

aiwa

**COMPACT DISC STEREO SYSTEM
SISTEMA ESTEREO CON REPRODUCTOR DE DISCOS COMPACTOS
CHAINE STEREO AVEC LECTEUR DE DISQUES COMPACTS**

NSX-MA845

**OPERATING INSTRUCTIONS
MANUAL DE INSTRUCCIONES
MODE D'EMPLOI**

En (English)

E (Español)

F (Français)

For assistance and information

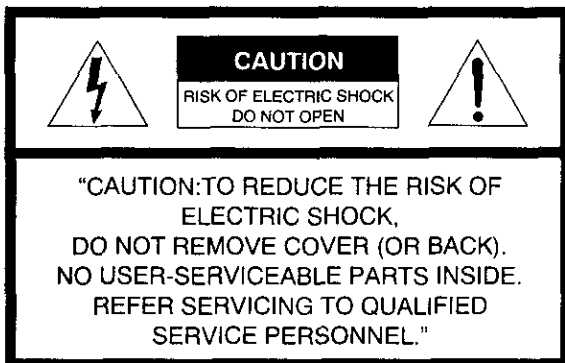
call toll free 1-800-BUY-AIWA

(United States and Puerto Rico)

COMPACT
aiwa

WARNING

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.



Explanation of Graphical Symbols:



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



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

Owner's record


For your convenience, record the model number and serial number (you will find them on the rear of your set) in the space provided below. Please refer to them when you contact your Aiwa dealer in case of difficulty.

Model No.	Serial No. (Lot No.)
CX-NMA845	
SX-WNA888	
SX-R275	

PRECAUTIONS

Read the Operating Instructions carefully and completely before operating the unit. Be sure to keep the Operating Instructions for future reference. All warnings and cautions in the Operating Instructions and on the unit should be strictly followed, as well as the safety suggestions below.

Installation

- Water and moisture** — Do not use this unit near water, such as near a bathtub, washbowl, swimming pool, or the like.
- Heat** — Do not use this unit near sources of heat, including heating vents, stoves, or other appliances that generate heat. It also should not be placed in temperatures less than 5°C (41°F) or greater than 35°C (95°F).
- Mounting surface** — Place the unit on a flat, even surface.
- Ventilation** — The unit should be situated with adequate space around it so that proper heat ventilation is assured. Allow 10 cm (4 in.) clearance from the rear and the top of the unit, and 5 cm (2 in.) from each side.
 - Do not place the unit on a bed, rug, or similar surface that may block the ventilation openings.
 - Do not install the unit in a bookcase, cabinet, or airtight rack where ventilation may be impeded.
- Objects and liquid entry** — Take care that objects or liquids do not get inside the unit through the ventilation openings.
- Carts and stands** — When placed or mounted on a stand or cart, the unit should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the unit or cart to overturn or fall.
 
- Condensation** — Moisture may form on the CD pickup lens when:
 - The unit is moved from a cold spot to a warm spot
 - The heating system has just been turned on
 - The unit is used in a very humid room
 - The unit is cooled by an air conditioner
 When this unit has condensation inside, it may not function normally. Should this occur, leave the unit for a few hours, then try to operate again.
- Wall or ceiling mounting** — The unit should not be mounted on a wall or ceiling, unless specified in the Operating Instructions.

Electric Power

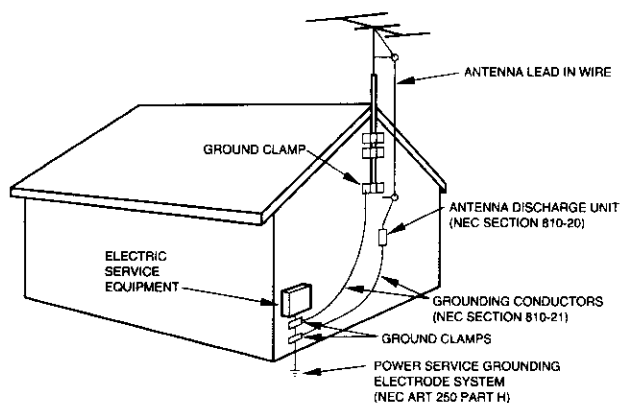
- Power sources** — Connect this unit only to power sources specified in the Operating Instructions, and as marked on the unit.
- Polarization** — As a safety feature, some units are equipped with polarized AC power plugs which can only be inserted one way into a power outlet. If it is difficult or impossible to insert the AC power plug into an outlet, turn the plug over and try again. If it still does not easily insert into the outlet, please call a qualified service technician to service or replace the outlet. To avoid defeating the safety feature of the polarized plug, do not force it into a power outlet.
- AC power cord**
 - When disconnecting the AC power cord, pull it out by the AC power plug. Do not pull the cord itself.
 - Never handle the AC power plug with wet hands, as this could result in fire or shock.
 - Power cords should be firmly secured to avoid being severely bent, pinched, or walked upon. Pay particular attention to the cord from the unit to the power outlet.
 - Avoid overloading AC power plugs and extension cords

- 4 **Extension cord** — To help prevent electric shock, do not use a polarized AC power plug with an extension cord, receptacle, or other outlet unless the polarized plug can be completely inserted to prevent exposure of the blades of the plug.
- 5 **When not in use** — Unplug the AC power cord from the power outlet if the unit will not be used for several months or more. When the cord is plugged in, a small amount of current continues to flow to the unit, even when the power is turned off.

Outdoor Antenna

- 1 **Power lines** — When connecting an outdoor antenna, make sure it is located away from power lines.
- 2 **Outdoor antenna grounding** — Be sure the antenna system is properly grounded to provide protection against unexpected voltage surges or static electricity build-up. Article 810 of the National Electrical Code, ANSI/NFPA 70, provides information on proper grounding of the mast, supporting structure, and the lead-in wire to the antenna discharge unit, as well as the size of the grounding unit, connection to grounding terminals, and requirements for grounding terminals themselves.

Antenna Grounding According to the National Electrical Code



NEC-NATIONAL ELECTRICAL CODE

Maintenance

Clean the unit only as recommended in the Operating Instructions.

Damage Requiring Service

Have the units serviced by a qualified service technician if:

- The AC power cord or plug has been damaged
- Foreign objects or liquid have gotten inside the unit
- The unit has been exposed to rain or water
- The unit does not seem to operate normally
- The unit exhibits a marked change in performance
- The unit has been dropped, or the cabinet has been damaged

DO NOT ATTEMPT TO SERVICE THE UNIT YOURSELF.

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PREPARATIONS

CONNECTIONS

The DOLBY PRO LOGIC system which is the biggest feature of this stereo system provides you with multi channel sound in your home.

Complete setting and connection of the main unit, supplied speakers, your TV and video equipment according to the following procedure.

Check your system and accessories

NSX-MA845

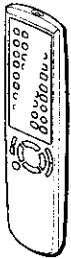
CX-NMA845 Compact disc stereo cassette receiver

SX-WNA888 Front speakers

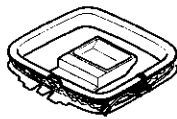
SX-R275 Surround speakers

SX-C605 Center speaker

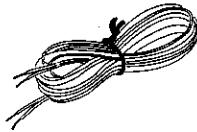
Remote control



AM antenna



FM antenna



Operating Instructions, etc

Before connecting the AC cord

The rated voltage of your unit is 120 V AC, as specified on the rear panel. Check that the rated voltage matches your local voltage.

IMPORTANT

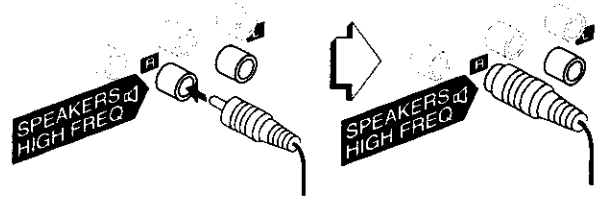
Connect the speakers, antennas, and all optional equipment first. Then connect the AC cord.

There are no differences between the front speakers. Both speakers can be connected as L (left) or R (right).

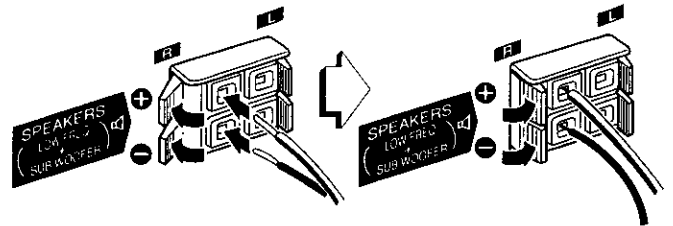
Refer to the diagram on the next page.

1 Connect the right speaker to the main unit.

- 1 Connect the speaker cord with the plug to the **SPEAKERS HIGH FREQ R** terminal.



- 2 Connect the speaker cord with the white stripe to the **SPEAKERS (LOW FREQ + SUB WOOFER) R** terminal and the black cord to the **-** terminal.



Sound signals from **5.1CH SUB WOOFER INPUT** jack are outputted from the built-in subwoofer in the front speakers.

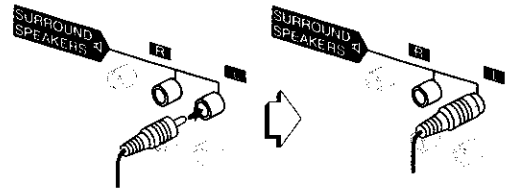
2 Connect the left speaker to the main unit.

Connect the speaker cord with plug to the **SPEAKERS HIGH FREQ L** terminal, and another speaker cord to the **SPEAKERS (LOW FREQ + SUB WOOFER) L** terminals in the same manner as step 1.

3 Connect the surround speakers.

Connect the surround speaker cords to **SURROUND SPEAKERS** terminals.

There is no difference between the surround speakers. Both speakers can be connected as R (right) or L (left).



4 Connect the center speaker.

Connect the center speaker cord to **CENTER SPEAKER** terminal.

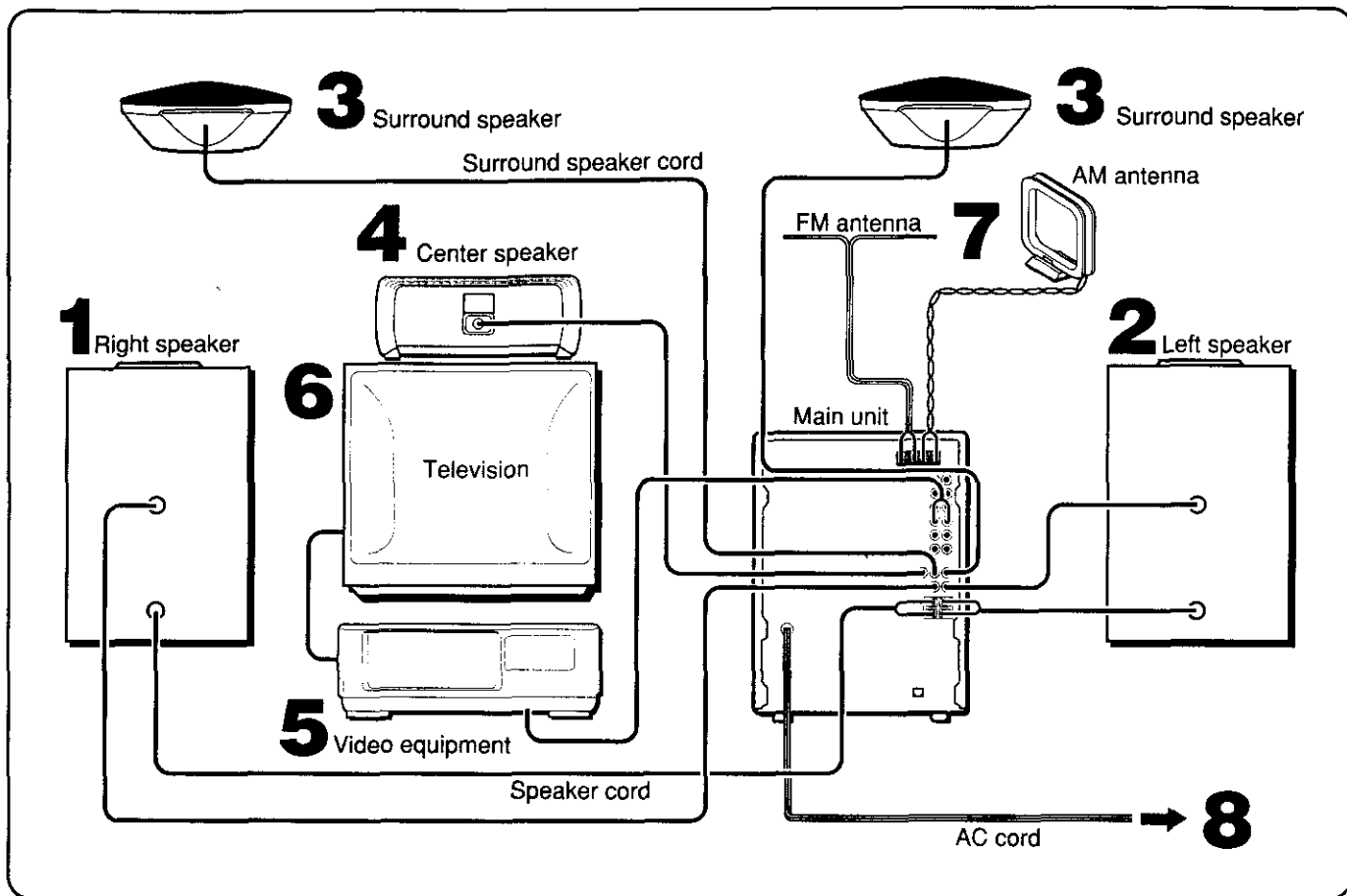


5 Connect the video equipment.

Connect **VIDEO/AUX** jack of this unit to the audio output jack of the video equipment with an optional audio connecting cord.

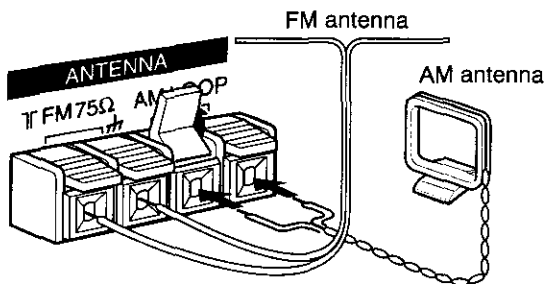
6 Connect the Television to the video equipment.

Refer to the Operating Instructions of the connected equipment for details.



7 Connect the supplied antennas.

Connect the FM antenna to **FM 75 Ω** terminals and the AM antenna to **AM LOOP** terminals.



8 Connect the AC cord to an AC outlet.

The game Demo will begin when the AC cord is plugged into an AC outlet. See page 8 "Game Demo" for details.

To position the antennas

FM feeder antenna:

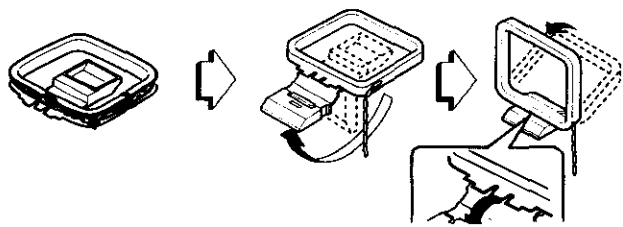
Extend this antenna horizontally in a T-shape and fix its ends to the wall.

AM antenna:

Position to find the best possible reception.

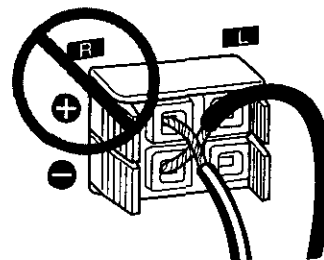
To stand the AM antenna on a surface

Fix the claw to the slot.



NOTE

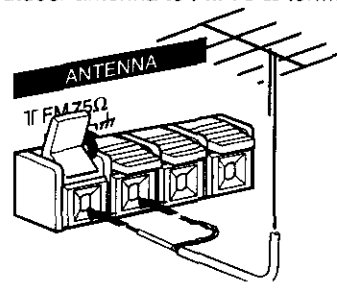
Be sure to connect the speaker cords correctly. Improper connections can cause short circuits in **SPEAKERS** terminals.



- Do not leave objects generating magnetism, such as credit cards, near the speakers, as these objects may be damaged.
- Do not bring the FM antenna near metal objects or curtain rails.
- Do not bring the AM antenna near other optional equipment, the stereo system itself, the AC cord or speaker cords, since noise will be picked up.
- Do not unwind the AM antenna wire.

