSS, Digital Video Disc (DVD) and High Definition Television (HDTV). The wide dynamic range of Dolby Digital enables the Marantz SR680 to reproduce soundtracks with their full fidelity and a realism that is not possible with conventional matrix surround systems.

The SR680 is manufactured under license from Dolby Laboratories Licensing Corporation. "Dolby", "AC-3", and the double-D symbol ⧈ are trademarks of Dolby Laboratories Licensing Corporation.

FEATURES

- High quality Dolby Digital (AC-3) DSP decoding chip.
- AC-3 RF input, for connection to compatible laser disc players such as the Marantz LV520 with an AC-3 RF output.
- Coax and Optical Digital AC-3/PCM inputs, for connection to other sources, such as DVD and/or DSS.
- Digital Dolby Pro Logic decoding provides wide dynamic range, low distortion, and high imaging accuracy.
- Cinema Re-EQ

  Cinema Re-EQ and the Re-EQ logo are registered trademarks of Lucas film Ltd. Manufactured under licence of Lucas film Ltd.
- Discrete pre-amp outputs allow the use of connections to external power amplifier(s).
- Multiple high power, high current amplifier stages
- Integral AM/FM tuner
- On Screen Display
- Infrared remote control with learning capability

PRECAUTIONS IN CONNECTION

- Be sure to unplug the power cable from the AC outlet or turn off the POWER/STANDBY switch before proceeding with any connection.
- Connect one cable at a time observing the "input" and "output".

  This will avoid any cross connection between channels and signal inputs and outputs.
- Insert the plugs securely. Incomplete connection may result in noise.
- Prior to connecting other audio and video equipment to the SR680, please read their owner's manuals.

INSTALLATION

If this unit or another electronic device incorporating a microcomputer is used at the same time with the tuner or television, picture disturbance or noise may occur. In such a case, install the unit according to the following guide points.

- Separate the unit as far as possible from the tuner or television.
- Place the antenna wire for the tuner or TV apart from the power cable and audio and video connection cables of this unit.
- Since the phenomenon is likely to occur when using an indoor antenna and/or 300-ohm feeder wire, we recommend using an outdoor antenna and 75-ohm coaxial cable.

LOCATION AND FUNCTION OF PARTS AND CONTROLS

REAR PANEL CONNECTIONS (See pages 3, 56 - 59.)

All connections to the rear panel should be made with entire power off to the system. To avoid mis-connection, it is advisable to connect one cable at a time between the different components. This is the safest way to avoid cross-connecting channels or mixing-up signal inputs with outputs.

Ⓐ FM antenna terminal (75 ohms)

For connecting an external FM antenna with a coaxial cable, or for connecting a cable network FM source.

AM antenna and ground terminals

For connecting the supplied AM loop antenna. Use the terminals marked "**AM**" and "**GND**".
The supplied **AM** loop antenna will provide good **AM** reception in most areas. Position the loop antenna to the best reception.

Ⓑ CD IN jacks

Connect to the CD player.

Ⓒ TAPE IN/OUT jacks

Connect the IN jacks to the output (**PLAY, OUT**) jacks of the tape deck.
Connect the OUT jacks to the input (**REC, IN**) jacks of the tape deck.

Ⓓ DSS/TV IN (AUDIO) jacks

Connect to the **AUDIO** output jacks of your Satellite tuner or TV tuner.

Ⓔ LD IN (AUDIO) jacks

Connect to the **AUDIO** output jacks of the LD (Laser Disc) player.

Ⓕ DVD IN (AUDIO) jacks

Connect to the **AUDIO** output jacks of the DVD (Digital Video Disc) player.

Ⓖ VCR IN/OUT (AUDIO) jacks

Connect the **IN** jacks to VCR's audio output (**OUT**) jacks.
Connect the **OUT** jacks to VCR's audio input (**IN**) jacks.

Ⓗ DSS/TV IN (VIDEO) jack

Connect to the video output of the Satellite tuner or TV tuner.

Ⓘ LD IN (VIDEO) jack

Connect to the video output of the LD player.

Ⓙ DVD IN (VIDEO) jack

Connect to the video output of the DVD player.

