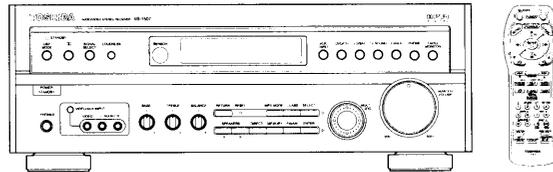# Owner's Manual

XB-1507

AUDIO/
VIDEO STEREO RECEIVER

TOSHIBA

IMPORTANT

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

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

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

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

IMPORTANT SAFETY INSTRUCTIONS

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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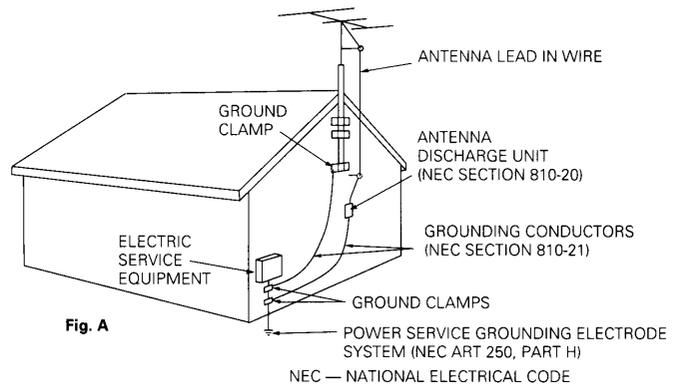● When the power-supply cord or plug is damaged.
● If liquid has been spilled, or objects have fallen into the product.
● If the product has been exposed to rain or water.
● If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by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

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

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

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

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

ANTENNA LEAD IN WIRE

GROUND CLAMP

ANTENNA DISCHARGE UNIT (NEC SECTION 810-20)

GROUNDING CONDUCTORS (NEC SECTION 810-21)

GROUND CLAMPS

ELECTRIC SERVICE EQUIPMENT

POWER SERVICE GROUNDING ELECTRODE SYSTEM (NEC ART 250, PART H)

Fig. A

NEC — NATIONAL ELECTRICAL CODE

Note to CATV System Installer
This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

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

Thank you for buying this TOSHIBA product.
Please read through these operating instructions so you will know how to operate your model properly. After you have finished reading the instructions, put them away in a safe place for future reference. In some countries or regions, the shape of the power plug and power outlet may sometimes differ from that shown in the explanatory drawings. However the method of connecting and operating the unit is the same.

FEATURES

□ DOLBY DIGITAL
By playing back Dolby Digital-compatible LD and DVD software, the dynamic effects of movie theaters and concert halls can be experienced at home.

□ DOLBY PRO LOGIC COMPATIBLE
Best suited for playing back movies and music by reproducing surround effects.

□ 100 W 5 CH EQUAL POWER DISCRETE AMPLIFIER
5 ch equal power discrete amplifier which plays back high quality Dolby Digital signals.

□ CONTROL OF OTHER MANUFACTURER'S EQUIPMENT USING THE MULTI CONTROL REMOTE CONTROL UNIT
Can be used to operate other manufacturer products with multi control remote control unit by presetting and learning functions.

□ VARIOUS SURROUND EFFECTS (DSP)
Reproduces five different surround effects.

IMPORTANT NOTICE

[FOR U.S. AND CANADIAN MODELS]
The serial number for this equipment is located on the rear panel. Please write this serial number on your enclosed warranty card and keep it in a secure area. This is for your security.

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

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

THE POWER SWITCH IS SECONDARY CONNECTED AND THEREFORE DOES NOT SEPARATE THE UNIT FROM MAINS POWER IN STANDBY POSITION.

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

RETURN function
This function returns the unit to its initial settings with the tuner ready to receive a broadcast. This is helpful during troubleshooting or when no sound is output. For details, refer to page 40.

RESET function
Set the MASTER VOLUME to minimum before pressing the RESET button. Use this function when normal operation is not possible due to external influences such as static electricity or lightning, or when operations are not functioning even when the operation switches are pressed. Press the RESET button to return to normal operating conditions.

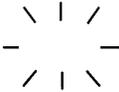## CONTENTS

3

READING THIS MANUAL

INTERPRETING ICONS

NOTE: Provides detailed precautions and advice on operations, etc.

Indicates that buttons or displays are blinking.

Indicates that buttons or displays are lit.

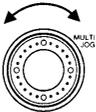Indicates that display changes automatically.

Indicates that displays alternate.

INTERPRETING ILLUSTRATIONS

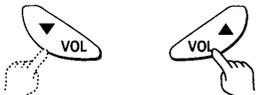The following describes the key function for each illustration.