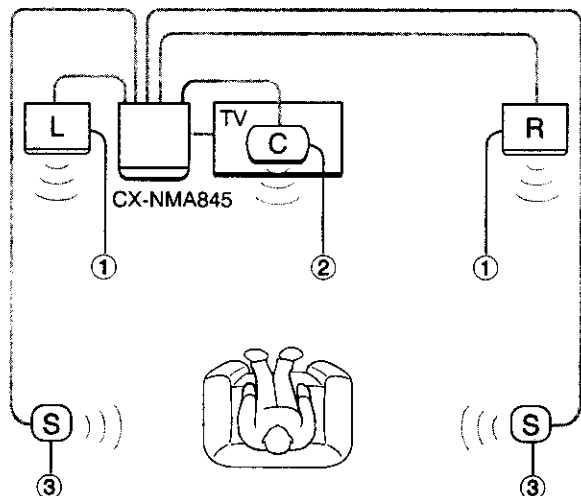
CONNECTING AN OUTDOOR ANTENNA

For better FM reception, use of an outdoor antenna is recommended. Connect the outdoor antenna to **FM 75 Ω** terminals.



POSITIONING THE SPEAKERS

To achieve the optimum effects obtainable with the DOLBY PRO LOGIC system, it is important to position the speakers properly. Refer to the following illustration to find out the best location in your room.



① **Front speakers**

② **Center speaker**

Position this at the center of the two front speakers and also, if a TV set is connected, on or below the set.

③ **Surround speakers**

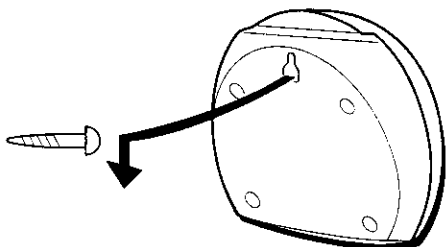
Place the surround speakers directly to the side of or slightly behind the listening area. Align them horizontally, about 1 meter (3.2 feet) above ear height.

NOTE

- No sound is heard from the center and surround speakers when the DOLBY PRO LOGIC, the SURROUND system and the 5.1 CH (page 31) are set to off.
- The center speaker sounds when the DOLBY PRO LOGIC or the 5.1 CH (page 31) is set to on.

To mount the surround speakers on the wall

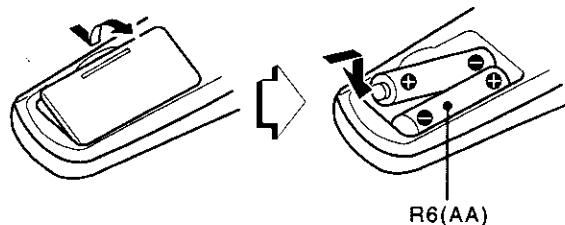
Mount each speaker on a spot that can hold its weight.



REMOTE CONTROL

Inserting batteries

Detach the battery cover on the rear of the remote control and insert two R6 (size AA) batteries.



When to replace the batteries

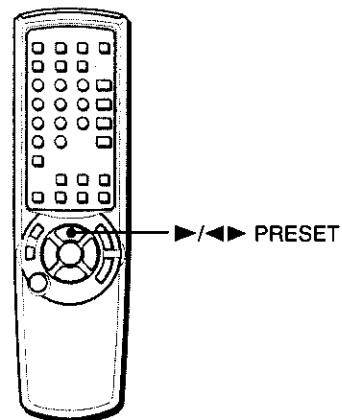
The maximum operational distance between the remote control and the sensor on the main unit should be approximately 5 meters (16 feet). When this distance decreases, replace the batteries with new ones.

Using the remote control

The instructions in this manual refer mainly to the buttons on the main unit. Buttons on the remote control with the same names as those on the main unit can be used as well.

▶/◀ PRESET on the remote control

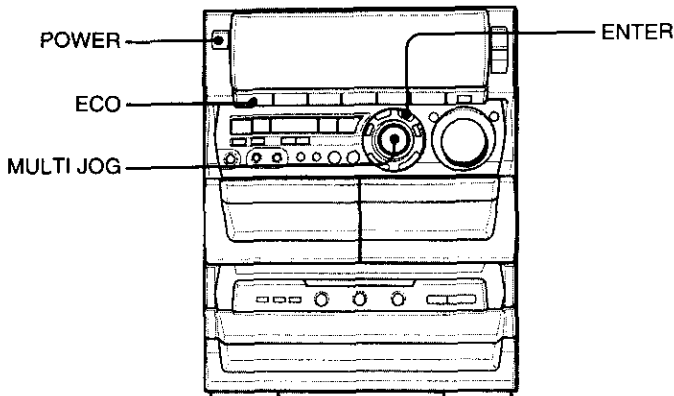
The function is the same as that of ◀▶ on the main unit.



NOTE

- If the remote control is not going to be used for an extended period of time, remove the batteries to prevent possible electrolyte leakage.
- The remote control may not operate correctly when:
 - The line of sight between the remote control and the remote sensor inside the display window is exposed to intense light, such as direct sunlight
 - Other remote controls are used nearby (those of a television, etc.)

BEFORE OPERATION



To turn the power on

Press one of the function buttons (**TAPE/DECK 1/2**, **TUNER/BAND**, **VIDEO/AUX/5.1CH**, **CD**, **MD**). Playback of the inserted disc or tape begins, or the previously tuned station is received (Direct Play Function).

POWER is also available.

NOTE

When the power is turned on, the disc compartment may open and close to reset the unit.

To turn the power off

Press **POWER**.

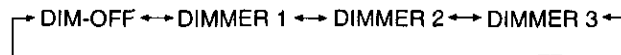
Flash Window

The inside of both cassette holders are lit up upon powering up. The light turns off when you hold down **TAPE** and press **■**. Repeat the process to turn the light back on.

To change the brightness level of the display

- 1 Press **ECO** so that "ECO MODE" is displayed.
- 2 Within 4 seconds, turn **MULTI JOG** to display "DIM MODE", and then press **ENTER** within 4 seconds.
- 3 Within 4 seconds, turn **MULTI JOG** to select the dimmer mode as below.

The mode will be automatically set after 4 seconds. It will also be set if **ENTER** is pressed within 4 seconds after step 3.



DIM-OFF: The normal display.

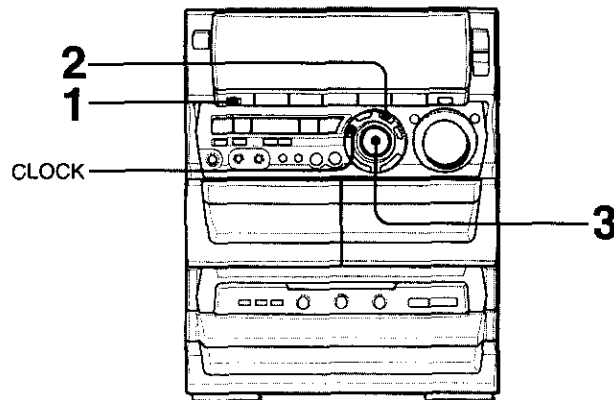
DIMMER 1: The illumination of the display is dimmer than usual.

DIMMER 2: The illumination of the display is dimmer than DIMMER 1.

DIMMER 3: The illumination of the display is dimmer than DIMMER 2, and the front panel blacks out.

NOTE

If the timer recording (page 29) is done with the economizing mode (page 7) set to "ON" and the power turns off, the dimmer mode will be set to "DIMMER 3" the next time the power is turned on.



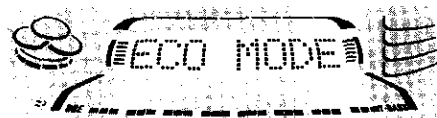
SETTING POWER ECONOMIZING MODE

Setting this unit to power economizing mode reduces power consumption as follows.

- When the power is turned off, all the display lights turn off. However, if the clock is not set, the game Demo (page 8) will begin when the power is turned off.
- If CD, Tape or Rhythm play function (page 9) does not play for 10 minutes or if there is no audio input from any connected external equipment for 10 minutes when VIDEO/AUX or MD is selected as the source, the power shuts off.
- When the power turns on due to timer recording (page 29), the display brightness level is set to "DIMMER 3" (page 7), all button lamps are off, and the volume is set to the minimum level (0).
- The display brightens only when operating the unit. When the unit has not been used for 10 seconds, the brightness level switches to the mode previously selected in "DIM MODE". (Page 7)
(If the display brightness level is set to "DIM-OFF", the brightness does not change. When the level is "DIMMER 3", the button lamps are also turned off.)

1 Press ECO.

"ECO MODE" will be displayed.

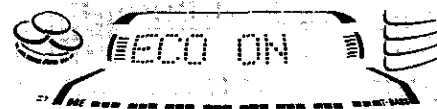


2 Press ENTER within 4 seconds.

The current power-economizing mode status will be displayed.
If the power-economizing mode is OFF: ECO OFF
If the power-economizing mode is ON: ECO ON

3 Turn MULTI JOG within 4 seconds to switch the power-economizing mode on or off.

Example: When "ON" is selected



The mode will be automatically set after 4 seconds. It will also be set if **ENTER** is pressed within 4 seconds after step 3.

NOTE

To view the clock when all the display lights turn off, press **CLOCK** so that the time is displayed for 4 seconds.

7-Channel Multi-Amplifier System

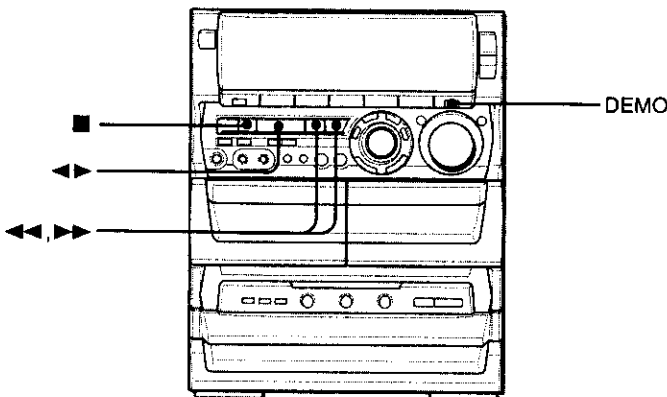
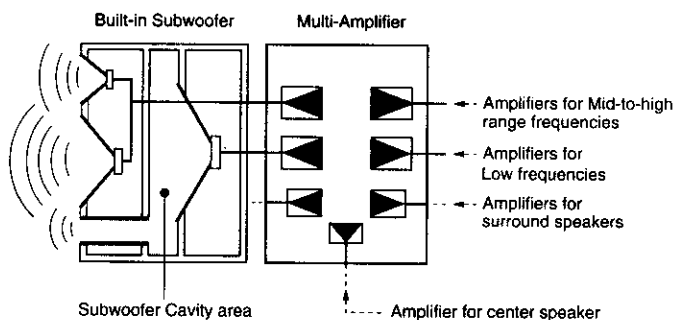
To provide reinforcement for the ultra-low frequencies, in addition to the Left/Right 2-channel amplifier used to reproduce mid-to-high-range frequencies, this system incorporates a second L/R 2-channel amplifier just for reproduction of ultra-low frequencies — making the front speakers, in effect, a 4-channel amplifier system. Therefore, this has a total of 7-channel amplifiers in the Multi Amplifier System (4-channel amplifiers in the front speakers + a L/R 2-channel amplifier in the surround speakers + a 1-channel amplifier in the center speaker). By utilizing discrete amplifiers for mid to-high-frequencies and low frequencies, high-quality sonic reproduction that is virtually free from distortion can be realized.

This Multi Amplifier System, which utilizes independent circuitry for the different frequency ranges, enables superb sonic reproduction free from distortion.

Built-in Subwoofer System

The built-in subwoofer System has a separate subwoofer cavity area that is part of the loudspeaker cabinet structure, which acts as a sonic filter to cut distortion components. (In the Multi Amplifier System, the ultra-low frequency signals transmitted from their own independent amplifier are reproduced in this area.) This separate construction gives a clear, rich definition to bass reproduction and it can realize clear, well-defined mid-to-high frequency signals.

And AIWA's built-in subwoofer system incorporates a subwoofer capable of powerful, satisfying bass performance with true stereo separation.



Game Demo

When you only plug the AC power cord for the first time after purchase, the game automatically comes on. This initial state is disabled once you set the built-in clock. As long as you leave the clock intact, the game automatically comes on when the unit is

To play the game Demo

Press **DEMO** whether the unit is turned on or off, and whether the clock has been set or not.

With the power switched off the game is silent. With the power switched on it is livened up with audio (referred to as game sound in the following).

1 Press ◀▶.

Three numbers on the display start to run.

2 Press ■ once.

The number on the left side stops.

3 Press ■ twice to stop the remaining two numbers.

Scoring:

20 points are given to start the game.

If all the numbers are equal, 50 points are added to the score.

If not equal, one point is subtracted.

If the gained points reach 9999, you win.

If the gained points fall to 0, you lose.

To cancel the game Demo

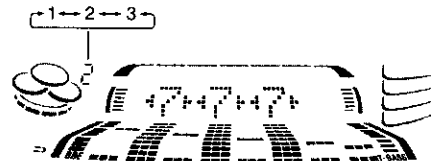
Press **DEMO**.

To reset the game Demo

Press **DEMO** twice.

To change the probability of equalizing the three numbers

Press ◀◀ or ▶▶ repeatedly to select one of the three probability levels when playing the game Demo. The tray number indicator in the display changes between 1 and 3. As the tray number increases from 1 to 3, the higher the probability of equalizing.



To mute the game sound

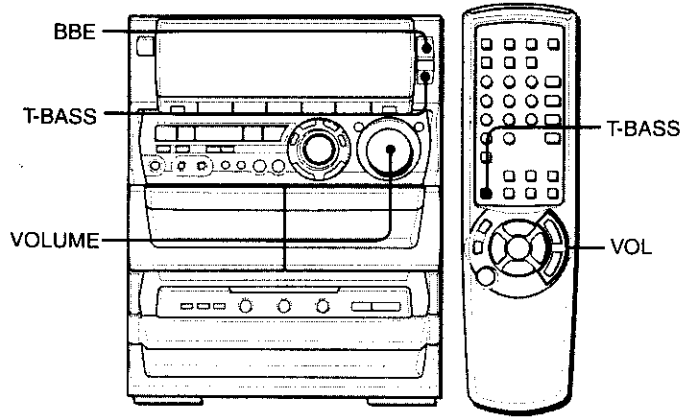
Firstly, cancel the game Demo by pressing **DEMO**. Then, keep pressing **DEMO** until "OFF" is displayed.

To restore the game sound, keep pressing **DEMO** again until "ON" is displayed.

NOTE

- During playing the game Demo, ■, ◀◀, ▶▶ and ◀▶ are available only for the game Demo. Cancel the game Demo to use these buttons for the functions such as CD playing, etc.
- To change the game sound, see "RHYTHM PLAY FUNCTION" on page 9.
- During the game Demo, some indicators unrelated with the actual operation light up on the display.
- DEMO is locked out during recording and is not operative.
- The game Demo and the game sound are automatically canceled if the volume is adjusted while the unit is turned on.

AUDIO ADJUSTMENTS



VOLUME

Turn **VOLUME** on the main unit, or press **VOL** on the remote control. The volume level is displayed as a number from 0 to MAX (50). The volume level is automatically set to 20 when the power is turned off with the volume level set to 21 or more.

To change the left/right balance

Press **MANUAL SELECT** on the remote control. "L/R" is displayed for 2 seconds. Press **◀ DOWN** or **▶ UP** on the remote control within these 2 seconds.

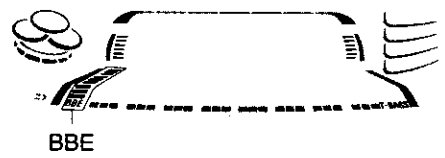
- The DOLBY PRO LOGIC and the DOLBY DIGITAL SURROUND front speakers level is also changed. (See pages 24 and 31)

BBE SYSTEM

The BBE system enhances the clarity of high-frequency sound. It also enriches the Karaoke function to make your voice sound clear and pleasant.

Press BBE.

Each time it is pressed, the level changes. Select one of the three levels, or the off position to suit your preference.



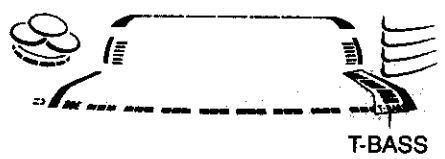
- The BBE system does not perform while 5.1 CH INPUTs (page 31) are active.

SUPER T-BASS SYSTEM

The T-BASS system enhances the realism of low-frequency sound.

Press T-BASS.

Each time it is pressed, the level changes. Select one of the three levels, or the off position to suit your preference.



NOTE

- Low frequency sound may be distorted when the T-BASS system is used for a disc or tape in which low frequency sound is originally

RHYTHM PLAY FUNCTION (BEAT MASTER DX)

USING THE BEAT FUNCTION

This unit has a library of rhythm patterns from which you can select the desired one to add to the playback of any music sources, thus allowing you to create your original sounds. The mix created with the BEAT and BBE functions can be recorded on tape if you want to. Also, the mix is available at **LINE OUT**.