Ⓚ VCR IN/OUT (VIDEO) jacks

Connect the **VCR IN** jack to VCR's video output (**OUT**) jack.
Connect the **VIDEO VCR OUT** jacks to **VCR's** video input (**IN**) jack.

Ⓛ TV MONI. (VIDEO) output jack

Connect to your TV's video input (**VIDEO IN**) jack.

Ⓜ PRE OUT jacks

Jacks for front, center and surround use are provided. Use these jacks for connection to power amplifier in case it is used.

Ⓝ SUB WOOFER output jack

Connect to the MAIN IN jacks of the SUB WOOFER CHANNEL power amplifier.

Ⓞ DIGITAL INPUT jacks

AC-3 RF In Jack
Connect the AC-3 RF Output jack of compatible Laser Disc player to this jack.

IMPORTANT NOTE:
This input jack is for AC-3 RF signal only.
Do not connect a normal audio output terminal of a Laser Disc player, etc. to this AC-3 RF in jack.

AC-3/PCM Digital Data Stream Coax In Jack
These terminal to the coax data stream AC-3 output of future AC-3/PCM digital products such as DVD and HDTV.

AC-3/PCM Digital Data Stream Optical In Jack
These terminal are used for connection to the optical data stream AC-3 output of future AC-3/PCM digital products such as DVD and HDTV. To avoid dust contamination, leave the protective cap inserted unless the jack is in use.

IMPORTANT NOTE:
These input jack are for AC-3/PCM digital signals only. Do not connect standard audio output to these AC-3/PCM digital input jacks. The sampling frequencies which can be supported by SR680 are 32 kHz, 44.1 kHz and 48 kHz only.

Ⓟ REMOTE CONT. IN/OUT terminals

Connect to a Marantz component equipped with remote control (D-BUS) terminals.

Ⓠ SPEAKER terminals

CENTER speaker output terminals
Connect to the center speaker.

SURROUND speaker output terminals
Connect to the surround (rear) speakers.

FRONT speaker output terminals
Connect to the front speakers.

Ⓡ AC OUTLETS

Connect the power cables of components such as a cassette deck and CD player to these outlets. Both SWITCHED and UNSWITCHED outlets are provided. The one marked SWITCHED provides power only when the SR680 is turned on and is useful for component which you use every time you play your system such as an equalizer or your most-used sound source. The one marked UNSWITCHED is always live as long as The SR680 is plugged into a live outlet. A component connected here may be left on permanently, or may be switched off with its own power switch.

Caution:
In order to avoid potential turn-off thumps, anything plugged in here should be powered up BEFORE the SR680 is turned on.

Ⓢ POWER cable

Plug into a household AC power outlet.

ENGLISH

FRONT PANEL FEATURES (See page 3)

① POWER switch and STANDBY indicator

When this switch is pressed once, the power turns ON and display appears on the display panel. When pressed again, the power turns OFF and the **STANDBY** indicator lights.
When the SR680 is the STANDBY mode, the apparatus is NOT disconnected from the AC supply mains.

② NIGHT button

Pressing this button prevents the AC-3 digital signal from playback at a loud voice. This function reduces the voice by 1/3 to 1/4 at maximum. Thus, it eliminates the occurrence of an abruptly loud voice at night. However, the function is valid only for the case when the AC-3 digital signal is entered into RF, OPTICAL or COAXIAL and data to compress the voice exists in the signal to be played back.

③ PHONES socket for stereo headphones

Conventional dynamic headphones can be plugged in here.

Note:
When the headphones plug is inserted, the surround mode is switched automatically to **STEREO** and the sound from the speakers are muted. The surround mode returns to the previous mode as soon as the plug is removed from the jack.
At this time, the speaker setting is set to none temporarily except front ch..

④ FUNCTION SELECTOR buttons (DIGITAL INPUT)

These buttons are a button for selecting a source connected to RF, OPTICAL or COAXIAL input jack. However, the source signal selected with the FUNCTION SELECTOR buttons (AUDIO/VIDEO) is output at the TAPE or VCR output jack.