Means to press the ENTER button (of the remote control unit).

Means to rotate (adjust) the MULTI JOG.

Means to press the 0 button (of the remote control unit) while pressing the COMMANDER SET UP button (of the remote control unit).

Means to press the VOL ▼ button (of the remote control unit) or VOL ▲ button (of the remote control).

INSPECTION CHECKLIST

The TOSHIBA Receiver is packaged with the following items:

	FM Antenna
	AM loop Antenna
	Remote Control Unit
	Dry Cell Batteries (size "AA" IEC LR6) × 2
✓	Owner's Manual
	Sub instruction manual (Remote Control Unit)
	Sub instruction manual [Dolby Digital (AC-3)]
	Product Registration Card

If any of these items were not included in the package, contact the dealer from where you purchased the product to obtain the missing items or a complete replacement.
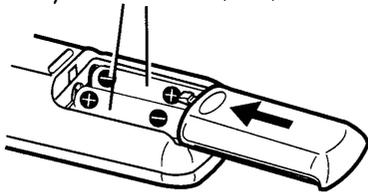
1. BEFORE USE

Loading Remote Control Batteries

1.
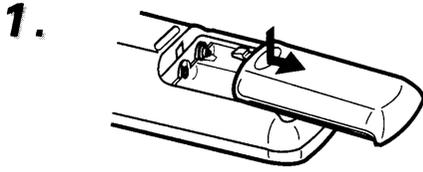
**2.** AA dry cell batteries (LR6)

CAUTIONS

INCORRECT USE OF BATTERIES MAY RESULT IN SUCH HAZARDS AS LEAK-AGE AND BURSTING. OBSERVE THE FOLLOWING PRECAUTIONS.

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

Operating Range of Remote Control Unit

30°
30°
7m(23 feet)
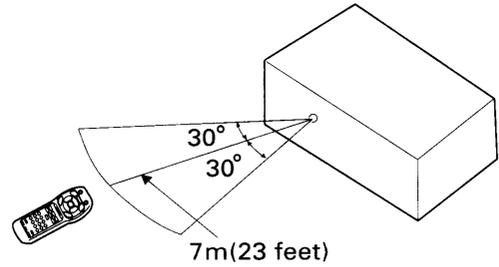
NOTES:
● The remote control unit may not work if there are obstacles between the remote control unit and this unit, and if the remote control unit is not directed towards the remote sensor of the main unit at the correct angle.
● The remote control unit may not work properly if strong light such as direct sunlight and fluorescent light is shining onto the main unit's remote sensor.
● The remote control unit may not work properly when this unit is used near devices emitting infrared light, or when remote control units of other devices which use infrared signals are used.
Simultaneously, the use of this remote control unit may cause other devices to work improperly.
● When the operating range of this remote control unit becomes too short, replace the batteries.
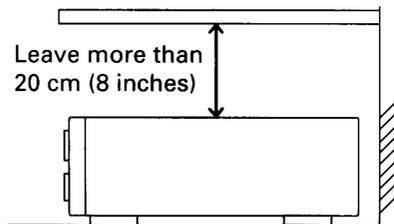
BEFORE USE

INSTALLATION

Installing This Unit

● Do not place objects on top of this unit. Radiated heat must be properly dispersed.
● When installing in racks, etc., leave more than 8 inches of space at the top of the rack or shelving.

Leave more than
20 cm (8 inches)

Installing Speakers

To achieve the best surround effects, install speakers as shown in the following diagram.

Installation Example

R,l   F,l   F,r   R,r

SW

C

Listening Position
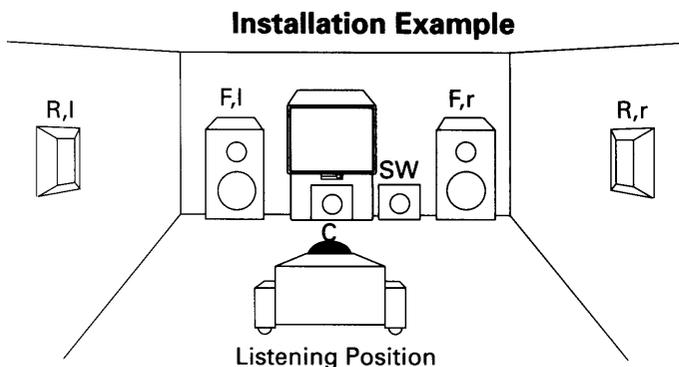
* In the above figure, F indicates front speakers, R indicates rear speakers, C indicates center speaker, SW indicates sub woofer, r indicates right, and l indicates left.