NOTE

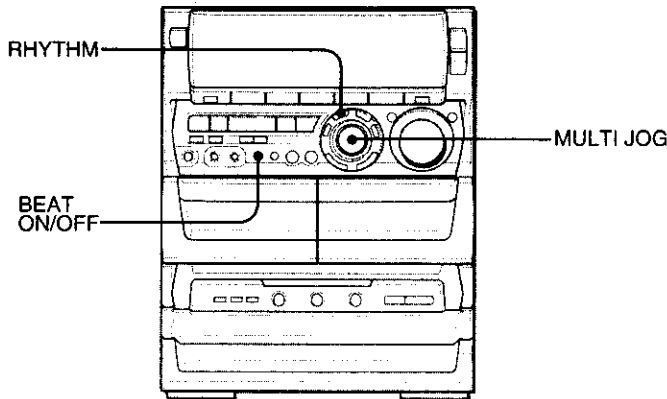
The BEAT function is not available when making a tape copy between two tape decks using **SYNC DUB**.

To select a rhythm pattern

- 1 Press **BEAT ON/OFF** to switch the function on. You'll hear the current rhythm pattern, the display showing the name of the rhythm.
- 2 Turn **MULTI JOG** to cycle through the options provided until you find one that meets the music. The display will change as follows:



To adjust the tempo of the rhythm pattern



- 1 Press **RHYTHM** repeatedly until the display reads "Tempo XXX."

NOTE

If "AUTO" shows while you are pressing **RHYTHM**, change it to "MANUAL" by turning **MULTI JOG** to the left. In AUTO mode the tempo is automatically set and you cannot access the display of "Tempo." (More about AUTO mode later.)

- 2 Turn **MULTI JOG**.

Turning to the right speeds up the tempo. Turning to the left slows down the tempo.

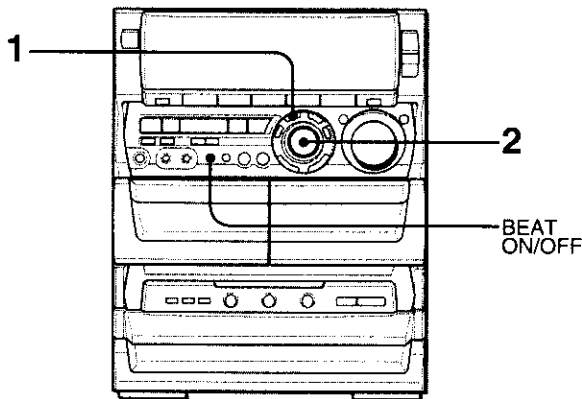
(If a time-out occurs before you turn the dial, go back to the display of "Tempo" by pressing **RHYTHM**.)

The tempo can be changed within the limits of 81 to 160.

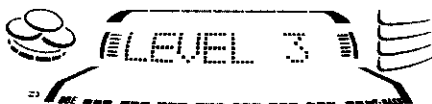
NOTE

The tempo of GAME is not adjustable.

To change the volume level of the rhythm pattern



- 1 Press **RHYTHM** repeatedly until the display reads "LEVEL X."



- 2 Turn **MULTI JOG**.

Three levels, 1-3, are available.

To stop the BEAT function

Press **BEAT ON/OFF**.

BEAT toggles between On and Off.

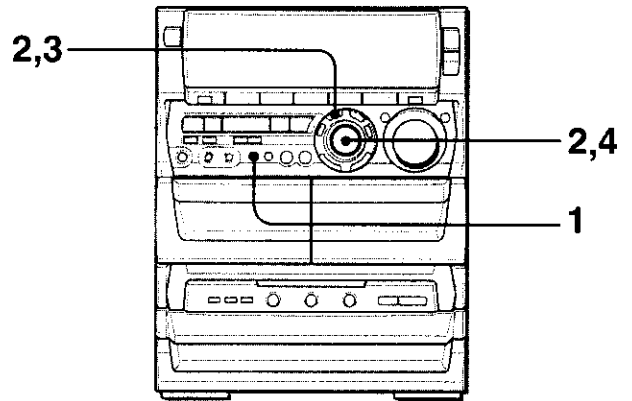
NOTE

Using the AUTO mode

The AUTO mode automatically adjusts the tempo of the current rhythm pattern so it coincides with the tempo of the music.

NOTE

Depending on the music the AUTO mode may not work correctly (with songs whose tempo is fuzzy, or is varying, for example).



You can let the music start playing before performing step 1 or later at the desired moment.

- 1 Press **BEAT ON/OFF** to switch the function on. You will hear the current rhythm pattern.
- 2 Change the rhythm pattern and the level setting as required by pressing **RHYTHM** and turning **MULTI JOG**.
- 3 Press **RHYTHM** to switch the display to read "MANUAL" or "AUTO."



- 4 Turn **MULTI JOG** to the right to change the display to "AUTO."

If "AUTO" is displayed in step 3, turn **MULTI JOG** to the left to change the display to "MANUAL" before performing step 4.



On switching from MANUAL over to AUTO the level of the rhythm pattern is automatically reduced to "1." The preset level will be resumed when the unit takes on the tempo of the music.

While the unit is trying to get synced up to the tempo of the music, a cascade-like blue indicator will flash on the sides of the graphic equalizer display section.



When the unit gets synced up to the tempo of the music, the display will momentarily read the synced-up tempo.

Depending on sound sources (such as, songs whose tempo is varying), however, you may see different tempos appearing one after the other in the display.

After once synced up if the sync lock unlocks the display will read "BEAT OUT," and again the unit will try to get synced up.

At the occurrence of BEAT OUT the level of the rhythm is automatically reduced to "1"; and it increases back to the preset level when sync is achieved again.

NOTE

The BEAT function can be used together with the SPICE A/B function, as well as with the FILL IN function. (For these functions see below.) But you cannot use the AUTO SPICE function at the same time as the BEAT function.

Using the FILL IN function

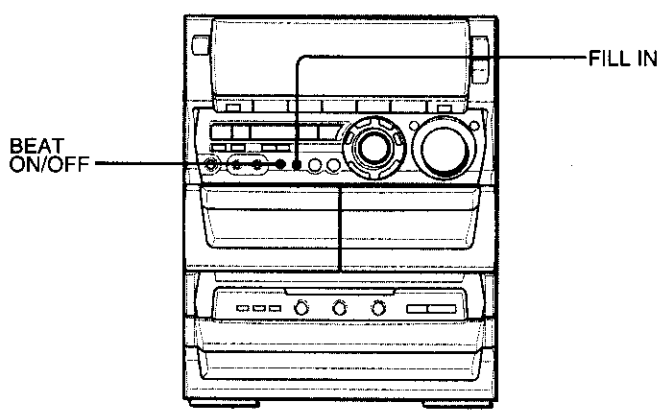
The FILL IN function is used together with the BEAT function to insert a variation of the current rhythm pattern.

The AUTO SPICE/FILL IN double function switch takes on the FILL IN function when the BEAT function is switched on.

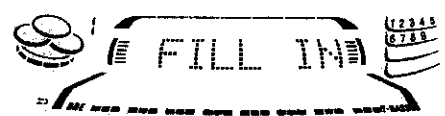
NOTE

- The AUTO SPICE function is not available at the same time as the FILL IN function.
- The FILL IN function is not available when making a tape copy between two tape decks using **SYNC DUB**.

To use the FILL IN function



During playback with the BEAT function switched on, press **FILL IN** at the desired moment.



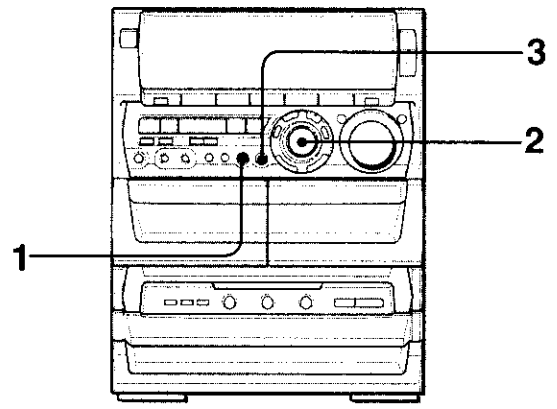
The display will read "FILL IN" and, when the current cycle of the rhythm pattern is over, you'll hear a short sound different from the rhythm pattern. This sound depends on rhythm patterns. If you want, try to change the rhythm pattern. (Selecting a rhythm pattern is discussed earlier, under the corresponding heading.)

USING THE SPICE FUNCTION

SPICE A/B function

The SPICE A/B function allows you to add percussion to the playback of the music and create your original sounds. Your sounds created with SPICE A/B can be recorded on tape if you want to.

To select sounds



1 Press A.

You'll hear the current sound stored in A.

2 Within 4 seconds, turn MULTI JOG to the left or right until you find the desired sound.

As the display changes, you'll hear the respective sound.

3 In a similar way, select a sound for B.

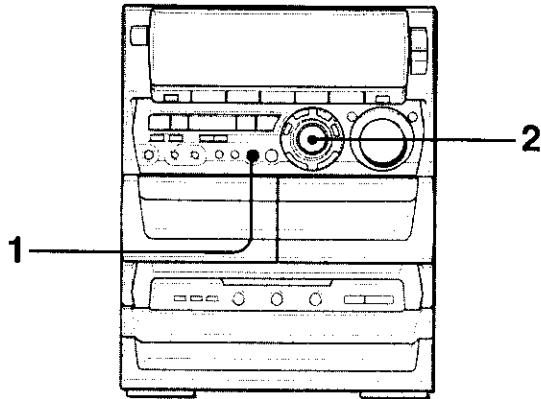
To actually use the function

Once you are satisfied with the sound selection, let the music start playing, and hit **SPICE A** or **B** in time with the music as if to play percussion instruments.

NOTE

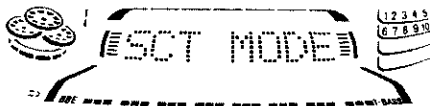
You cannot use the SPICE A/B function when making a tape copy between two tape decks using **SYNC DUB**.

Using a scratch mode



- 1 Hold down SPICE A. (Don't release the button until you complete step 2.)**

The display will read "SCT MODE."



- 2 Still holding down the button, turn MULTI JOG.**

Depending on the direction in which you turn MULTI JOG, different scratches are produced.

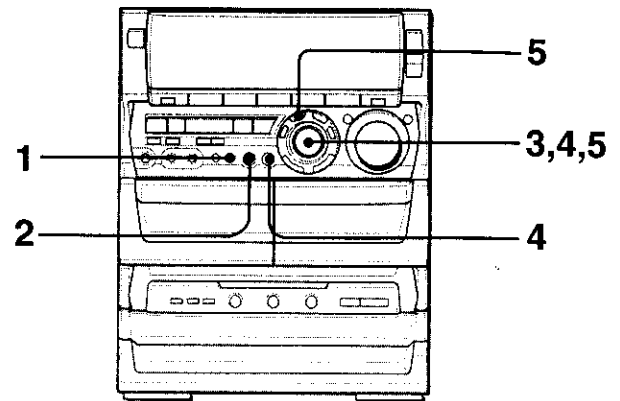
The Scratch mode is disabled when you release the A button.

Using the AUTO SPICE function

The AUTO SPICE function produces the sounds of SPICE A and B in sync with the music, the sound of A in response to low frequency signals, and the sound of B in response to high frequency signals.

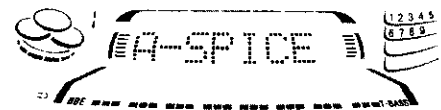
NOTE

- The AUTO SPICE function cannot be used together with the BEAT function.
- Depending on the music the AUTO SPICE function may not work the way you'd expect. In such a case, use the SPICE A/B function instead.
- The AUTO SPICE function is not available when making a tape copy between two tape decks using SYNC DUB.



- 1 Press AUTO SPICE.**

"A-SPICE" will show in the display.



- 2 Press SPICE A.**

You'll hear the sound currently stored in A, its name appearing in the display.

Each time you press A the sound is produced.

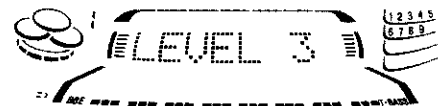
- 3 If you want to change the sound of A, turn MULTI JOG until you find the desired sound.**

(If a time-out occurs after completing step 2 and before performing step 3, press SPICE A again.)

- 4 In a similar way, check the sound of B and change it if you want to.**

- 5 To adjust the level of the A and B sounds, access the display of "LEVEL X" by pressing RHYTHM as many times as necessary, then within 4 seconds turn MULTI JOG.**

Three levels, 1, 2 and 3, are available.



The A and B levels are adjusted at one time.

- 6 Let the source start playing to audition the effect.**

The blue cascade-like indicator to the left of "BBE" in the display will flash and the sound of SPICE A will play in sync with the bass, and the sound of SPICE B in sync with the treble.

NOTE

When a rhythm pattern is playing or while a FILL IN sound is being produced if you flip SPICE A or B or produce scratches, a momentary break would occasionally occur in the rhythm pattern or the FILL IN sound. The same goes for the AUTO SPICE sounds when you flip SPICE A or B or produce scratches.

GRAPHIC EQUALIZER

SELECTING THE PROGRAMMED EQUALIZATION CURVE

This unit provides the following 5 different programmed equalization curves.

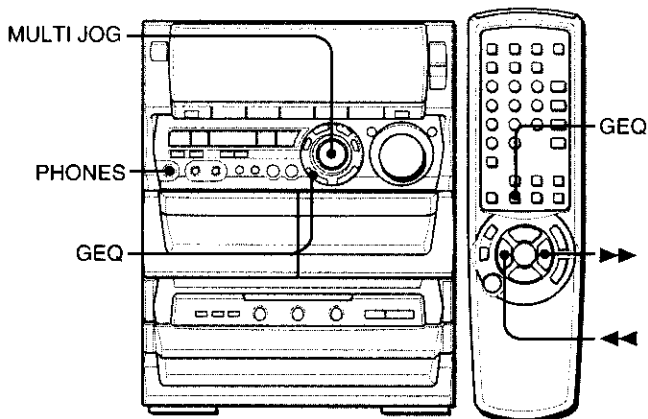
ROCK: Powerful sound emphasizing treble and bass

POP: More presence in the vocals and midrange

LATIN: Accented higher frequencies for latin music.

CLASSIC: Enriched sound with heavy bass and fine treble.

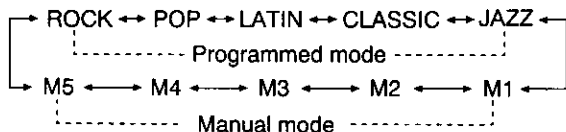
JAZZ: Accented lower frequencies for jazz-type music



Press **GEQ**, and turn **MULTI JOG** to select one of the programmed equalization curves within 4 seconds.



"GRAPHIC EQUALIZER" appears and the GEQ mode is displayed cyclically as follows.



To display the current GEQ mode

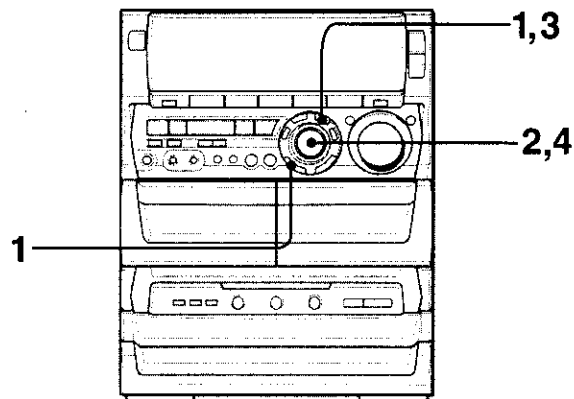
Press **GEQ**. The current mode is displayed for 4 seconds.

To cancel the selected mode

Press **GEQ** twice.

"GEQ OFF" appears and "GRAPHIC EQUALIZER" disappears.

SETTING A NEW EQUALIZATION CURVE MANUALLY



The equalization curve can be customized to suit your preference.

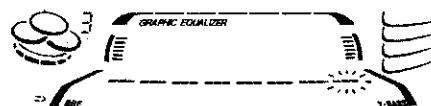
- 1 Press **GEQ**, followed by **ENTER** within 4 seconds. The display will be switched to read "GEQ LOW."
- 2 Within 8 seconds, turn **MULTI JOG** to adjust the level of the lowest frequency.



- 3 Press **ENTER** to let "GEQ HIGH" show.

The highest level frequency indicator flashes for 8 seconds.

- 4 Within 8 seconds, turn **MULTI JOG** to adjust the level of the highest frequency.



The frequency level indicators between the lowest and the highest are adjusted accordingly.

Using the headphones

Connect headphones to the **PHONES** jack with a standard stereo plug (ø6.3 mm, 1/4 inch).