⑤ MODE UP and DOWN buttons

Selects the surround modes.
When these buttons are pressed, the SURROUND mode is changed in following sequence:

STEREO ⟷ DOLBY DIGITAL (AC - 3) ⟷ PRO LOGIC
MATRIX ⟷ HALL ⟷ 3 - STEREO ⟷ MOVIE

Note:The Dolby Digital (AC-3) mode can be selected only in RF, OPTICAL, COAXIAL.

⑥ FUNCTION SELECTOR buttons (AUIDO/VIDEO)

These buttons are used to select the source to be input to the unit via the rear panel input jacks.
The video function selector, such as **DSS/TV, LD, DVD**,**VCR** and **AUX**, selects video and audio simultaneously. Audio function sources such as **FM/AM**, **CD** and **TAPE** may be selected in conjunction with a Video source. This feature (Sound Injection) combines a sound from one source with a picture from another.
Choose the video source first, and then choose another audio source to activate this function.
When a function button for an audio function (FM/AM, CD or TAPE) is selected:
The surround mode is set automatically to last memory. If it is required to play an audio function in a surround mode, set a mode by pressing the **MODE ▲ ▼** button.
The set surround mode is not changed when a function button for a video function (**DSS/TV, LD, DVD**,**VCR**) is selected.

⑦ BASS and TREBLE tone controls

These controls are used to boost or cut high and low frequencies. At their center detent position, there is no boost or cut.
TREBLE: Adjusts the tone of high-frequency sound for LEFT, CENTER and RIGHT ch.
BASS: Adjusts the tone of low-frequency sound for LEFT, CENTER, RIGHT and SUBWOOFER ch.

⑧ BALANCE control

Adjusts the sound volume balance between the left and right of front speakers and headphone channels.

⑨ AUX input jacks

These auxiliary video/audio input jacks accept the connection of a camcorder, portable VCR, etc.
To make proper connections, refer the owner's manuals of the auxiliary components.

⑩ VOLUME control

Adjusts the overall sound level. Turning the control clockwise increases the sound level.

Note:
The sound volume level can be displayed by pressing the volume up/down button [13] of the remote control unit RC780SR for up to1 second.

TUNER CONTROL BUTTONS

⑪ FM MODE button

When the FM band is selected, press button to select the auto stereo mode or mono mode. The AUTO indicator lights in the auto stereo mode.

⑫ P.SCAN (preset scan) button

This button is used to scan preset stations automatically.
When pressed, "P-SCAN" blinks in the display and the tuner starts scanning the preset stations of all band. Press again to cancel the P-SCAN.

⑬ CLEAR button

Press this button to cancel the station-memory setting mode or preset scan tuning.

⑭ MEMO (memory) button

Press this button to enter the tuner preset memory numbers and station name, or the sleep timer period.

⑮ TUNING UP and DOWN buttons

During reception of AM or FM, you can scan the other frequencies by pressing these buttons.

⑯ PRESET UP and DOWN buttons

During reception of AM or FM, you can select another preset station by pressing these buttons.

OTHERS

⑰ DISPLAY

Displays the operating status of the SR680.

⑱ ATT (Attenuater) button

ATT (Attenuater) button attenuates the AUDIO/VISUAL signal selected with the FUNCTION buttons (AUDIO, AUDIO/VIDEO). When the input signal is too great and the voice distorts even by throttling the SR680 VOLUME control, turn on the function. "ATT" is displayed when this function is activated
The signal input level is reduced by about the half. Attenuater is invalid for use with the output signal of "REC OUT".

⑲ OSD (On-Screen Display) button

Press this button to display the current setting status of the SR680 on the TV screen.
Once the button is pressed, the on-screen display is turned on and each a control button related to the SR680 is pressed thereafter, the information will be displayed on the TV screen.
When the button is pressed again to turn the on-screen display off, it disappears from the TV screen. (Refer to "On-screen display" on page 15.)

⑳ CINEMA RE-EQ button

Press this button to active the Cinema Re-EQ. "RE-EQ" is displayed when this function is activate. Cinema Re-EQ and the Re-EQ logo are registered trademarks of Lucas film Ltd. Manufactured under licence of Lucas film Ltd.