NOTES:

● Do not install the rear speakers far away from the front and center speakers, since surround effects will not be fully attained.
● Installing speakers near the TV may cause electromagnetic interference in the TV. In such cases, use magnetically shielded speakers or install the speakers away from the TV.
● Install the left and right front speakers at equal distance from the TV.
● Install the center speaker at the top, bottom, or behind the TV so that TV sound and images match.
● It is recommended to install the rear speakers slightly above ear level.

Installing the Cassette Deck

Installing the cassette deck in the following (A) positions in the figure may affect playback. It is recommended that it be installed in the (B) position.
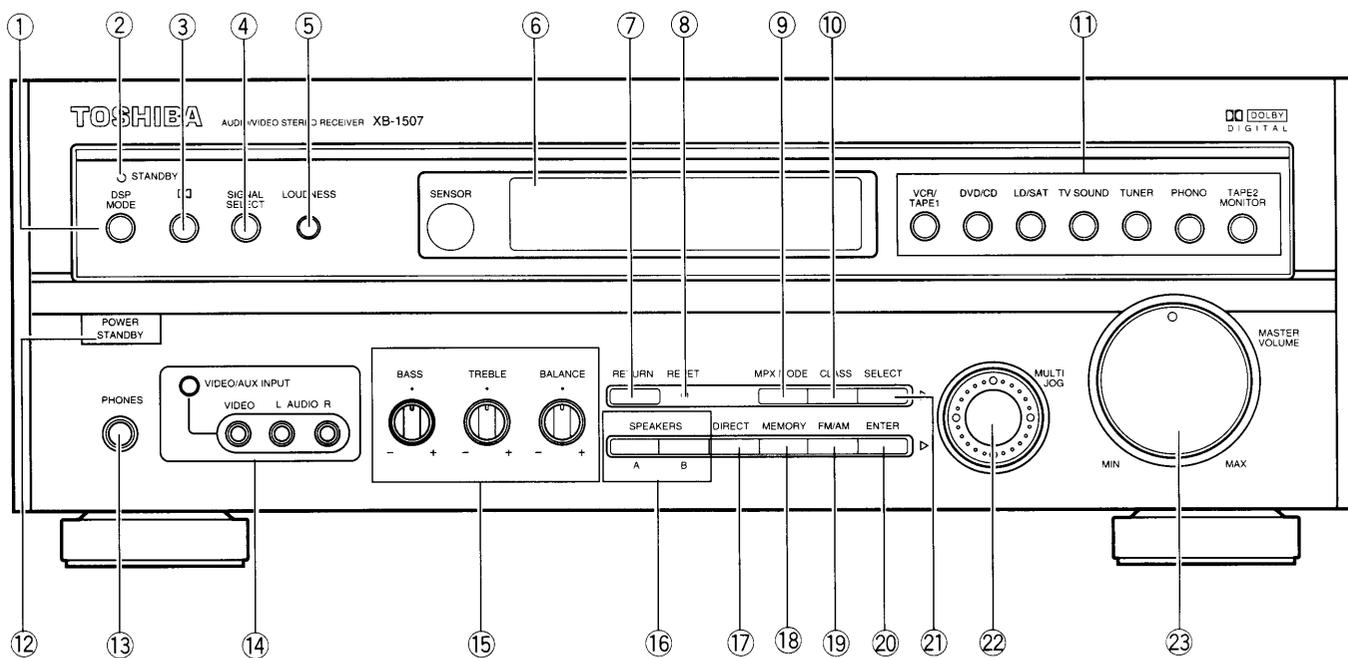
Ⓐ