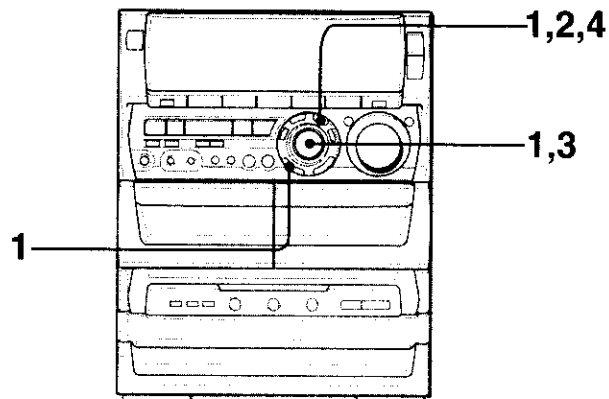
No sound is output from the speakers while the headphones are plugged in.

- When the headphones are plugged in, the **SURROUND** system, the **DOLBY PRO LOGIC** and the **5.1 CH** (page 31) do not function.

Sound adjustment during recording

The **VOLUME** control has no effect on recording. It only sets the level feeling the speakers and headphones. Remember, however,

MEMORIZING THE NEW EQUALIZATION CURVES



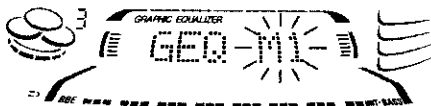
Up to 5 customized equalization curves can be stored as the manual modes M1 - M5.

1 Go through steps 1-4 on previous page.

The created curve is displayed for 8 seconds.

2 Within 8 seconds, press ENTER.

"M 1" flashes on the display for 8 seconds.



- If this step is not completed within 8 seconds, press **GEQ** first to display "GEQ ON". Then within 4 seconds press **ENTER** repeatedly until "M1" flashes.

3 Within 8 seconds, turn MULTI JOG to select one of the manual modes M1 - M5 to store the curve.

4 Within 8 seconds, press ENTER.

The new equalization curve is stored.

To select the stored equalization curve

Press **GEQ**, and turn **MULTI JOG** to select one of the manual modes M1 - M5 within 4 seconds.

To adjust the volume of the surround speakers

Press **MANUAL SELECT** twice or three times on the remote control.

"S-L" or "S-R" is displayed for 2 seconds. Press **◀ DOWN** or **▶ UP** on the remote control within these 2 seconds.

- The **DOLBY PRO LOGIC** (page 24) and the **DOLBY DIGITAL SURROUND** (page 31) surround speakers level is also changed.

NOTE

The **SURROUND** mode is canceled when:

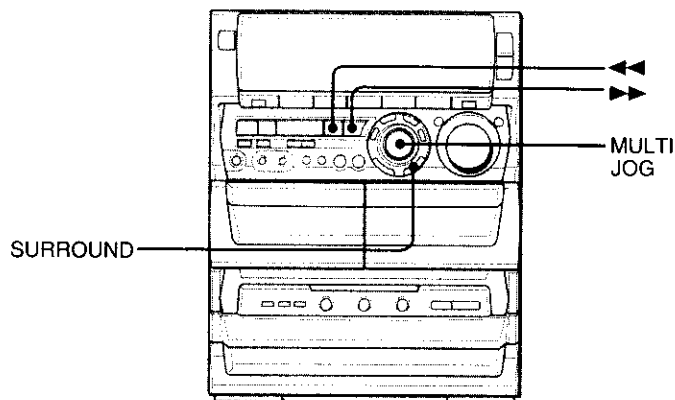
- the **ECHO** level is changed.
- the **DOLBY PRO LOGIC** is turned on.

DSP SURROUND

The **DSP (Digital Signal Processor) SURROUND** sonically changes the acoustic characteristics of any listening rooms, allowing you to enjoy the real sound presence of different environments.

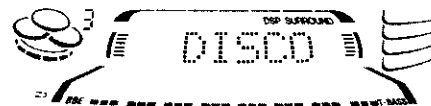
This unit has been programmed with 5 different **SURROUND** modes.

SELECTING A PROGRAMMED DSP SURROUND MODE



Five modes of **DSP SURROUND** offer the sound presence you'd experience in disco (**DISCO**), at a live concert (**LIVE**), stadium (**STADIUM**), in a concert hall (**HALL**) or movie theater (**MOVIE**). (Shown in parentheses are indications appearing in the display.)

Press **SURROUND**, and turn **MULTI JOG** or press **◀** or **▶** repeatedly to select the desired programmed mode within 4 seconds.



"**DSP SURROUND**" appears and the **DSP SURROUND** mode is displayed cyclically as follows.



Equalization curves are selected automatically to match the **DSP SURROUND** modes and can also be manually selected or turned off to suit your preference.

To display the current DSP SURROUND mode

Press **SURROUND**. The current mode is displayed for 4 seconds.

To cancel the selected mode

Press **SURROUND** twice. "**DSP OFF**" appears and "**DSP SURROUND**" disappears.

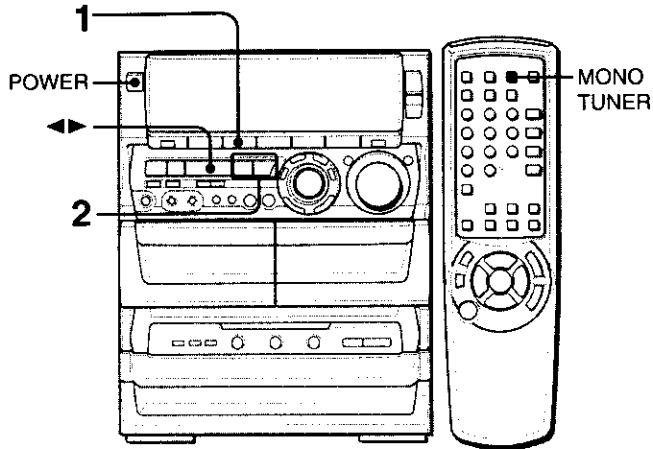
When the music source is monaural

Select "**LIVE**", "**STADIUM**" or "**MOVIE**" to obtain a simulated stereo effect.

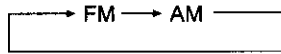
When "**DISCO**" or "**HALL**" is selected, no sound will be heard from the surround speakers.

RADIO RECEPTION

MANUAL TUNING

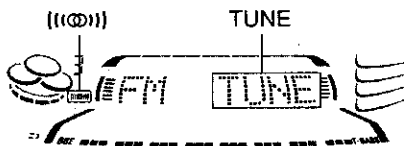


- 1 Press **TUNER/BAND** repeatedly to select the desired band.



When **TUNER/BAND** is pressed while the power is off, the power is turned on directly.

- 2 Press **◀◀ DOWN** or **▶▶ UP** to select a station. Each time the button is pressed, the frequency changes. When a station is received, "TUNE" is displayed for 2 seconds. During FM stereo reception, ((Ⓜ)) is displayed.



To search for a station quickly (Auto Search)

Keep **◀◀ DOWN** or **▶▶ UP** pressed until the frequency starts to change rapidly. After tuning in to a station, the search stops. To stop the Auto Search manually, press **◀◀ DOWN** or **▶▶ UP**.

- The Auto Search may not stop at stations with very weak signals.

When an FM stereo broadcast contains noise

Press **MONO TUNER** on the remote control so that "MONO" appears on the display.

Noise is reduced, although reception is monaural.

To restore stereo reception, repeat the above so that "MONO" disappears.

To change the AM tuning interval

The default setting of the AM tuning interval is 10 kHz/step. If you use this unit in an area where the frequency allocation system is 9 kHz/step, change the tuning interval.

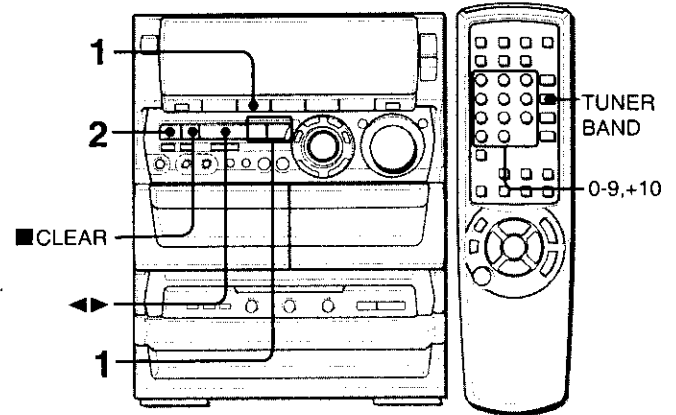
Press **POWER** while pressing **◀▶**.

To reset the interval, repeat this procedure.

NOTE

When the AM tuning interval is changed, all preset stations are cleared. The preset stations have to be set again.

PRESETTING STATIONS

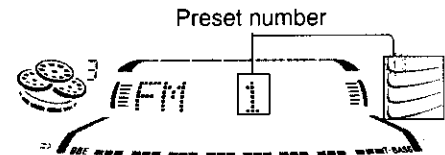


The unit can store a total of 32 preset stations. When a station is stored, a preset number is assigned to the station. Use the preset number to tune in to a preset station directly.

- 1 Press **TUNER/BAND** to select a band, and press **◀◀ DOWN** or **▶▶ UP** to select a station.

- 2 Press **■ SET** to store the station.

A preset number beginning from 1 in consecutive order for each band is assigned to the station.



- 3 Repeat steps 1 and 2.

The next station will not be stored if a total of 32 preset stations for all the bands have already been stored.

NOTE

"FULL" is displayed if you attempt to store more than 32 preset stations.

PRESET NUMBER TUNING

Use the remote control to select the preset number directly.

- 1 Press **TUNER/BAND** to select a band.

- 2 Press numbered buttons 0-9 and +10 to select a preset number.

Example:

To select preset number 20, press +10, +10 and 0.

To select preset number 15, press +10 and 5.

Selecting a preset number on the main unit

Press **TUNER/BAND** to select a band. Then, press **◀▶** repeatedly or turn **MULTI JOG**.

Each time **◀▶** is pressed, the next ascending number is selected.

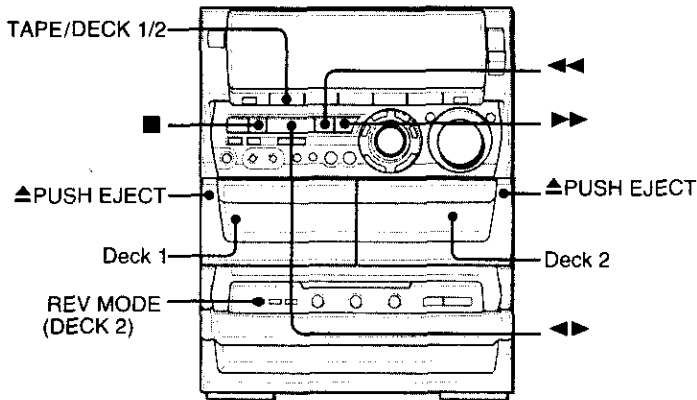
To clear a preset station

Select the preset number of the station to be cleared. Then, press **■ CLEAR**, and press **■ SET** within 4 seconds.

The preset numbers of all other stations in the band with higher

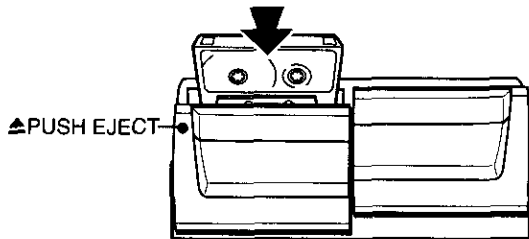
TAPE PLAYBACK

BASIC OPERATIONS



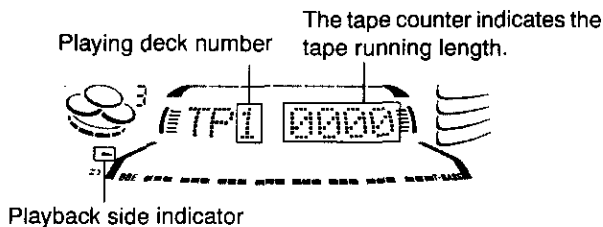
- On deck 1, tapes are always played back on both sides. On deck 2, you can select a reverse mode to play back one or both sides.
- Use Type I (normal), Type II (high/CrO₂) or Type IV (metal) tapes for playback.

1 Press TAPE/DECK 1/2 and press \blacktriangle PUSH EJECT to open the cassette holder.



Insert a tape with the exposed side down. Push the cassette holder to close.

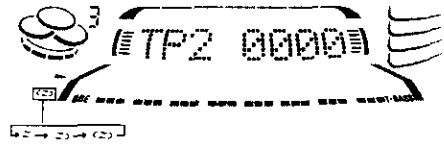
2 Press \blacktriangleleft to start play.



- \blacktriangleright : The front side is being played (forward).
- \blacktriangleleft : The back side is being played (reverse).

To select a reverse mode (deck 2 only)

Each time **REV MODE (DECK 2)** is pressed, the reverse mode changes.



To play one side only, select \blacktriangleleft .

To play from front side to reverse side once only, select \blacktriangleleft .

To play both sides repeatedly, select \blacktriangleleft .

- When tapes are loaded in both decks, \blacktriangleleft on the display indicates Continuous Play.

To select a playing deck

When tapes are loaded in both decks, press **TAPE/DECK 1/2** first to select a deck.

The selected deck number is displayed.

To stop play, press \blacksquare .

To pause play (deck 2 only), press \blacksquare . To resume play, press again.

To change the playback side, press \blacktriangleleft in play or pause mode.

To fast forward or rewind, press \blacktriangleleft or \blacktriangleright . Then press \blacksquare to stop the tape.

To start play when the power is off (Direct Play Function)

Press **TAPE/DECK 1/2**. The power is turned on and play of the inserted tape begins.

To set the tape counter to 0000

Press \blacksquare **CLEAR** in stop mode.

The counter is also set to 0000 when the cassette holder is opened and closed.

MUSIC SENSOR

If there is a 4-second or longer blank between each track, a search for the beginning of the current or next track during playback can be done easily.

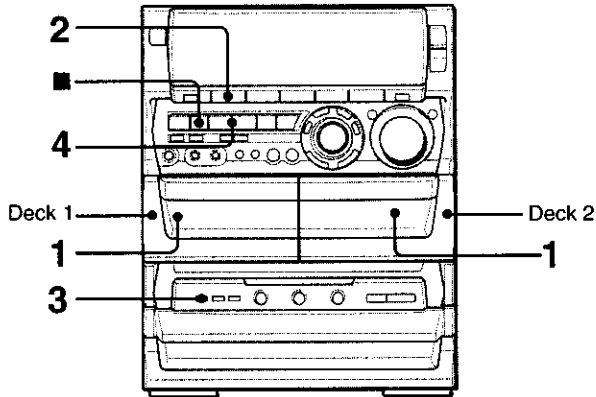
Press ◀▶ or ▶▶ during playback referring to the playback side indicator (◀ or ▶) on the display.

For example, when ▶▶ is pressed while ▶ is displayed, playback of the next track starts.

Music sensor function may not be able to detect tracks under the following conditions:

- Blanks of less than 4 seconds between tracks
- Noisy blanks
- Long passages of low-end sound
- Low overall recording levels

CONTINUOUS PLAY

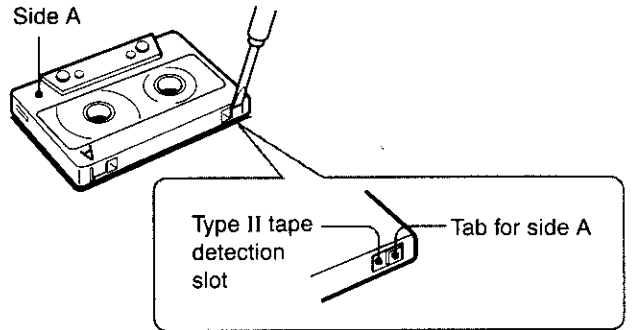


After playback on one deck finishes, the tape in the other deck will start to play without interruption.

- 1** Insert tapes into deck 1 and deck 2.
- 2** Press TAPE/DECK 1/2 to select the deck to be played back first.
- 3** Press REV MODE (DECK 2) to select ◀▶.
- 4** Press ▶▶ to start playback.
Playback continues until ■ is pressed.

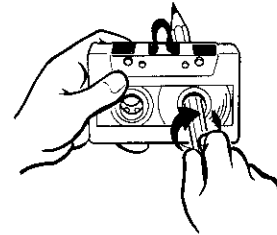
About cassette tapes

- To prevent accidental erasure, break off the plastic tabs on the cassette tape after recording with a screwdriver or other pointed tool.