Note:
The Cinema Re-EQ activates only Dolby Digital (AC-3), Pro Logic and 3-streo mode.

㉑ INFRARED SENSOR window

This window receives infrared signals from the remote control unit. Aim the remote control unit to this sensor window for proper signal transmission.

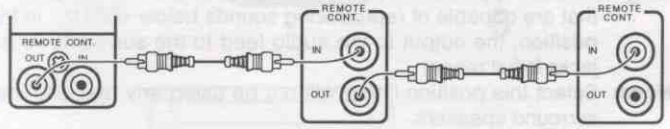
REMOTE CONTROL BUS CONNECTIONS

This unit is equipped with a remote control function.
By connecting this unit's remote control jacks to a Marantz CD player or tape deck equipped with remote control (D-BUS) jacks, it allows system remote control operation.
Connect **REMOTE CONT. OUT** jack of SR680 to REMOTE CONT. IN of other Marantz equipment, i.e. CD player or Cassette deck, by using an RCA pin cable.

Note:
If a component equipped with remote control (D-BUS) jacks has an INT/EXT switch on the rear panel, set the switch to EXT when using the system control function.

(Connection example)

SR680 rear panel
or MA500 rear panel CD player rear panel Tape deck panel

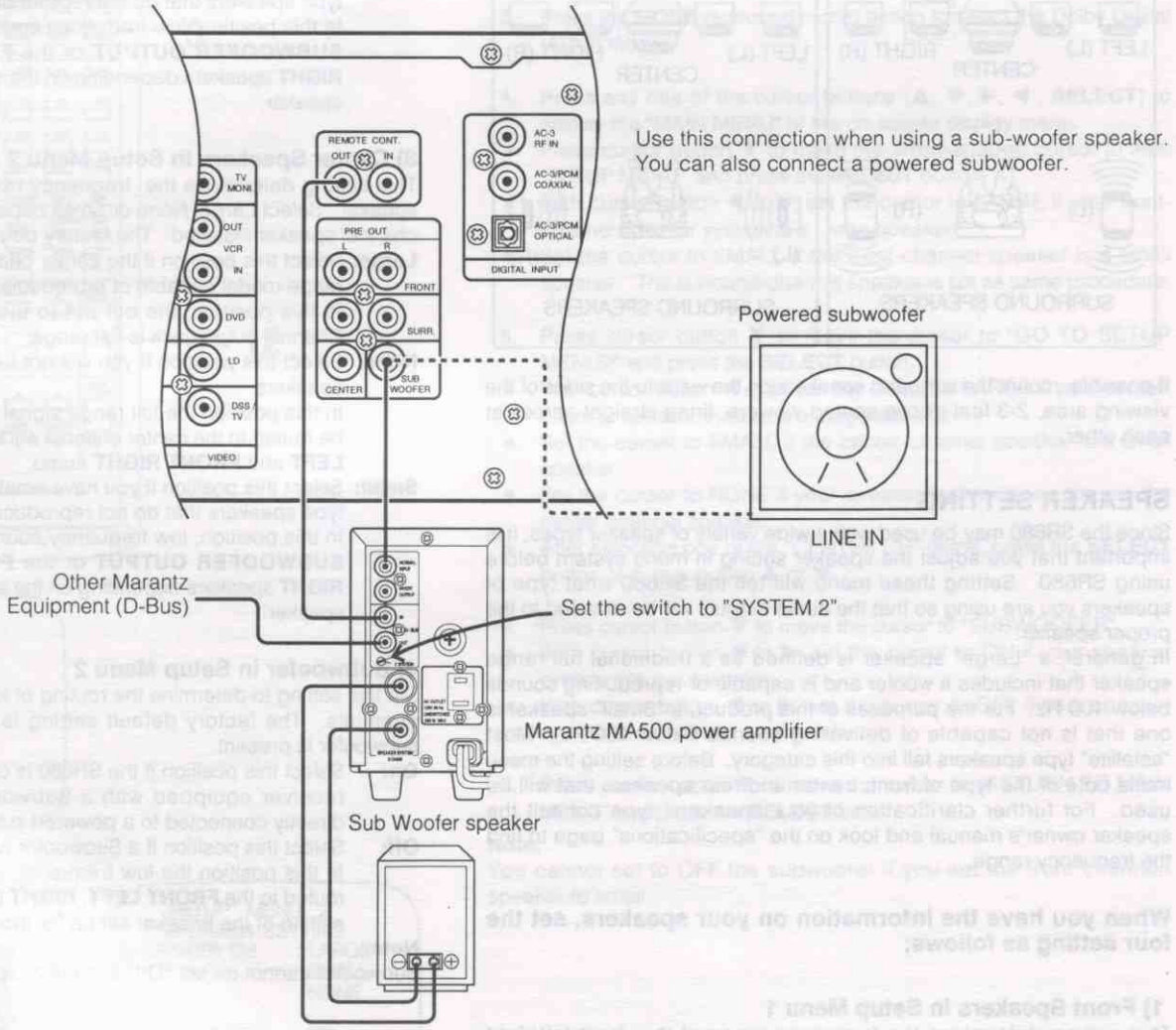


Controlling the power ON/OFF of a power amplifier connected to the SR680 through Marantz remote control

1. If you connect the MA500 power amplifier to the SR680, set the Bus System Selector switch of the MA500 to "System 2". Now the MA-500 can be turned ON / OFF in synchronism with the power ON / OFF of the SR680.

Notes:
- Be sure to connect the remote control bus before the procedure above.
- If the procedure above does not make it possible to control the power ON/OFF, set the SR680 with the following procedure.
- With the power of the SR680 ON, press and hold the **MEMO** button and press the **POWER** switch.

CONNECTION FOR A SUB WOOFER



Use this connection when using a sub-woofer speaker.
You can also connect a powered subwoofer.

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SET-UP AND CALIBRATION