Ⓐ   Ⓑ

Ⓐ
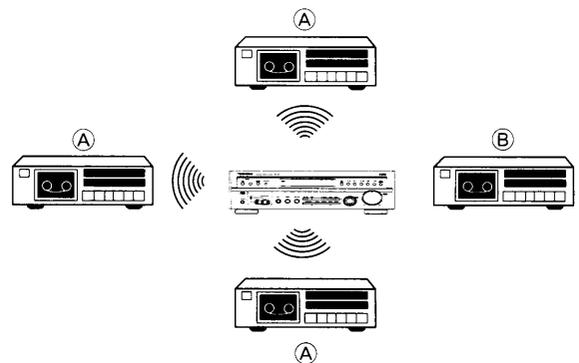
2. NAMES AND CONNECTIONS OF PARTS

NAMES OF PARTS

Front Panel

* The size of characters shown in the diagram may differ from that on the actual product.
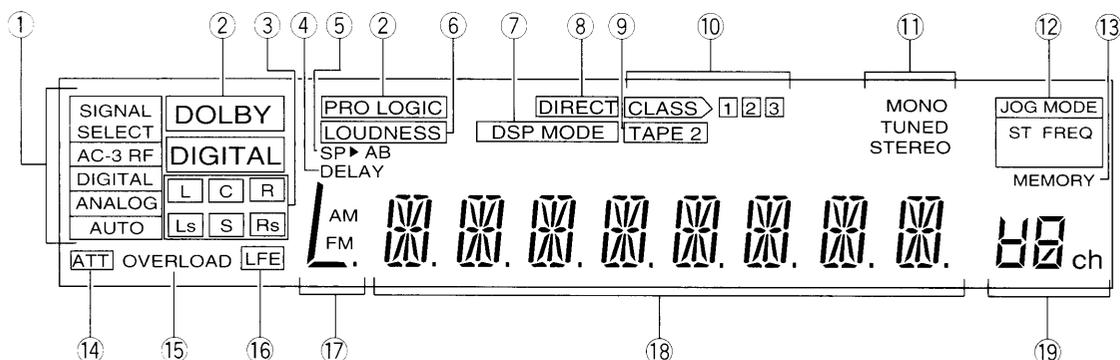
① **DSP MODE button (P.31)**

② **STANDBY indicator**

③ **▣▣ DOLBY MODE button (P.32)**

④ **SIGNAL SELECT button (P.34)**

⑤ **LOUDNESS button**
Press this button when the volume is low to increase both the low and high range levels.

⑥ **Display**

⑦ **RETURN button (P.40)**

⑧ **RESET button (P.44)**

⑨ **MPX MODE button**
Use to switch between the auto stereo and monaural mode for receiving FM broadcasts. When the received broadcast signal is weak, press this button to set the monaural mode.

⑩ **CLASS button (P.15)**

⑪ **Function Selection buttons (P.14~)**

⑫ **POWER STANDBY button**

⑬ **PHONES jack (Headphone input terminal)**

⑭ **VIDEO/AUX INPUT button/terminal (P.11)**
Connect to a video camera, etc.

⑮ **TONE and BALANCE controls**
Use to adjust tone and volume balance.

⑯ **SPEAKERS A, B buttons**
ON/OFF switch selector for the A and B speaker systems.

⑰ **DIRECT button**
Use to play back sound without going through the tone and balance control circuits. DOLBY MODE, DSP MODE and LOUDNESS also turn off.

⑱ **MEMORY button (P.15)**

⑲ **FM/AM button (P.14)**
Use to switch the FM and AM frequency band reception.

⑳ **ENTER button (P.15)**

㉑ **SELECT button (P.14)**
Use to switch the function of the MULTI JOG between station mode and frequency mode when operating the tuner.

㉒ **MULTI JOG Function (P.14~)**
Use to select the frequency and station number when operating the tuner.

㉓ **MASTER VOLUME**

7

Display

① **SIGNAL SELECTION indicators**
The input signal currently selected will illuminate.

② **DOLBY DIGITAL and PRO LOGIC indicators**
"DOLBY" lights when the Dolby Surround mode is ON. There are two Dolby Surround modes-Dolby Digital (AC-3) and Dolby Pro Logic. "DOLBY" and "DIGITAL" light during Dolby Digital decoding, and "DOLBY" and "PRO LOGIC" light during Dolby Pro Logic decoding.

③ **PROGRAM FORMAT indicators**
When playing back in the Dolby Digital (AC-3) mode, the indicator of the channel set for the playback source lights.

④ **DELAY indicator**
Lights when the signal delay time is being adjusted.

⑤ **Speakers A, B indicator**
The indicator of the speaker system (A, B) selected will light.

⑥ **LOUDNESS indicator**
Lights when LOUDNESS is engaged.

⑦ **DSP MODE indicator**
Lights when DSP MODE is engaged.

⑧ **DIRECT indicator**
Lights when DIRECT is engaged.

⑨ **TAPE 2 indicator**
Lights when TAPE 2 MONITOR is engaged.

⑩ **CLASS 1, 2, 3 indicators**
The indicator of the class number selected lights.

⑪ **TUNER indicator**
MONO:
Lights when the monaural mode is selected using the MPX MODE button.
TUNED:
Lights when broadcast signals are being received.
STEREO:
Lights when stereo broadcast signals are received during auto stereo mode.

⑫ **JOG MODE indicator**
ST:
This indicator lights when the station mode is selected.
FREQ:
This indicator lights when the frequency mode is selected.

⑬ **MEMORY indicator**
Lights when station memory is selected.

⑭ **ATT indicator**
Lights when INPUT ATT is ON.

⑮ **OVERLOAD indicator**
Lights when input level is excessive when ANALOG is selected (including AUTO) via the SIGNAL SELECT button.