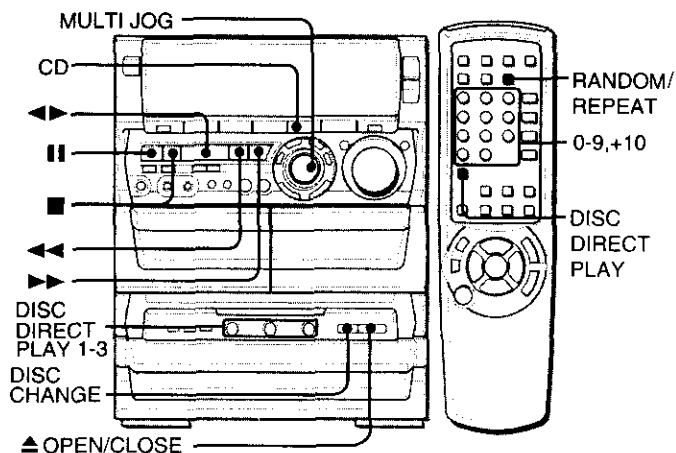
To record on the tape again, cover the tab openings with adhesive tape, etc. (On Type II tapes, take care not to cover the Type II tape detection slot.)

- 120-minute or longer tapes are extremely thin and easily deformed or damaged. They are not recommended.
- Take up any slack in the tape with a pencil or similar tool before use. Slack tape may break or jam in the mechanism.



CD PLAYING

BASIC OPERATIONS



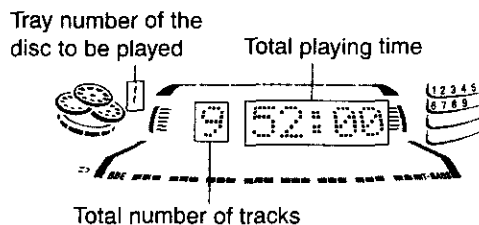
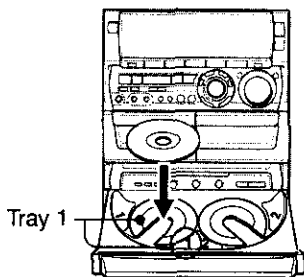
LOADING DISCS

Press **CD**, then press **▲ OPEN/CLOSE** to open the disc compartment. Load disc(s) with the label side up.

To play one or two discs, place the discs on tray 1 and 2.

To play three discs, press **DISC CHANGE** to rotate the trays after placing two discs. Place the third disc on tray 3.

Close the disc compartment by pressing **▲ OPEN/CLOSE**.



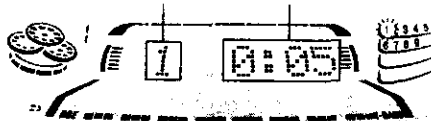
PLAYING DISCS

Load discs.

To play all discs in the disc compartment, press **◀▶**. Play begins with the disc on tray 1.

Number of track being played: 1

Elapsed playing time: 0:05



To play one disc only, press **DISC DIRECT PLAY 1-3**. The selected disc is played once.

To stop play, press **■**.

To pause play, press **||**. To resume play, press again.

To search for a particular point during playback, keep **◀◀** or **▶▶** pressed and release it at the desired point.

To skip to the beginning of a track during playback, press **◀◀** or **▶▶** repeatedly or turn **MULTI JOG**.

To remove discs, press **▲ OPEN/CLOSE**.

To start play when the power is off (Direct Play Function)
Press **CD**. The power is turned on and play of the loaded disc(s) begins.

When **▲ OPEN/CLOSE** is pressed, the power is also turned on and the disc compartment is opened.

To check the remaining time

During play, press **CD EDIT/CHECK**. The amount of time remaining until all tracks finish playing is displayed. To restore the playing time display, repeat the above.

Selecting a track with the remote control

1 Press **DISC DIRECT PLAY** and within 3 seconds press **1**, **2** or **3** to select a disc.

2 Press numbered buttons **0-9** and **+10** to select a track.

Example:

To select the 25th track, press **+10**, **+10** and **5**.

To select the 10th track, press **+10** and **0**.

The selected track starts to play and continues to the end of that disc.

Replacing discs during play

While one disc is playing, the other discs can be replaced without interrupting play.

1 Press **DISC CHANGE**.

2 Remove the discs and replace with other discs.

3 Press **▲ OPEN/CLOSE** to close the disc compartment.

NOTE

- When loading an 8-cm (3-inch) disc, put it onto the inner circle of the tray.
- Do not place more than one compact disc on one disc tray.
- Do not tilt the unit with discs loaded. Doing so may cause malfunctions.
- Do not use irregular shape CDs (example: heart-shaped, octagonal ones). It may result in malfunctions.

RANDOM/REPEAT PLAY

Use the remote control.

RANDOM play

All the tracks on the selected disc or all the discs can be played randomly.

REPEAT play


A single disc or all the discs can be played repeatedly.

Press RANDOM/REPEAT.

Each time it is pressed, the function can be selected cyclically.

RANDOM play — RANDOM lights up on the display.

REPEAT play —  lights up on the display.


RANDOM/REPEAT play — RANDOM and  light up on the display.

Cancel — RANDOM and  disappear from the display.

To play all discs, press  to start play.

To play a single disc, press **DISC DIRECT PLAY** and within 3 seconds press 1, 2 or 3 to start play.

NOTE

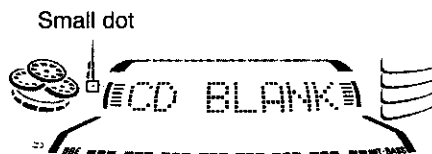
During random play it is not possible to skip to the previously played track with .

BLANK SKIP PLAY

The silent portions between tracks recorded on a CD can be skipped during playback.

1 Press CD BLANK SKIP.

"CD BLANK SKIP ON" is displayed and a small dot appears in the display.



2 Press to start playback.

The silent portions between tracks will be skipped, and the sound will be played back without interruption. If a track fades out (ends with the sound gradually decreasing), the fadeout portion also will be skipped.

To return to normal playback

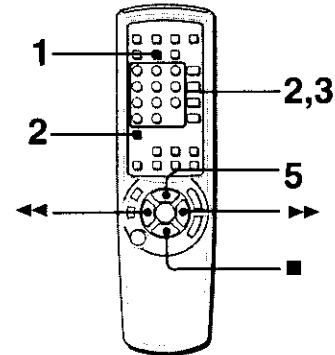
Press **CD BLANK SKIP** again, and "CD BLANK SKIP OFF" is displayed and the dot in the display disappears.

NOTE

- There may be a case where BLANK SKIP PLAY does not function correctly.
- BLANK SKIP PLAY is automatically canceled when performing AI EDIT RECORDING (page 22), PROGRAMMED EDIT RECORDING (page 23), or recording during PROGRAMMED PLAY (page 19) or RANDOM PLAY (page 19).

PROGRAMMED PLAY

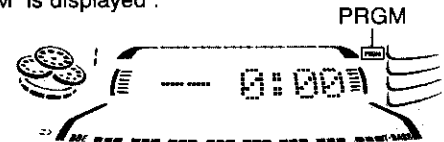
Up to 30 tracks can be programmed from any of the inserted discs.



Use the remote control.

1 Press PRGM twice while in stop mode.

"PRGM" is displayed.



- When **PRGM** is pressed once in step 1, the unit enters the KARAOKE PROGRAM (page 27).

2 Press DISC DIRECT PLAY and within 3 seconds press 1, 2 or 3 to select a disc.

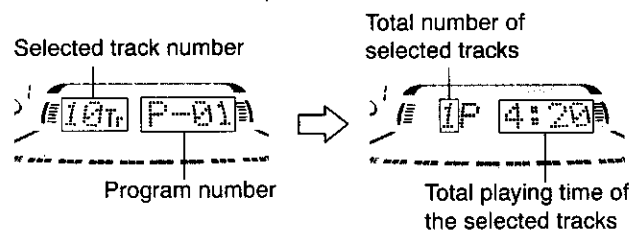
Go to the next step when the tray stops rotating.

3 Press numbered buttons 0-9 and +10 to program a track.

Example:

To select the 25th track, press +10, +10 and 5.



To select the 10th track, press +10 and 0.



4 Repeat steps 2 and 3 to program other tracks.

5 Press / to start play.

To check the program

Each time  or  is pressed in stop mode, a disc number, track number, and program number will be displayed.

To clear the program

Press  **CLEAR** in stop mode.


To add tracks to the program

Repeat steps 2 and 3 in stop mode. The track will be programmed after the last track.

To change the programmed tracks

Clear the program and repeat all the steps again.

To play the programmed tracks repeatedly

After programming the tracks, press **RANDOM/REPEAT** repeatedly until  appears on the display.

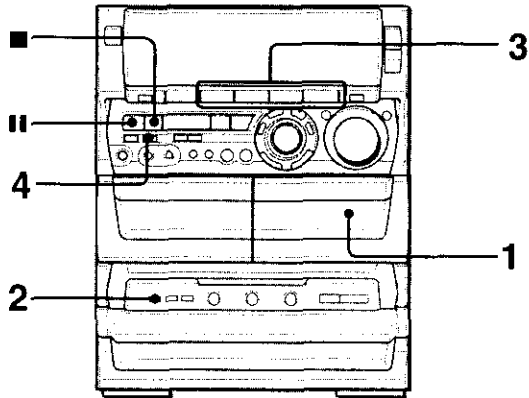
NOTE

- During programmed play, you cannot perform random play, check the remaining time, and select a disc or track. "Can't

RECORDING

BASIC RECORDING

This section explains how to record from the tuner, CD player, or external equipment.

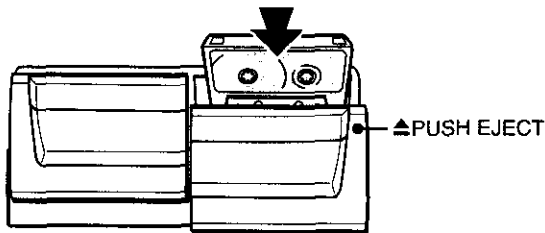


Preparation

- Use Type I (normal) and Type II (high/CrO₂) tapes for recording.
- Set the tape to the point where recording will start.

1 Insert the tape to be recorded on into deck 2.

Insert the tape with the side to be recorded on first facing out from the unit.



2 Press REV MODE (DECK 2) to select the reverse mode.

To record on one side only, select \square .
To record on both sides, select \square) or (\square .

3 Press function (TUNER/BAND, VIDEO/AUX/5.1CH, CD or MD) and prepare the source to be recorded.

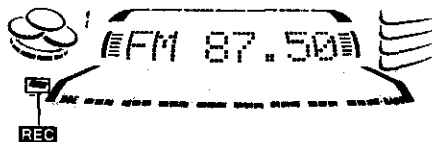
To record from a CD, press CD and load the disc(s).

To record from a radio broadcast, press TUNER/BAND and tune in to a station.

To record from a connected source, press VIDEO/AUX/5.1CH or MD.

4 Press ● REC/REC MUTE to start recording.

When recording from a connected source, start playback of the source.



When the selected function is CD, playback and recording start simultaneously.

To stop recording, press ■.

To pause recording, press ||. (Applicable when the source is TUNER, VIDEO/AUX or MD.) To resume recording, press it again.

Sound adjustment during recording

The VOLUME control has no effect on recording. It only sets the level feeding the speakers and headphones. Remember, however, recording takes on the BEAT, AUTO SPICE/FILL IN, SPICE A/B functions, as well as on the BBE function.

INSERTING BLANK SPACES

Insertion of 4-second blank spaces enables you to activate the Music Sensor function. (Applicable when the source is TUNER/BAND, VIDEO/AUX or MD.)

1 Press ● REC/REC MUTE during recording or while in recording pause mode.

REC on the display flashes for 4 seconds and 4-second blank space is made. Then, the deck enters the recording pause mode.

2 Press || to resume recording.

To insert a blank space of less than 4 seconds, press ● REC/REC MUTE again while **REC** is flashing.

To insert blank spaces of more than 4 seconds, after the deck enters recording pause mode, press ● REC/REC MUTE again. Each time the button is pressed, a 4-second blank space is added.

NOTE

"Can't REC" is displayed if you attempt to record on a tape with the plastic tabs broken off.

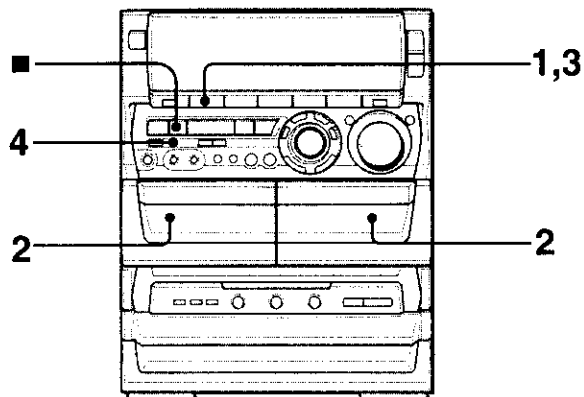
To erase a recording

Remember to unplug the microphone(s). Also, check to make sure that BEAT and AUTO SPICE are switched off (page 9).

1 Insert the tape to be erased into deck 2 and press TAPE/DECK 1/2 to display "TP 2".

2 Set the tape to the point where the erasure is to be started.

DUBBING A TAPE MANUALLY



NOTE

- Set the tape to the point where recording will start.
- The reverse mode is automatically set to \square .
Note that recording will be done on one side of the tape only.

1 Press TAPE/DECK 1/2.

2 Insert the original tape into deck 1 and the tape to be recorded on into deck 2.

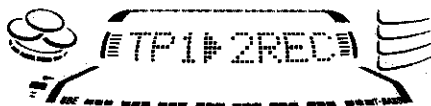
Insert the tapes with the sides to be played back or recorded on facing out from the unit.

3 Press TAPE/DECK 1/2 to select deck 1.

"TP 1" is displayed.

4 Press \bullet REC/REC MUTE to start recording.

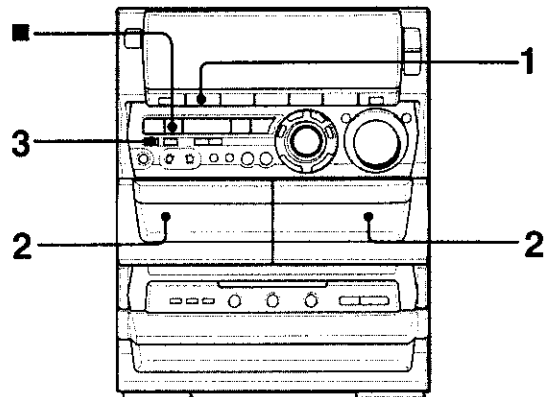
Playing and recording start simultaneously.



To stop dubbing

Press \blacksquare .

DUBBING THE WHOLE TAPE



This function allows you to make exact copies of both sides of the original tape. The reverse side of both tapes will start simultaneously as soon as the longer tape has been reversed.

NOTE

- Dubbing does not start from a point halfway in the tape.
- The reverse mode is automatically set to \square .

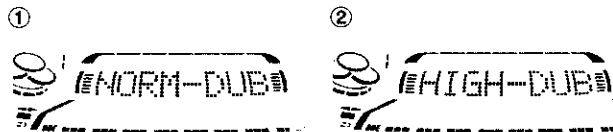
1 Press TAPE/DECK 1/2.

2 Insert the original tape into deck 1 and the tape to be recorded on into deck 2.

Insert each tape with the side to be played back or recorded on facing out from the unit.

3 Press SYNC DUB once or twice to start recording.

- ① For recording at normal speed, press it once to display NORM-DUB.
- ② For recording at high speed, press it twice to display HIGH-DUB.



The tapes are rewound to the beginning of the front sides, and recording starts.

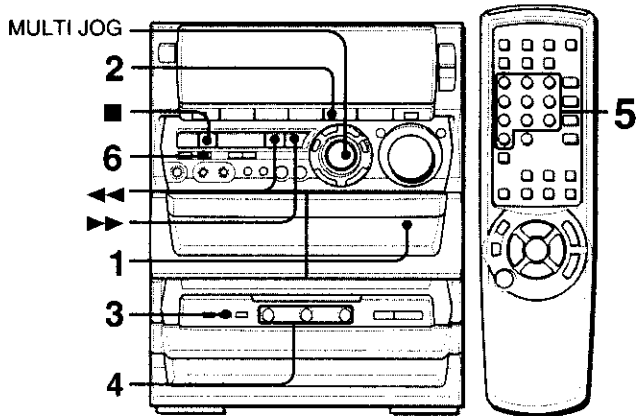
To stop dubbing

Press \blacksquare .

NOTE

Recording does not start, if the erasure prevention tab on either side of the tape is broken off.

AI EDIT RECORDING



The AI edit recording function enables CD recording without worrying about tape length and track length. When a CD is inserted, the unit automatically calculates the total track length. If necessary, the order of tracks is rearranged so that no track is cut short.

(AI: Artificial Intelligence)

NOTE

AI edit recording will not start from a point halfway into the tape. The tape must be recorded from the beginning of either side.