After completion of all connecting arrangements, please do the following procedure for the set-up and calibration before play-back.

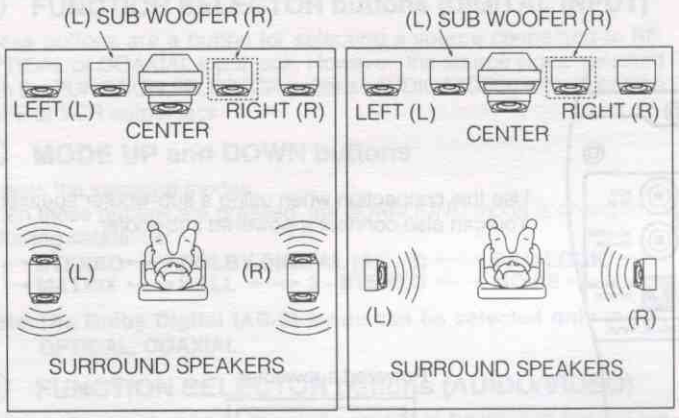
SPEAKER SELECTION

The home theater system you already have installed should function provided that there are left, center and right front speakers, left and right rear/surround speakers and a subwoofer. For best result we recommend that the front speakers be of the same type, with identical or similar driver units. This will deliver smooth pans across the front sound stage as the action moves from side to side.

Your center channel speaker is very important as over 80 % of the dialog from a typical motion picture emanates from the center channel. Rear channel speaker need to be identical to the front channel speakers, but they should be of high quality. One of the benefits of Dolby Digital (AC-3) is that they surround channels are full range, while they were frequency limited in earlier "Pro Logic" type systems.

Bass effects are an important part of home theater. For optimal enjoyment a subwoofer should be used as it is optimized for low frequency reproduction. If you have full range front speakers, however, they may be used in place of a subwoofer with proper setting of the switches in menu system.

Speaker system configurations (diagram, as currently used)



If possible, mount the surround speakers on the walls to the sides of the viewing area, 2-3 feet above seated viewers, firing straight across at each other.

SPEAKER SETTING

Since the SR680 may be used with a wide variety of speaker types, it is important that you adjust the speaker setting in menu system before using SR680. Setting these menu will tell the SR680 what type of speakers you are using so that the audio outputs will be directed to the proper speaker.