⑯ **LFE indicator**
[LFE] lights when the LFE (Low Frequency Effects) channel is set for the playback source with Dolby Digital. The [LFE] indicator also lights when LFE signals are present.
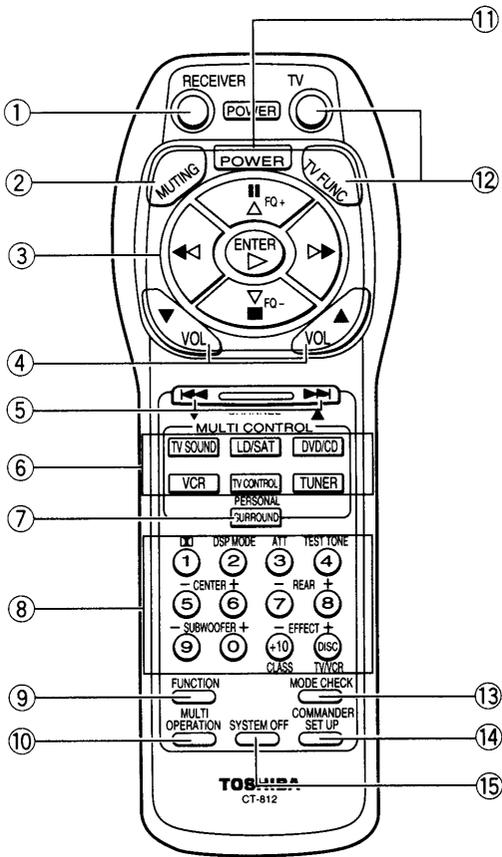
⑰ **AM/FM indicators**
Indicates the band currently selected (AM or FM).

⑱ **CHARACTER display**

⑲ **STATION display**
Indicates the broadcast station number currently selected.

Remote Control Unit

① **RECEIVER POWER button**

② **MUTING button**
Press to mute the volume.

③ **[When set to SURROUND (OPERATIONS)]**
△ (UP), ▽ (DOWN), ◁ (LEFT), ▷ (RIGHT) (Select/Adjust) buttons
[When set to other than SURROUND (OPERATIONS)]
▯▯ (Pause), □ (Stop), ◁◁ (Rewind), ▷▷ (Fast Forward), ▷ (Play) buttons

④ **VOL (▼ (DOWN), ▲ (UP)) buttons**

⑤ **[TV Operations]**
Selects the TV channel.
**[CD, LD, DVD operations]**
I◁◁, ▷▷I (Chapter/Track Search) buttons

⑥ **MULTI CONTROL function buttons**
Use to set and operate the MULTI CONTROL modes, and switch functions.
TV CONTROL: Press to operate TV.

⑦ **SURROUND/PERSONAL button**
[When setting MULTI operations]
Press when setting to the personal mode using multi operations.
[When setting to other than multi operation]
Press when performing surround operations and setting/changing setting modes.

⑧ **Number/surround setting buttons**
[When setting surround (operations)]
▯▯ : Turns the Dolby Surround mode ON/OFF.
DSP MODE : Switches to the various surround effects.
ATT : When turned ON when the sound is unstable due to excessive input levels, the input signal level drops so that the sound becomes easier to listen to.
TEST TONE: When turned ON (while in surround mode), volume balance adjustment signals are output to allow the speakers to be adjusted.
CENTER –, +: Adjusts the center level.
REAR –, +: Adjusts the rear level.
SUB WOOFER –, + : Adjusts the sub woofer level.
EFFECT –, + : Adjusts DSP effects.
[Tuner Operations]
Number buttons: Use for setting the frequency value when the station call is selected or during direct access.
CLASS: Switches the CLASS number.
[VCR operations]
TV/VCR: Switches between TV/VCR.
[CD Operations]
DISC: Use to select the DISC number.

⑨ **FUNCTION button**
Switches the function.

⑩ **MULTI OPERATION button**
Use to set the multi operation.

⑪ **POWER button**
Turns ON/OFF the power of devices other than this unit.

⑫ **TV buttons (P.22)**

⑬ **MODE CHECK button (P.22)**

⑭ **COMMANDER SET UP button**
Use to control and learn operations of other manufacturer's equipment, and set multi operation functions.

⑮ **SYSTEM OFF button (P.30)**
Use to turn OFF the power of all equipment connected to the main unit.

NAMES AND CONNECTIONS OF PARTS

2

CONNECTING DEVICES

When connecting or changing equipment, be sure to turn OFF the POWER switch, and disconnect the power cord from the wall outlet.