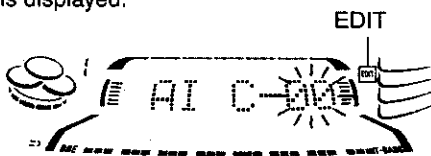
1 Insert the tape into deck 2.

Insert the tape with the side to be recorded on first facing out from the unit.

2 Press CD and load the disc(s).

3 Press CD EDIT/CHECK once.

"EDIT" is displayed.



• When "PRGM" is displayed, press CD EDIT/CHECK.

4 Press DISC DIRECT PLAY 1-3 to select a disc.

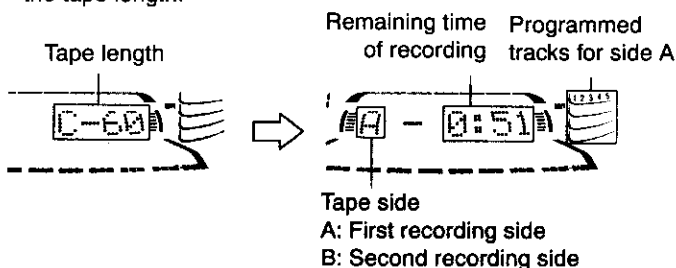
5 Press numbered buttons 0-9 on the remote control to designate the tape length.

10 to 99 minutes can be specified.

Example: When using a 60-minute tape, press 6 and 0.

In a few seconds, the tracks to be recorded on each side of the tape are determined.

• ◀◀, ▶▶ or MULTI JOG are also available to designate the tape length.



6 Press ● REC/REC MUTE to start recording on the first side.

The tape is rewound to the beginning of the front side, the lead segment is played through for 10 seconds, and recording starts. When recording on the front (side A) ends, recording on the back (side B) starts.

To stop recording

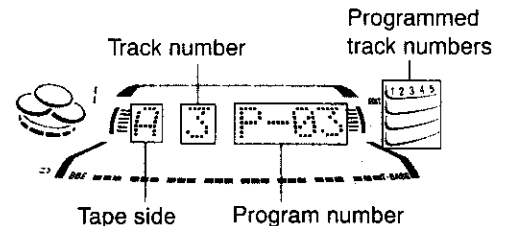
Press ■. Recording and CD play stop simultaneously.

To clear the edit program

Press ■ CLEAR twice so that "EDIT" disappears on the display.

To check the order of the programmed track numbers

Before recording, press CD EDIT/CHECK to select side A or B, and press ◀◀ or ▶▶ repeatedly.



To add tracks from other discs to the edit program

If there is any time remaining on the tape after step 5, you can add tracks from other discs in the CD compartment.

1 Press CD EDIT/CHECK to select side A or B.

2 Press DISC DIRECT PLAY 1-3 to select a disc.

3 Press numbered buttons on the remote control to select tracks. A track whose playing time is longer than the remaining time cannot be programmed.

4 Repeat steps 2 and 3 to add more tracks.

Time on cassette tapes and editing time

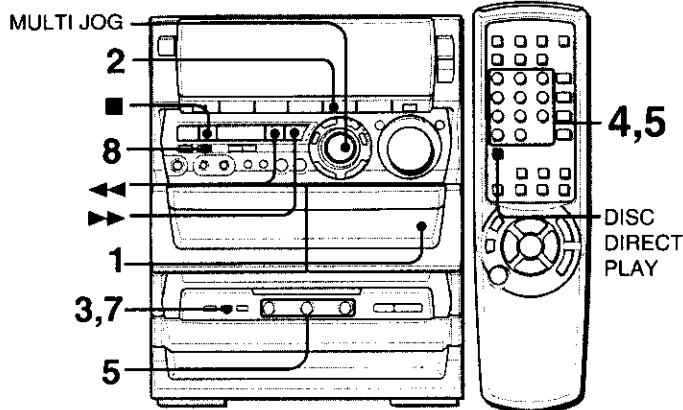
The actual cassette recording time is usually a little longer than the specified recording time printed on the label. This unit can program tracks to use the extra time. When the total recording time is a little longer than the tape's specified recording time after editing, the display shows the extra time (without a minus mark), instead of the time remaining on the tape (with the minus mark).

NOTE

• The AI edit recording function cannot be used with discs containing 31 tracks or more. "TR OVER" is displayed if this is attempted.

• Recording is inhibited if the erasure prevention tab on either side of the tape is broken off.

PROGRAMMED EDIT RECORDING



In the programmed edit recording function the tracks can be programmed while checking the remaining time on each side of the tape.

NOTE

The programmed edit recording will not start from a point halfway in the tape. The tape must be recorded on from the beginning of either side.

1 Insert the tape into deck 2.

Insert the tape with the side to be recorded on first facing out from the unit.

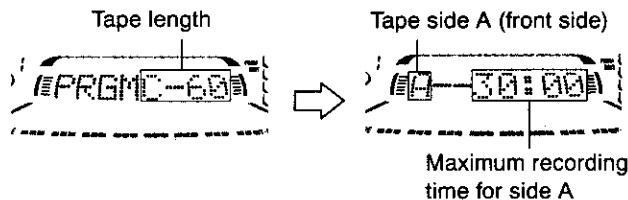
2 Press CD and load the disc(s).

3 Press CD EDIT/CHECK twice.

"EDIT" and "PRGM" are displayed.
• When "AI" is displayed, press CD EDIT/CHECK again.

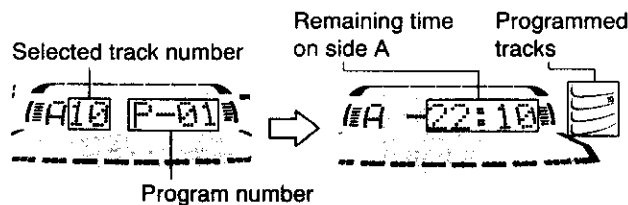
4 Press numbered buttons on the remote control to designate the tape length.

10 to 99 minutes can be specified.
• The ◀◀, ▶▶ or MULTI JOG are also available to designate the tape length.



5 Press DISC DIRECT PLAY 1-3 to select a disc. Then, press numbered buttons 0-9 and +10 on the remote control to program a track.

Example: To select the 10th track of disc 2, press DISC DIRECT PLAY 2, then press +10 and 0.

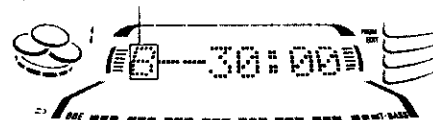


6 Repeat step 5 for the rest of the tracks for side A.

A track whose playing time is longer than the remaining time cannot be programmed.

7 Press CD EDIT/CHECK to select side B and program the tracks for side B.

After confirming "B" on the display, repeat step 5.
Tape side B (reverse side)



8 Press the ● REC/REC MUTE button to start recording.

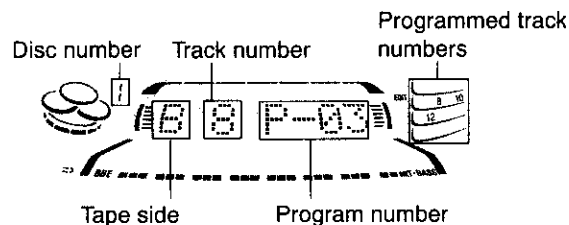
The tape is rewound to the beginning of the front side, the lead segment is played through for 10 seconds, and recording starts. When recording on the front side (A) ends, recording on the back side (B) starts.

To stop recording

Press ■. Recording and CD play stop simultaneously.

To check the order of the programmed track numbers

Before recording, press CD EDIT/CHECK to select side A or B, and press ◀◀ or ▶▶ repeatedly.



To change the program of each side

Press CD EDIT/CHECK to select side A or B, and press ■ CLEAR to clear the program on the selected side. Then program tracks again.

To clear the edit program

Press ■ CLEAR twice so that "EDIT" disappears on the display.

NOTE


- Up to 30 tracks can be programmed from any of the inserted discs.
- "FULL" is displayed if you attempt to program more than 30 tracks.
- Recording is inhibited if the erasure prevention tab on either side of the tape is broken off.

DOLBY PRO LOGIC

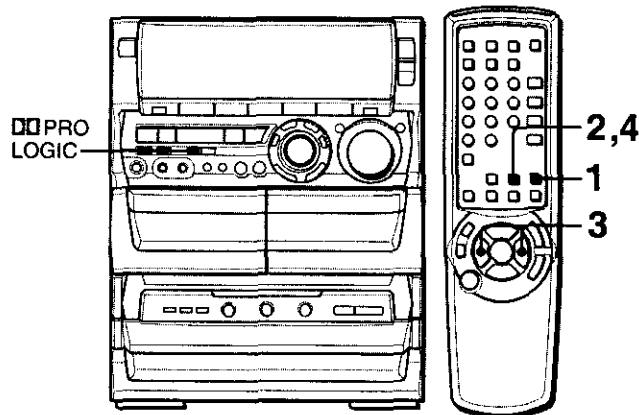
The DOLBY PRO LOGIC feature and the center and rear speakers (standard) assure full-scale home theater sound. When playing back laser discs or video software that have been recorded in Dolby Surround, astonishingly realistic sound surrounds the listener to create a new level of audio/visual entertainment.

Independent control of the five sound channels allows the listener to enjoy the same type of sound reproduction experienced in movie theaters. Voices are reproduced in the front and center sound field, while ambient sounds like cars and crowds are reproduced on all sides of the listener for an incredibly lifelike audio/video experience. Please read the following carefully to "tune" the system's output to match the characteristics of your listening space.

Check the following:

- Before using the DOLBY PRO LOGIC, adjust the proper balance of speaker sound levels.
- Make sure the supplied speakers are properly connected and positioned. (See pages 4-6)
- Make sure the TV set and video unit are properly connected. (See pages 4 and 5)
- Make sure the laser disc, video tape, etc., support .

ADJUSTING SPEAKER LEVEL BALANCE




The unit is equipped with a built-in test signal generator called a noise sequencer for easy balance adjustment of all 5 channels. The sequencer outputs a noise signal that "travels" from channel to channel, enabling the simple adjustment of sound level to achieve, at the listening position, the same apparent loudness from each channel.

Use the remote control.

1 Press DOLBY PRO LOGIC to select "NORMAL".

"NORMAL" is displayed.

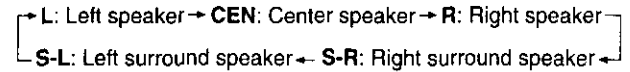
If "PHANTOM" or "3 STEREO" is displayed, press DOLBY PRO LOGIC repeatedly until "NORMAL" is selected.

When using the unit, press  PRO LOGIC.

2 Press MANUAL SELECT and hold it down for about 4 seconds until "L" flashes.

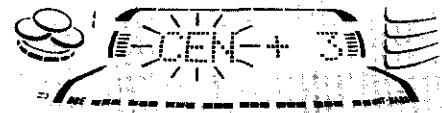


A noise signal is sent to each channel in turn in the following sequence.



3 Adjust the sound level of the center and the surround speakers.

While "CEN" "S-R" or "S-L" is displayed, press ◀ DOWN or ▶ UP to adjust the volume of the center or each surround speaker to match the level of the front speakers.



To adjust the balance between the left and right front speakers, see page 7. At this time, the DOLBY PRO LOGIC mode should be canceled by pressing DOLBY PRO LOGIC until the "PRO-OFF" is displayed.

4 Press MANUAL SELECT again to stop the noise signal.

NOTE

- If the surround speakers or the center speaker level of the DOLBY PRO LOGIC is changed, that of the SURROUND system (page 14) and the DOLBY DIGITAL SURROUND (page 31) is also changed.
- While "S-L" or "S-R" is displayed, both surround speakers output the noise signal together. However, only the sound level of one surround speaker displayed as "S-L" or "S-R" can be adjusted.
- When the sequencer outputs a noise signal, a clicking sound might be heard from the speakers due to the characteristics of the circuit. This is not malfunction.

About the channels

The left and right front speakers create the stereo effect.

The center speaker helps achieve precise sound positioning over a broad sound field.

The rear-mounted surround speakers enhance the "depth" of the sound field.

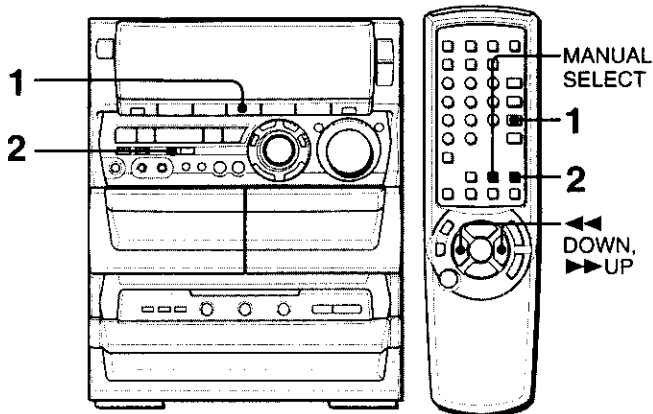
To change the delay time

The surround speakers reproduce sounds a split second after the front speakers. The delay is initially set to 20 ms (milliseconds). To change this standard delay time, press MANUAL SELECT on the remote control repeatedly until "TIME" is displayed. Then, press ◀ DOWN or ▶ UP. Each time one of the buttons is pressed, the delay time changes as shown below.

15 mS ↔ 20 mS ↔ 30 mS



PLAY WITH DOLBY PRO LOGIC



1 Press VIDEO/AUX/5.1 CH and start playback of the video source.

"VIDEO" is displayed.

If "5.1 ch IN" is displayed, press VIDEO/AUX/5.1 CH again.

2 Press **PRO LOGIC**.

"NORMAL" is selected, and the playback sound has the DOLBY PRO LOGIC effect.

When using the remote control, press **DOLBY PRO LOGIC**.

To cancel Dolby Pro Logic mode

Press **PRO LOGIC** repeatedly until "PRO-OFF" is displayed.

To change the sound levels during playback

After adjusting the balance with the noise sequencer, the sound levels of the center or each surround speaker can be adjusted during playback of laser discs or video software.

- 1 Press **MANUAL SELECT** on the remote control repeatedly to select "CEN" (center speaker) "S-L" (Left surround speaker) or "S-R" (Right surround speaker).
- 2 While the "CEN" "S-L" or "S-R" is displayed, press **DOWN** or **UP** on the remote control to adjust the volume.

ADDITIONAL DOLBY PRO LOGIC MODES

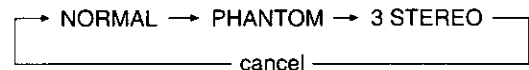
In addition to the NORMAL mode, this unit is also equipped with the PHANTOM and the 3 STEREO modes.

PHANTOM mode: Use this mode when no center speaker is connected. The center channel signals are output through the left and right speakers.

3 STEREO mode: Use this mode when no surround speakers are connected. This mode reproduces rear sounds through the front speakers.

To select PHANTOM or 3 STEREO

Press **PRO LOGIC** repeatedly until the desired DOLBY PRO LOGIC mode is displayed. The DOLBY PRO LOGIC mode is displayed cyclically as follows.



To adjust the balance of connected speaker sound levels

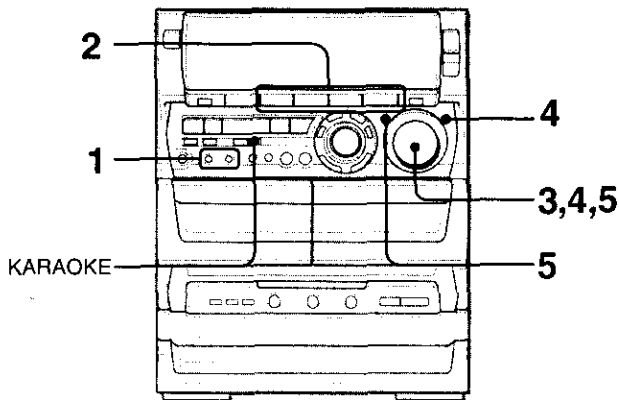
Carry out steps 2 to 4 of "ADJUSTING SPEAKER LEVEL BALANCE".

NOTE

- Depending on the sound source and/or listening conditions, a surround effect may not be obtained even when the DOLBY PRO LOGIC .
- The full DOLBY PRO LOGIC effect cannot be obtained when using software without **DOLBY SURROUND** mark. In this case, use the SURROUND system instead. (See page 14.)
- The DOLBY PRO LOGIC is automatically canceled when:
 - the ECHO level is changed.
 - the SURROUND system or the BBE is turned on.
 - the headphones are plugged in.
 - the Karaoke function is turned on.
 - the 5.1 CH (page 31) is selected.
- Set the microphone volume to OFF while the DOLBY PRO LOGIC is on. Otherwise, the DOLBY PRO LOGIC sound cannot be reproduced correctly.