In general, a "Large" speaker is defined as a traditional full range speaker that includes a woofer and is capable or reproducing sounds below 100 Hz. For the purposes of this product, a "Small" speaker is one that is not capable of delivering sounds below 100 Hz. Most "satellite" type speakers fall into this category. Before setting the menu make note of the type of front, center and rear speakers that will be used. For further clarification of your speakers' type consult the speaker owner's manual and look on the "specifications" page to find the frequency range.

When you have the information on your speakers, set the four setting as follows;

1) Front Speakers in Setup Menu 1

This setting determines the frequency range of the front left/right speakers. Select Large or Small depending on the type of speaker you will be using. The factory default setting is "Small".

Large: Select this position if you are using full range speakers that are capable of reproducing sounds below 100 Hz. In this position, the output to the front left/right output jacks is full range.

Small: Select this position if you have small, frequency limited satellite type speakers that do not reproduce sounds below 100 Hz. Do not select this position if your system does not include Sub woofer. In this position, low frequency sounds are routed to the **SUBWOOFER OUTPUT** jacks.

2) Surround Speakers in Setup Menu 1

This setting determines the frequency range of the rear surround speakers. Select Large, None or Small depending on the type of speakers you will be using. The factory default setting is "Small".

Large: Select this position if you are using traditional, large speakers that are capable of reproducing sounds below 100 Hz. In this position, the output to the audio feed to the surround output jacks is full range.

None: Select this position if you will not be using any rear channel/ surround speakers. In this position the full range surround audio that would otherwise be routed to the surround channels will be mixed in with the **FRONT LEFT** and **FRONT RIGHT** audio.

Small: Select this position if you have small, frequency limited satellite type speakers that do not reproduce sounds below 100 Hz. In this position, low frequency sounds are routed to either the **SUBWOOFER OUTPUT** or the **FRONT LEFT** and **FRONT RIGHT** speakers depending on the setting of the **SUBWOOFER** speaker.

3) Center Speakers in Setup Menu 2

This setting determines the frequency range for the center channel speaker. Select Large, None or Small depending on the type of center channel speaker installed. The factory default setting is "Small".

Large: Select this position if the center channel speaker is a large, full range model capable of reproducing sounds below 100 Hz. In this position, the out put to the audio feed to the Center Channel output jack is full range.

None: Select this position if you will not be using any center channel speakers. In this position the full range signal audio that would otherwise be routed to the center channel will be mixed in with the **FRONT LEFT** and **FRONT RIGHT** audio.

Small: Select this position if you have small, frequency limited satellite type speakers that do not reproduce sounds below 100 Hz. In this position, low frequency sounds are routed to either the **SUBWOOFER OUTPUT** or the **FRONT LEFT** and **FRONT RIGHT** speakers depending on the setting of the **SUBWOOFER** speaker.

4) Subwoofer in Setup Menu 2

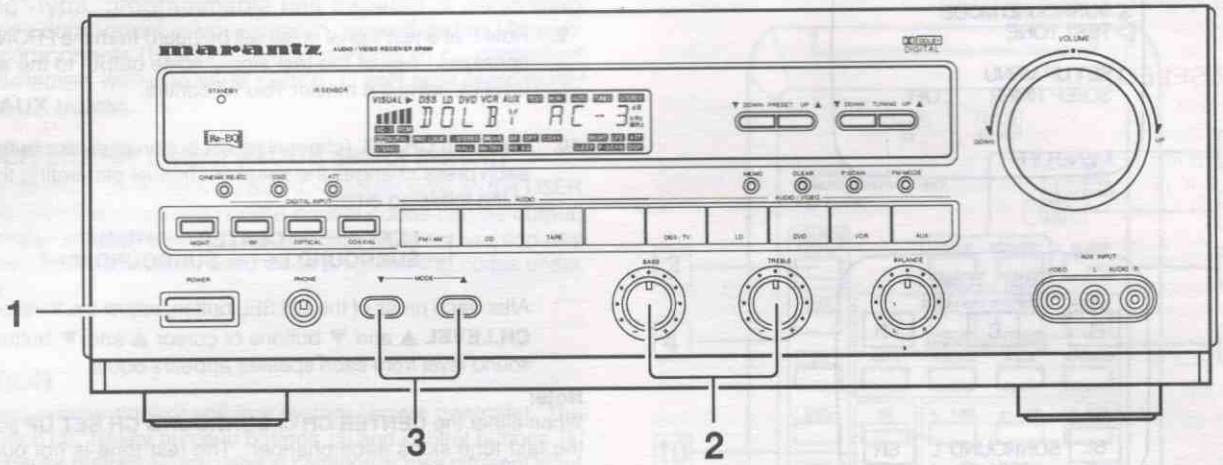
Set this setting to determine the routing of low frequency sounds for all channels. The factory default setting is "ON", to indicates that a subwoofer is present.