■ For better reception of signals, use the FM external antenna.
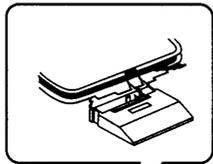

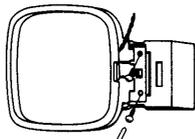75 Ω coaxial cable
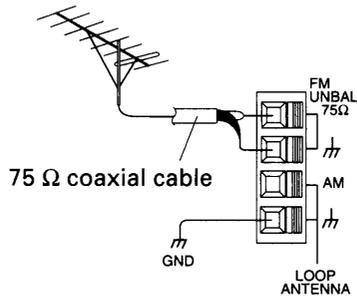
■ When AM broadcast reception is poor

Connect a 5 to 6 meter (15~18 feet) vinyl-coated wire to the AM antenna. If possible extend horizontally outdoors to achieve optimal reception.
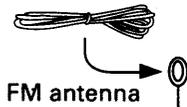

AM outdoor antenna

AM indoor antenna
(Vinyl-coated wire)

5~6m (15~18 feet)
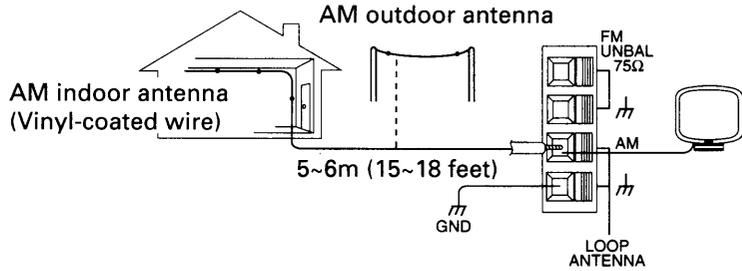
■ Assembling the AM loop antenna

When attached on a wall, etc.

Face towards the direction with the best reception.

Stretch out fully and secure onto the wall using pins.

FM antenna

TV monitor

VCR

* Can also be connected to a cassette deck.

VIDEO IN

AUDIO/ VIDEO OUT

AUDIO/ VIDEO IN

TOSHIBA
AUDIO / VIDEO STEREO RECEIVER
MODEL NO. XB-1507
AC 120V 60Hz 280W 400VA

TOSHIBA AMERICA
CONSUMER PRODUCTS, INC.
MADE IN INDONESIA

LISTED 977B
AUDIO
EQUIPMENT
E44656

Analog player

AUDIO OUT

PLAY OUTPUT

REC INPUT
VIDEO OUT

AUDIO OUT
VIDEO OUT

AUDIO OUT

Cassette deck

LD player
* Can also be connected to a satellite system.

DVD player
* Refer to page 12 for how to connect the LD player and DVD player.

TOSHIBA Projection TV

■ Antenna terminal

10mm(3/8 in.)

■ Input/output plug

VIDEO

L

R

L

R

Connect the white plug to L, red plug to R, and yellow plug to VIDEO. Be sure to insert completely.

■ Speakers terminal

10mm (3/8 in.)

* The size of characters and terminal positions in the figures may differ from those on the actual product.

TOSHIBA projection TV for center channel

Speaker system (Rear)

C

R   L

L-AUDIO (MONO)

L-AUDIO (MONO)