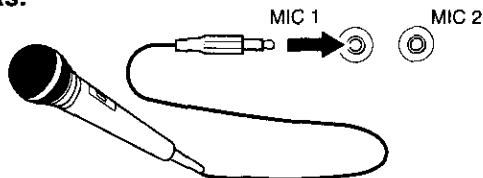
KARAOKE

MICROPHONE MIXING



Two microphones (not supplied) can be connected to this unit, allowing you to sing along to music sources. Use microphones with mini plugs ($\phi 3.5$ mm, $1/8$ inch).

1 Connect your microphones to MIC 1 and MIC 2 jacks.



2 Press one of the function buttons to select the source to be mixed, and play the source.

3 Adjust the volume and tone of the source.

4 Press MIC and turn VOLUME within 4 seconds to adjust the microphone volume.

The microphone volume can be selected from 1 to MAX (7) or OFF (cancel).

The volume of both microphones is adjusted simultaneously.

5 Press ECHO and turn VOLUME within 4 seconds to adjust the echo level.

The echo level can be selected from 1 to MAX (7) or OFF (cancel).

To change the delay time of echo

Hold down **ECHO** while the echo is on.

"L" (Long) and "M" (Middle) are displayed alternately. At the desired position, release the button.

To record microphone sound mixed with source sound

Follow the procedure for recording from the sound source (see page 20).

SYNC DUB cannot be used for mixing recording.

When not using the microphones

Set the microphone volume and echo level to OFF and remove the microphones from **MIC** jacks.

NOTE

- When the **ECHO** level is changed, the **SURROUND** mode and the **DOLBY PRO LOGIC** are automatically canceled.
- When the **MIC** or **ECHO** is turned on while the 5.1 CH (page 31) is selected, the 5.1 CH is changed to **VIDEO**.
- If a microphone is held too near the speakers, a howling sound may be produced. In this case, hold the microphone away from the speakers, or decrease the microphone volume.

- When the function is changed, the microphone volume and the echo volume are set to off.

Recommended microphones

The use of unidirectional type microphones is recommended to prevent howling. Contact your local Aiwa dealer for details.

VOCAL FADER/MULTIPLEX FUNCTIONS

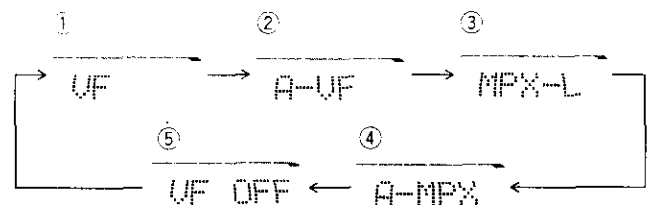
This unit can use discs or tapes as Karaoke sources.

Use the vocal fader function for ordinary discs or tapes.

Use the multiplex function for multi audio discs or tapes.

Press **KARAOKE** repeatedly to select the vocal fader or multiplex function.

Each time **KARAOKE** is pressed, one of these functions is selected cyclically.



① Vocal Fader

The singer's voice becomes softer than the accompaniment.

② Auto Vocal Fader

The singer's voice becomes softer only while there is audio input through a microphone.

③ Multiplex

Only the sound on the left channel is heard from both speakers, and the sound on the right channel is muted.

④ Auto Multiplex

The sound on the left channel is heard from both speakers, and the sound on the right channel is muted only while there is audio input through a microphone.

⑤ Cancel

To change the time lag setting in Auto Vocal Fader or Auto Multiplex function

The muted singer's voice can be restored faster.

When Auto Vocal Fader or Auto Multiplex is selected, "A-VF" or "A-MPX" is displayed for 3 seconds and changes to the selected function name. After the selected function name is displayed, keep pressing **KARAOKE** until "FAST" is displayed.

To return to the initial setting, select **SLOW**.

When the power is turned off, **SLOW** is restored.

To change the audible channel in Multiplex function

When Multiplex is selected, "MPX -L" is displayed for 3 seconds and changes to the selected function name. After the selected function name is displayed, keep pressing **KARAOKE** until "MPX-R" is displayed.

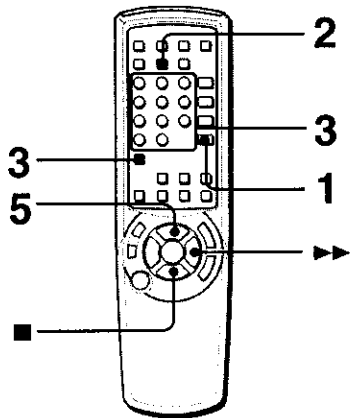
To return to the initial setting, select **MPX-L**.

When the power is turned off, **MPX-L** is restored.

NOTE

- The Karaoke functions may not operate correctly with the following kinds of CDs or tapes.
 - Those with monaural sound
 - Those recorded with strong echoes
 - Those with the vocal part recorded on the right or left side of the sound width
- While the Karaoke function is on, the sound is output as monaural

KARAOKE PROGRAM

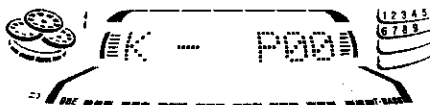


Before or during CD play, you can reserve up to 15 tracks to be played after the current track. Each reservation is cleared when it finishes playing.

Use the remote control.

1 Press CD and load the discs.

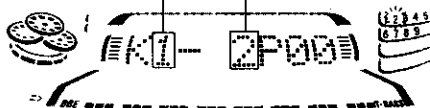
2 Press PRGM once.



3 Press DISC DIRECT PLAY and within 3 seconds press 1, 2 or 3 to select a disc.

Then, press numbered buttons 0-9 and + 10 to program a track.

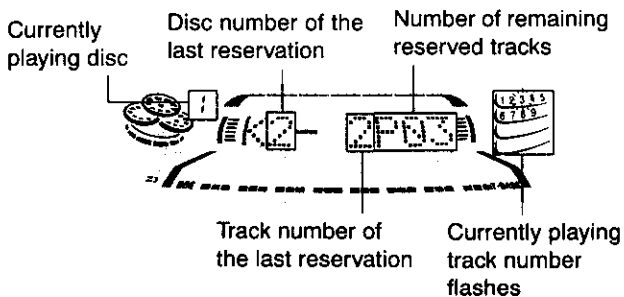
Reserved disc number Reserved track number



4 Repeat step 3 to reserve other tracks.

5 Press ▶/◀▶ to start play.

After a track is played, it is cleared from the program.



To add a reservation during play

Repeat step 3.

To check the reserved tracks

Press CD EDIT/CHECK repeatedly. Each time it is pressed, the disc number and track number are displayed in the reserved order.

To stop play

Press ■.

When ▶/◀▶ is pressed, the play starts from the last track again.

To skip a current track

Press ▶▶. The skipped track is cleared from the program.

To clear all the reservations

Press ▶▶ repeatedly until "K - P00" is displayed.



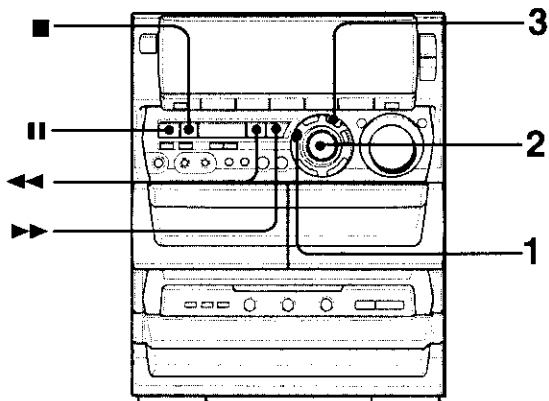
Press it once more to cancel the Karaoke programs. The display returns to that of CD play.

NOTE

- If the reserved track number does not exist on the selected disc, the unit stops playing and the display flashes. In this case, press ▶▶ to skip the error track. Then press ◀▶ to start play with the next reserved track.
- When PRGM is pressed repeatedly in step 2, "PRGM" is displayed and the unit enters CD program play mode (page 19). To cancel program play, press ■ CLEAR.

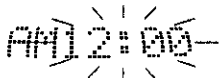
CLOCK AND TIMER

SETTING THE CLOCK



The clock is displayed. (The “:” between the hours and minutes flashes.) When the power cord is plugged into an AC outlet for the first time after purchase or when the clock setting is canceled due to a power failure, the entire clock display flashes.

1 Press CLOCK.



2 Within 4 seconds, turn MULTI JOG to designate the hour and the minute.

Turning **MULTI JOG** changes both the hour and the minute. ◀◀ or ▶▶ is also available instead of **MULTI JOG**. Holding these buttons down will vary the time rapidly.

3 Press ENTER or ■.

The clock starts from 00 seconds.

To restore an original clock setting

Press **CLOCK** before completing step 3 to restore the previous time setting. This cancels any new setting.

To view the clock when another display is in the display

Press **CLOCK**. The time is displayed for 4 seconds and then the original display reappears. However, the clock cannot be displayed during recording.

To switch to the 24-hour standard

Press the **CLOCK** and then press ■ within 4 seconds. Repeat the same procedure to restore the 12-hour standard.

If the clock display flashes

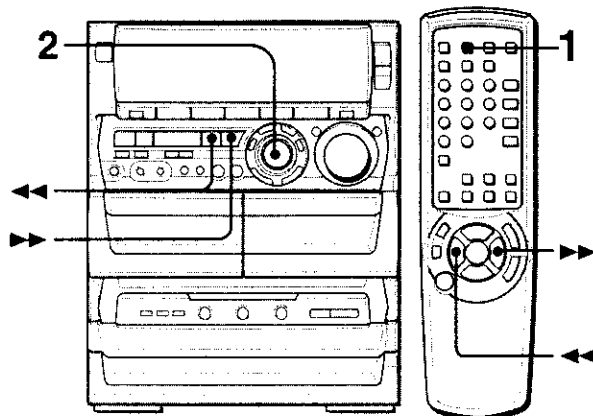
This is caused by a power interruption. The current time needs to be reset.

If power is interrupted for more than approximately 24 hours, all settings stored in memory after purchase need to be reset.

NOTE

If the power-economizing mode (page 7) is on, all the display lights turn off when the power is turned off. To view the clock, press **CLOCK** so that the time is displayed for 4 seconds.

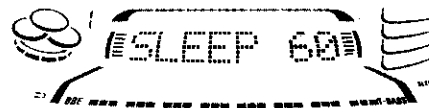
SETTING THE SLEEP TIMER



The unit can be turned off automatically at a specified time.

Use the remote control.

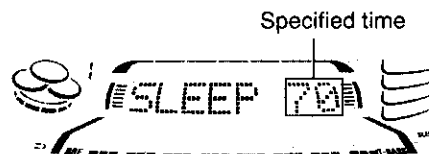
1 Press SLEEP.



2 Within 4 seconds, turn MULTI JOG to specify the time until the power is turned off.

The time changes between 5 and 240 minutes in 5-minute steps.

◀◀ and ▶▶ are also available instead of **MULTI JOG**.



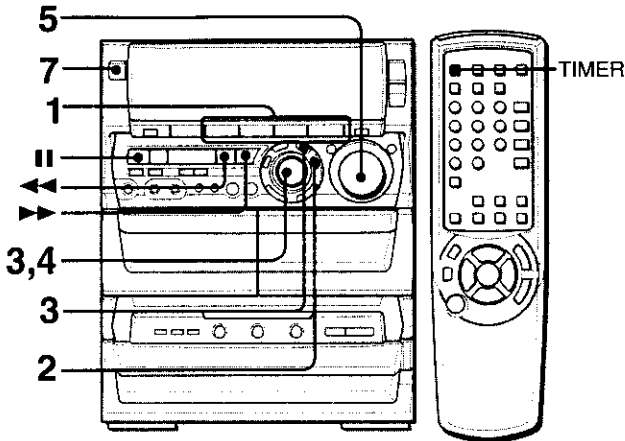
To check the time remaining until the power is turned off

Press **SLEEP** once. The remaining time is displayed for 4 seconds.

To cancel the sleep timer

Press **SLEEP** twice so that “SLEEP OFF” appears on the display.

SETTING THE TIMER



The unit can be turned on at a specified time every day with the built-in timer.

Preparation

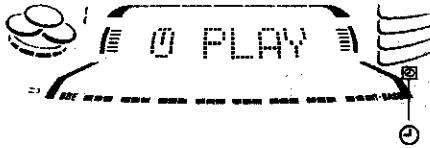
Make sure the clock is set correctly.

1 Press one of the function buttons to select a source.

- If **TUNER/BAND** is pressed, the band cannot be selected in this step.

2 Press **TIMER** repeatedly until ☉ appears on the display.

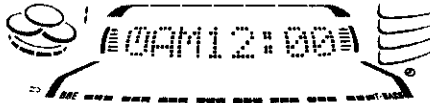
Time and audio source name flash alternately.



3 Within 6 seconds, turn **MULTI JOG** to designate the timer-on time, then press **ENTER** or **||**.

Turning **MULTI JOG** changes both the hour and the minute.

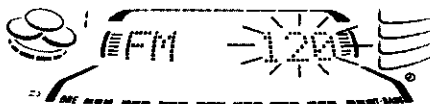
◀◀ or ▶▶ is also available instead of **MULTI JOG**. Holding these buttons down will vary the time rapidly.



4 Within 4 seconds, turn **MULTI JOG** to select the duration for the timer-activated period.

The duration can be set between 5 and 240 minutes in 5-minute steps.

◀◀ or ▶▶ is also available instead of **MULTI JOG**.



The duration will be automatically set after 4 seconds. It will also be set if **ENTER** or **||** is pressed within 4 seconds after step 4.

5 Adjust the volume.

The source sound will play at the volume level set in this step when the power is turned on by the timer.

If the volume level is set to 21 or higher, however, it will automatically be set to 20 when the power is turned on.

6 Prepare the source.

To listen to a CD, load the disc to be played first on tray 1.

To listen to a tape, insert the tape into deck 1 or 2.

To listen to the radio, tune in to a station.

7 Press **POWER** to turn off the power.

When the timer-on time is reached, the unit turns on and begins play with the selected source.

NOTE

You can change the source that was selected in step 1 by pressing one of the function buttons before pressing **ENTER** or **||** in step 3.

To check the timer setting

Press **TIMER**.

The selected source, the timer-on time, and the duration for the timer-activated period will be displayed for 4 seconds.

To change any of the previous setting

Carry out from step 1.

However, if you do not change the timer-on time, in step 3 just press **ENTER** twice and continue from step 4.

To cancel the timer standby mode temporarily

Press **TIMER** repeatedly so that ☉ disappears.

To restore the timer standby mode, press again to display ☉.

Using the unit while the timer is set

You can use the unit normally after setting the timer.

Before turning off the power, carry out step 5 and 6.

NOTE

- Timer playback and timer recording will not begin unless the power is turned off.

- Connected equipment cannot be turned on and off by the built-in timer of this unit. Use an external timer.

TIMER RECORDING

Timer recording is applicable for **TUNER** and **VIDEO/AUX** (with an external timer) sources only.

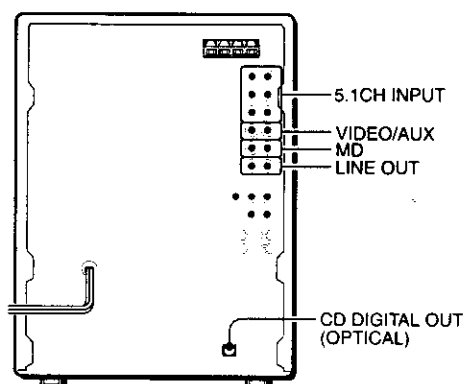
Press either **TUNER/BAND** or **VIDEO/AUX/5.1CH** to select a source, then press **TIMER** repeatedly until ☉**REC** lights up on the display. Within 6 seconds, carry out the steps of "SETTING THE TIMER" from step 3 and insert the tape to be recorded on into deck 2 after step 6.

NOTE

- When the power-economizing mode (page 7) has been turned on, the timer recording volume level will be 0 (minimum level).
- You cannot use the timer function to record from a CD or tape.

OTHER CONNECTIONS

CONNECTING OPTIONAL EQUIPMENT



Refer to the operating instructions of the connected equipment for details.

- The connecting cords are not supplied. Obtain the necessary connecting cords.
- Consult your local Aiwa dealer for optional equipment.

VIDEO/AUX JACKS

This unit can input analog sound signals through these jacks. Use a cable with RCA phono plugs to connect audio equipment (turntables, LD players, MD players, VCRs, TV, etc.). Connect the red plug to the **VIDEO/AUX R** jack, and the white plug to the **VIDEO/AUX L** jack.

When connecting a turntable

Use an Aiwa turntable equipped with a built-in equalizer amplifier.

MD JACKS

This jack is recommended to connect with an MD player. Use a cable with RCA phono plugs. Connect the red plug to the **MD R** jack, and the white plug to the **MD L** jack.