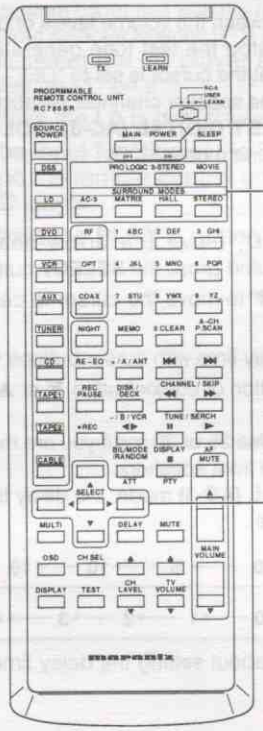
On: Select this position if the SR680 is connected to an amplifier or receiver equipped with a Subwoofer INPUT terminal, or if directly connected to a powered subwoofer.

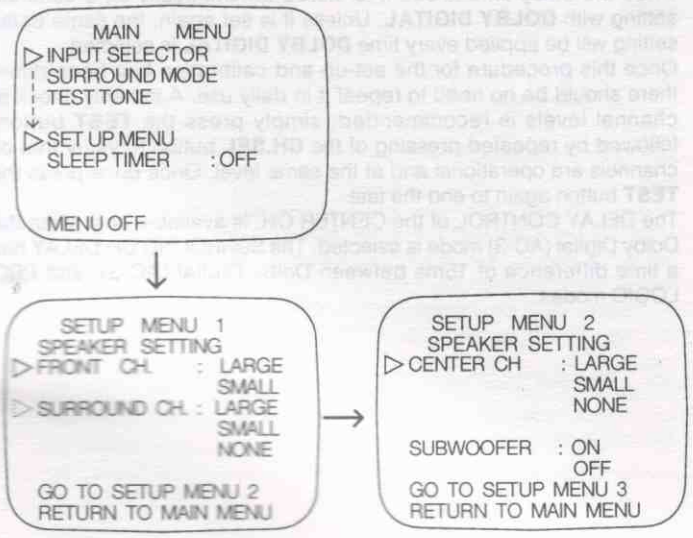
Off: Select this position if a Subwoofer will not be used. In this position the low frequency sounds (below 100 Hz) will routed to the **FRONT LEFT**, **RIGHT** terminals, depending on the setting of the speaker set up for those channels.

Note:
Subwoofer cannot be set "Off" if the front speaker is set "Small".

CALIBRATION







1. Turn the SR680 power ON.

2. Place the tone controls (BASS, TREBLE) at the middle position.

3. Press the **MODE** (surround mode) button to select the Dolby Digital (AC-3) mode.

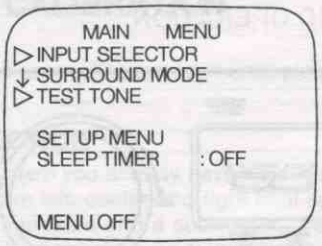
4. Press any one of the cursor buttons (▲, ▼, ▶, ◀ , **SELECT**) to display the "MAIN MENU" of the on-screen display menu.
   - Press cursor button ▼ to move the arrow-shaped cursor to item "SETUP MENU" and press the **SELECT** button.
   - With cursor button ◀ or ▶, set the cursor to LARGE if your front-channel speaker system is a Large speaker.
   - Set the cursor to SMALL if the front-channel speaker is a small speaker. The surround-channel speaker is set as same procedure.