■ Front Panel

TOSHIBA
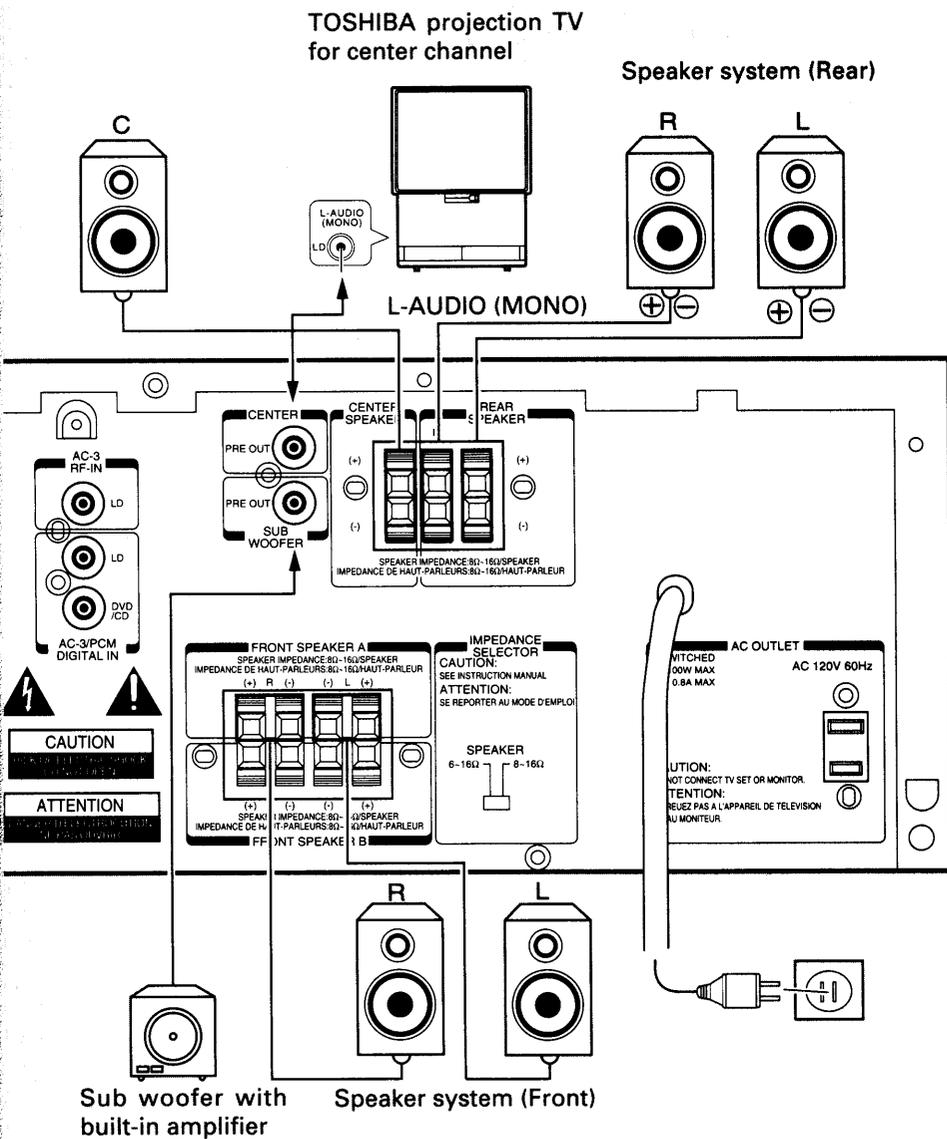
Video equipment such as video camera recorder, etc.

AC-3 RF-IN

LD

LD

DVD /CD

AC-3/PCM DIGITAL IN

CAUTION

ATTENTION

CENTER

CENTER SPEAKER

REAR SPEAKER

PRE OUT

PRE OUT

SUB WOOFER

SPEAKER IMPEDANCE:8Ω~16Ω/SPEAKER
IMPEDANCE DE HAUT-PARLEURS:8Ω~16Ω/HAUT-PARLEUR

FRONT SPEAKER A
SPEAKER IMPEDANCE:8Ω~16Ω/SPEAKER
IMPEDANCE DE HAUT-PARLEURS:8Ω~16Ω/HAUT-PARLEUR

IMPEDANCE SELECTOR
CAUTION:
SEE INSTRUCTION MANUAL
ATTENTION:
SE REPORTER AU MODE D'EMPLOI

AC OUTLET
SWITCHED
100W MAX
0.8A MAX

AC 120V 60Hz

SPEAKER
6~16Ω ┬ 8~16Ω

CAUTION:
DO NOT CONNECT TV SET OR MONITOR.
ATTENTION:
NE RELIEZ PAS A L'APPAREIL DE TELEVISION
OU AU MONITEUR

FRONT SPEAKER B

R   L

Sub woofer with built-in amplifier

Speaker system (Front)

NOTE:

Use nominal impedances such as 6 Ω to 16 Ω or 8 Ω to 16 Ω for the speaker system. When using 6 Ω to 16 Ω, switch the IMPEDANCE SELECTOR to 6 Ω to 16 Ω.

NAMES AND CONNECTIONS OF PARTS

2

Connecting DVD, LD, or a Satellite Receiver

Connect the satellite receiver or LD player equipped with an RF OUTPUT as shown below.

Connecting DVD Player

Connect the DVD player as shown below.
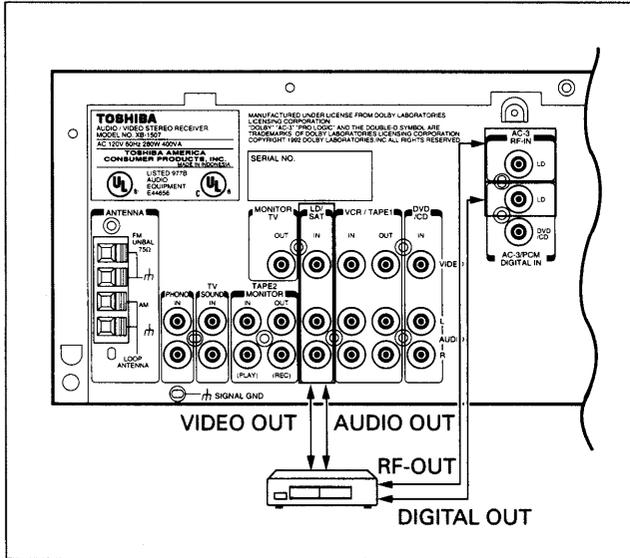
AC Outlet
[SWITCHED 100 W (0.8 A) MAX]

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

NOTES:

● This unit should be disconnected by removing the power plug from the wall socket when not in regular use, e.g. when on vacation.