LINE OUT JACKS

This unit can output analog sound signal through these jacks. Use a cable with RCA phono plugs to connect audio equipment with **LINE IN** (analog input) jacks. Connect the red plug of a cable to **LINE OUT R** jack, and the white plug to **LINE OUT L** jack.

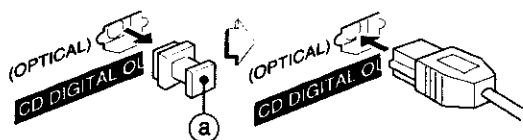
NOTE

Do not connect an equipment to **LINE OUT** jacks and **VIDEO/AUX** jacks simultaneously. Otherwise, noise is generated and malfunction occurs.

CD DIGITAL OUT (OPTICAL) JACK

This unit can output CD digital sound signals through this jack. Use an optical cable to connect digital audio equipment (DAT deck, MD recorder, etc.).

Remove the dust cap **a** from the **CD DIGITAL OUT (OPTICAL)** jack. Then, connect an optical cable plug to the **CD DIGITAL OUT (OPTICAL)** jack.

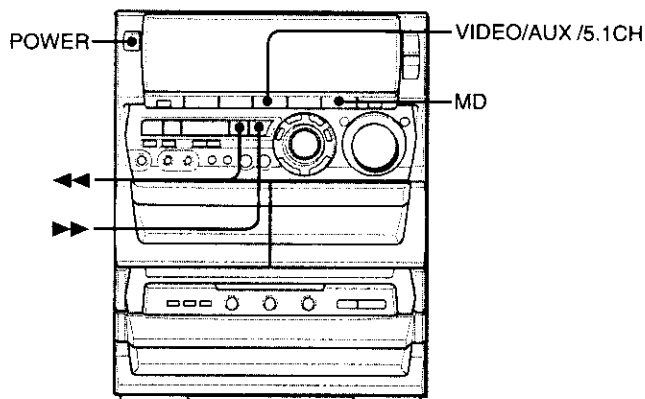


When the **CD DIGITAL OUT (OPTICAL)** jack is not being used

5.1 CH INPUT JACKS

This unit can input sound signals from the audio equipment (DVD player, LD player, etc.) that contains a Dolby Digital decoder with the 5.1 ch output terminals. Refer to "CONNECTING A DVD PLAYER" on page 31.

LISTENING TO EXTERNAL SOURCES



To play equipment connected to **VIDEO/AUX/5.1CH** jacks or **MD** jacks proceed as follows.

1 Press **VIDEO/AUX/5.1CH** or **MD**.

To play the equipment connected to **VIDEO/AUX**, press **VIDEO/AUX/5.1CH**. "VIDEO" appears on the display.

To play the equipment connected to **MD**, press **MD**. "MD" appears on the display.

2 Play the connected equipment.

To change a source name in the display

When **VIDEO/AUX/5.1CH** is pressed, "VIDEO" is displayed initially. It can be changed to "AUX" or "TV".

With the power on, press **POWER** while pressing **VIDEO/AUX/5.1CH**.

Repeat the procedure to select one of the names.

To adjust the sound level of the external source

When the sound level of the external source is much higher or much lower than that of other function sources, adjust it as follows.

- 1 Press **VIDEO/AUX/5.1CH** or **MD** and play the equipment.
- 2 Press **◀** or **▶** so that the sound level becomes the same as that of other function sources.

NOTE

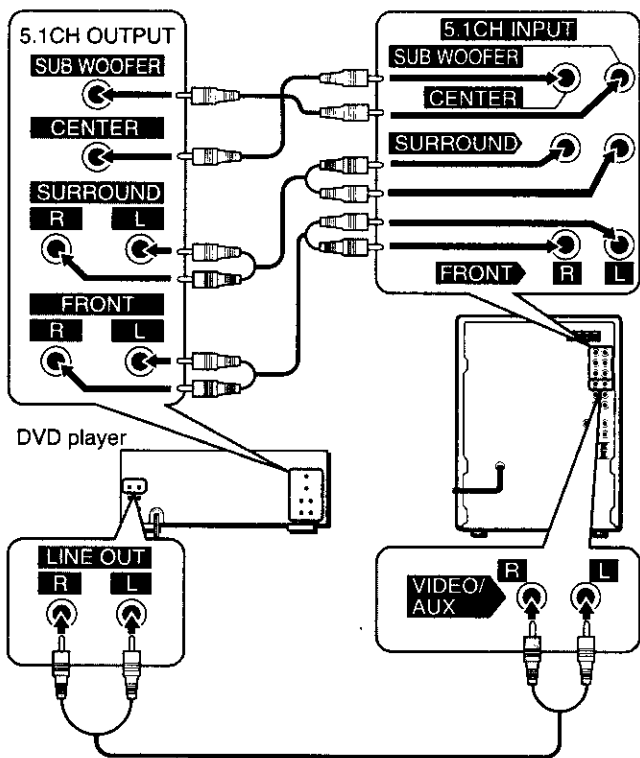
During recording, the sound level can not be adjusted.

CONNECTING A DVD PLAYER

5.1CH INPUT jacks of this unit support the DOLBY DIGITAL SURROUND system.

Connect a DVD player with 5.1CH output jacks to this unit using cables with RCA phono plugs as follows;

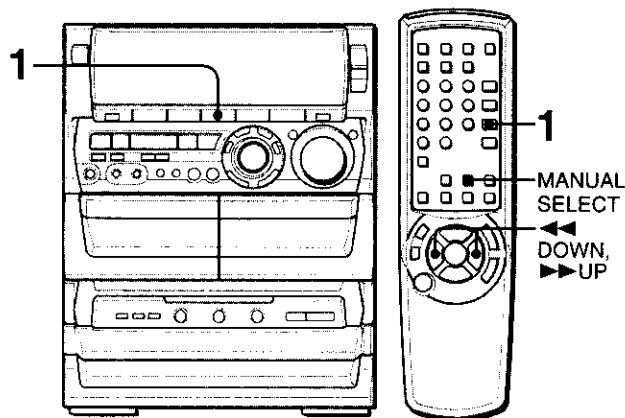
DVD player's jack	This unit's jack
5.1CH OUTPUT SUB WOOFER, etc.	5.1CH SUB WOOFER
5.1CH OUTPUT CENTER, etc.	5.1CH CENTER
5.1CH OUTPUT SURROUND (L,R), etc.	5.1CH SURROUND (L,R)
5.1CH OUTPUT FRONT (L,R), etc.	5.1CH FRONT (L,R)
LINE OUT (L, R), etc.	VIDEO/AUX (See NOTE .)



NOTE

- If the DVD is not connected to VIDEO/AUX jack of this unit;
 - the spectrum analyzer dose not show the sound level of the DVD player.
 - the sound from the connected DVD player cannot be recorded.
 To remove these limitations, connect the LINE OUT jacks of the DVD player to VIDEO/AUX jacks of this unit besides connecting to 5.1CH INPUT jacks. The signals through VIDEO/AUX jacks enable the spectrum analyzer to work and the recording to be done. Refer also to the operating Instructions of the DVD player.
- DOLBY DIGITAL SURROUND sound cannot be recorded in any way.

LISTENING TO DOLBY DIGITAL SURROUND SOUND



When a DVD player is connected to the 5.1CH INPUT jacks of this unit, you can listen to DOLBY DIGITAL SURROUND sound, which enables you to enjoy theater-quality sound in your home.

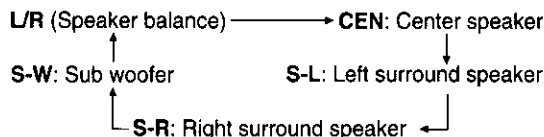
- 1 Press VIDEO/AUX/5.1CH repeatedly until "5.1 ch IN" is displayed.
- 2 Start playing DOLBY DIGITAL SURROUND sound on the DVD player.

NOTE

- The DOLBY PRO LOGIC, BBE and the SURROUND are automatically canceled when the 5.1 CH is selected.
- Make sure the software played back with the connected DVD player support the DOLBY DIGITAL SURROUND.
- The function is changed from the 5.1 CH to the VIDEO when;
 - the headphones are plugged in.
 - the MIC or ECHO level is changed.
 - the SURROUND system, the DOLBY PRO LOGIC or the Karaoke function is turned on.

To adjust the sound levels of the center and surround speakers in DOLBY DIGITAL SURROUND

- 1 Press VIDEO/AUX/5.1CH repeatedly until "5.1 ch IN" is displayed.
- 2 Press MANUAL SELECT repeatedly. Speaker names appear in turn as follows;



- 3 Press ◀ DOWN or ▶ UP to adjust the sound level while "CEN", "S-L", "S-R" or "S-W" is displayed. Each level can be adjusted between -8dB and +7dB.
- 4 Repeat steps 2 and 3 to adjust each speaker's sound level.

NOTE

If the surround speakers or the center speaker level of the DOLBY DIGITAL SURROUND is changed, that of the SURROUND system (page 14) and the DOLBY PRO LOGIC (page 24) is also changed.

GENERAL

CARE AND MAINTENANCE

Occasional care and maintenance of the unit and the software are needed to optimize the performance of your unit.

To clean the cabinet

Use a soft and dry cloth.

If the surfaces are extremely dirty, use a soft cloth lightly moistened with mild detergent solution. Do not use strong solvents, such as alcohol, benzine or thinner as these could damage the finish of the unit.

To clean the tape heads

When the tape heads are dirty;

- high frequency sound is not emitted
- the sound is not adequately high
- the sound is off-balance
- the tape cannot be erased
- the tape cannot be recorded on

After every 10 hours of use, clean the tape heads with a head cleaning cassette.

Refer to the instructions of the cleaning cassette for details.

To demagnetize the tape heads

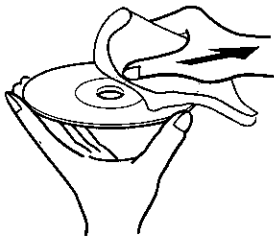
The tape heads may become magnetized after long-term use. This may narrow the output range of recorded tapes and increase noise.

After every 20 to 30 hours of use, demagnetize the tape heads with a separately sold demagnetizing cassette.

Refer to the instructions of the demagnetizing cassette for details.

Care of discs

- When a disc becomes dirty, wipe the disc from the center out with a cleaning cloth.



- After playing a disc, store the disc in its case. Do not leave the disc in places that are hot or humid.

Care of tapes

- Store tapes in their cases after use.
- Do not leave tapes near magnets, motors, television sets, or any source of magnetism. This will downgrade the sound quality and cause noise.
- Do not expose tapes to direct sunlight, or leave them in a car parked in direct sunlight.

TROUBLESHOOTING GUIDE

If the unit fails to perform as described in these Operating Instructions, check the following guide.

GENERAL

There is no sound.

- Is the AC cord connected properly?
- Is there a bad connection? (→ pages 4&5)
- There may be a short circuit in the speaker terminals.
 - Disconnect the AC cord, then correct the speaker connections.
- Was an incorrect function button pressed?

Sound is emitted from one speaker only.

- Is the other speaker disconnected?

The output sound is not stereo.

- Is the Karaoke function turned on? (→ page 26)

An erroneous display or a malfunction occurs.

- Reset the unit as stated below.

The power is not turned on.

- Disconnect the AC cord, and connect it again in a few seconds.

TUNER SECTION

There is constant, wave-like static.

- Is the antenna connected properly? (→ page 5)
- Is the signal weak?
 - Connect an outdoor antenna.

The reception contains noise interferences or the sound is distorted.

- Is the system picking up external noise or multipath distortion?
 - Change the orientation of the antenna.
 - Move the unit away from other electrical appliances.

CASSETTE DECK SECTION

The tape does not run.

- Is deck 2 in pause mode? (→ page 16)

The sound is off-balance or not adequately high.

- Is the playback head dirty? (→ page 32)

Recording is not possible.

- Is the erasure prevention tab on the tape broken off? (→ page 20)
- Is the recording head dirty? (→ page 32)

Erasure is not possible.

- Is the erasure head dirty? (→ page 32)
- Is a metal tape being used?

High frequency sound is not emitted.

- Is the recording/playback head dirty? (→ page 32)

CD PLAYER SECTION

The CD player does not play.

- Is the disc correctly placed? (→ page 18)
- Is the disc dirty? (→ page 32)
- Is the lens affected by condensation?
 - Wait approximately one hour and try again.

To reset

If an unusual condition occurs in the display window or the cassette decks, reset the unit as follows.

- 1 Press **POWER** to turn off the power.
- 2 Press **POWER** to turn the power back on while pressing **CLEAR**. Everything stored in memory after purchase is canceled.

If the power cannot be turned off in step 1 because of a

SPECIFICATIONS

Main unit CX-NMA845

FM tuner section

Tuning range	87.5 MHz to 108 MHz
Usable sensitivity (IHF)	13.2 dBf
Antenna terminals	75 ohms (unbalanced)

AM tuner section

Tuning range	530 kHz to 1710 kHz (10 kHz step) 531 kHz to 1602 kHz (9 kHz step)
Usable sensitivity	350 μ V/m
Antenna	Loop antenna

Amplifier section

Mid-high frequency amplifier	Front
Power output	20 W + 20 W (200 Hz – 20 kHz, THD less than 1%, 6 ohms)
Total harmonic distortion	0.1 % (10 W, 1 KHz, 6 ohms, DIN AUDIO)
LOW FREQ + SUB WOOFER amplifier	
Power output	80 W + 80 W (50 Hz – 200 Hz, THD less than 1%, 6 ohms)
Total harmonic distortion	0.1 % (45 W, 80 Hz, 6 ohms, DIN AUDIO)
	Rear (Surround)
	33 W + 33 W (1 kHz, THD less than 1%, 8 ohms)

Center

34 W (1 kHz, THD less than 1%, 8 ohms)

Inputs

VIDEO/AUX: 316 mV (adjustable)
MD: 316 mV (adjustable)
MIC 1, MIC 2: 1 mV (10 k ohms)
5.1CH INPUT (adjustable)
FRONT (L,R): 240 mV
REAR (L,R): 240 mV
CENTER: 600 mV
SUB WOOFER: 240 mV

Outputs

SPEAKERS HIGH FREQ:
accept speakers of 6 ohms or more

SPEAKERS:

(LOW FREQ
+
SUB WOOFER)

accept speakers of 6 ohms or more

SURROUND SPEAKERS:

accept speakers of 8 ohms to 16 ohms

CENTER SPEAKER: accept
speakers of 8 ohms or more

LINE OUT: 150 mV

PHONES (stereo jack): accepts
headphones of 32 ohms or more

Cassette deck section

Track format	4 tracks, 2 channels stereo
Frequency response	CrO ₂ tape: 50 Hz – 16000 Hz Normal tape: 50 Hz – 15000 Hz
Recording system	AC bias
Heads	Deck 1: Playback head x 1 Deck 2: Recording/playback head x 1, erase head x 1

Compact disc player section

Laser	Semiconductor laser ($\lambda = 780$ nm)
D-A converter	1 bit dual
Signal-to-noise ratio	85 dB (1 kHz, 0 dB)
Harmonic distortion	0.05 % (1 kHz, 0 dB)

General

Power requirements	120 V AC, 60 Hz
Power consumption	210 W
Dimensions of main unit (W x H x D)	260 x 324 x 346 mm (10 ¹ / ₄ x 12 ⁷ / ₈ x 13 ⁵ / ₈ in.)
Weight of main unit	7.8 kg (17 lbs 3 oz.)

Standby power consumption	With power-economizing mode off: 29 W With power-economizing mode on: 1.5 W
---------------------------	--

Speaker system SX-WNA888

Cabinet type	3 way, built-in subwoofer (magnetic shielded type)
Speakers	Subwoofer: 160 mm (6 ³ / ₈ in.) cone type Full range: 120 mm (4 ³ / ₄ in.) cone type Super tweeter: 20 mm (¹³ / ₁₆ in.) ceramic type
Impedance	6 ohms/6 ohms
Output sound pressure level	87 dB/W/m
Dimensions (W x H x D)	240 x 345 x 300 mm (9 ¹ / ₂ x 13 ⁵ / ₈ x 11 ⁷ / ₈ in.)
Weight	5.5 kg (12 lbs 2 oz.)

Specifications and external appearance are subject to change without notice.


BBE SYSTEM

The word "BBE" and the "BBE symbol" are trademarks of BBE Sound, Inc.

Under license from BBE Sound, Inc.

DOLBY PRO LOGIC

Manufactured under license from Dolby Laboratories Licensing Corporation.

DOLBY, the double-D symbol  and "PRO LOGIC" are trademarks of Dolby Laboratories Licensing Corporation.

COPYRIGHT

Please check the laws on copyright relating to recordings from discs, radio or external tape for the country in which the machine is being used.

NOTE

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

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

CAUTION

Modifications or adjustments to this product, which are not