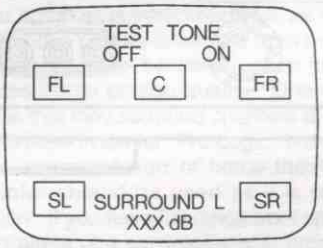
5. Press cursor button ▼ to move the cursor to "GO TO SETUP MENU2" and press the **SELECT** button.
   - With cursor button ◀ or ▶, set the cursor to LARGE if your center-channel speaker system is a Large speaker.
   - Set the cursor to SMALL if the center-channel speaker is a small speaker.
   - Set the cursor to NONE if your speaker system does not use the center-channel speaker.
   - After selecting one of the "CENTER CH" items, press the **SELECT** button or cursor button ▲ or ▼.

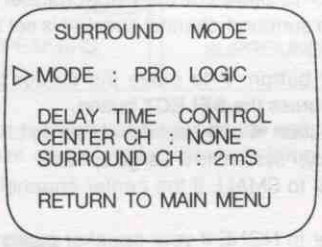
6. Press cursor button ▼ to move the cursor to "SUBWOOFER".
   - With cursor button ◀ or ▶, set the cursor to ON if your speaker system use a subwoofer.
   - With cursor button ◀ or ▶, set the cursor to OFF if your speaker system does not use a subwoofer.

7. Press cursor button ▼ to move the cursor to "RETURN TO MAIN MENU" and press the **SELECT** button.

Note:
You cannot set to OFF the subwoofer if you set the front channel-speaker to small.







8. Press cursor button ▼ to move the cursor to "TEST TONE" and press the **SELECT** button.

9. Note that a test signal noise will be heard from the FRONT LEFT CH speakers. Adjust the test signal noise output to the appropriate level by using the master volume control.

10. Press the **CH.SEL** (channel select button or cursor button ▶), each press changes the speaker channel generating the test tone in the following order:

LEFT → CENTER → RIGHT
SURROUND L ← SURROUND R

After each press of the CH.SEL button, adjust the level by using the **CH.LEVEL** ▲ and ▼ buttons or cursor ▲ and ▼ buttons until the sound level from each speaker appears equal.

Note:
When either the **CENTER CH** or **SURROUND CH SET UP** set to **NONE** the test tone skips each channel. The test tone is not output to the subwoofer irrespective of ON or OFF selection.

11. When the balance between the volume levels of different speakers has been adjusted, stop the test tone generation by press the cursor button ◀ so that the cursor is set to "OFF".
The volume levels of the speaker channels set above will be used in common for the **DOLBY DIGITAL (AC-3)**, **DOLBY PRO LOGIC** and **3-STEREO** surround modes.

12. Delay Time Setting

① On the MAIN MENU, move the arrow-shaped cursor to "SURROUND MODE" and press the **SELECT** button.

② Press cursor button ▼ to move the cursor to center or surround channel.

③ Select the desired delay time with cursor buttons ◀ and ▶.

④ Press the **SELECT** button or cursor button ▼ or ▲ to complete the setting.
Normally use 20 ms. Use 25 or 30 ms if you are much closer to the rear speakers than the front speakers.
In the **DOLBY DIGITAL (AC-3)** mode, the delay time is variable in the following sequence.

SURROUND CH. **0 → 5 → 10 → 15**

CENTER CH. **0 → 1 → 2 → 3 → 4 → 5**

⑤ For more information about setting the delay time, please turn to Page 26.

Notes:
Once the delay time is set, it is stored automatically as a common setting with **DOLBY DIGITAL**. Unless it is set again, the same delay setting will be applied every time **DOLBY DIGITAL** is selected.
Once this procedure for the set-up and calibration has been done, there should be no need to repeat it in daily use. A monthly check of channel levels is recommended; simply press the **TEST** button, followed by repeated pressing of the **CH.SEL** button to verify that all channels are operational and at the same level. Once done press the **TEST** button again to end the test.
The DELAY CONTROL of the CENTER CH. is available only when the Dolby Digital (AC-3) mode is selected. The SURROUND CH DELAY has a time difference of 15ms between Dolby Digital (AC-3) and PRO LOGIC modes.