● Do not connect appliances with high power consumption such as heaters, irons, or television sets to this AC OUTLET in order to avoid overheating and fire risk. This can also cause the receiver to malfunction.

> **CAUTION:**
> **DO NOT CONNECT MONITOR OR TV SET DIRECTLY TO THE SWITCHED AC OUTLET LOCATED ON THE BACK OF THE XB-1507.**

3. BASIC OPERATIONS

LISTENING TO FM/AM BROADCASTS

NOTE:
Turn OFF TAPE 2 MONITOR (the indicator goes off).
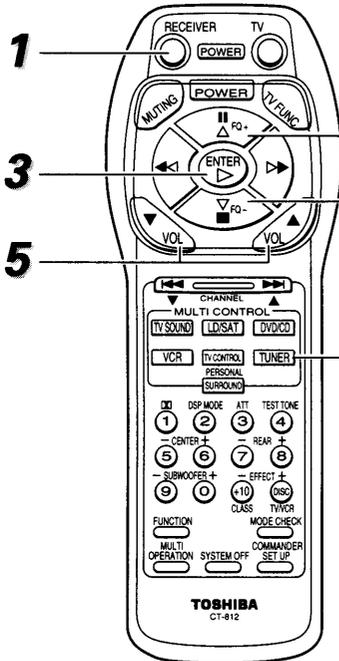
1. Turn ON the power of the receiver.

RECEIVER POWER → STANDBY indicator goes off.

2. Set the TUNER function.

TUNER → FM 87.50MHz --ch
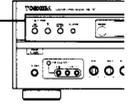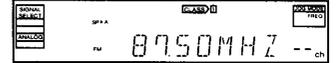
3. Select the band (FM or AM).

ENTER →

FM ⟶
AM ⟵
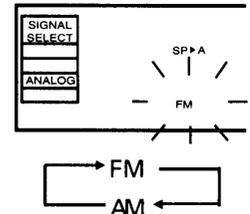
4. Select the broadcast station.
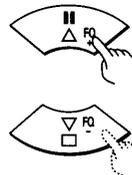
→ Refer to "selecting broadcast stations" below.

5. Adjust the volume.

Selecting Broadcast Stations

(Selecting an FM broadcast in 0.1 MHz steps)

①Selecting step by step.
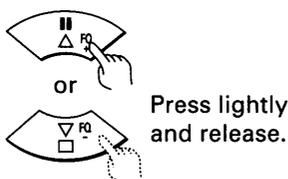
or — Press lightly and release.

↓
87.50
87.60
87.70
⋮

②Selecting automatically.

or ▶ or
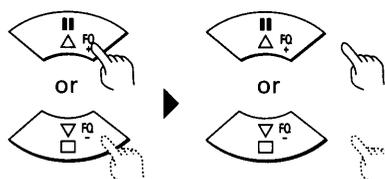
(Press and hold for approx. 1 second, then release)

↓
87.50
↓
89.50
Stops when received.

③Selecting at high speed
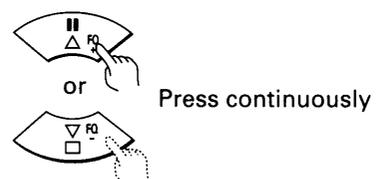
or — Press continuously

↓
87.50 Stops when
87.60 released.
⋮
89.50
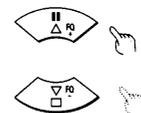
BASIC OPERATIONS
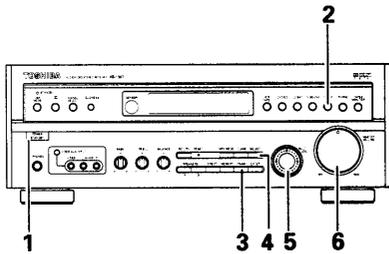
■ **Selecting a broadcast station using this unit**
1. Press the POWER button.
2. Set the TUNER function.
3. Press the FM/AM button and select FM or AM broadcast.
4. Press the SELECT button, to set the frequency mode.
   FREQ indicator lights.
5. Rotate the MULTI-JOG and adjust to the desired broadcast station.
   The TUNED indicator lights up when a broadcast program is received.
6. Adjust the volume.

NOTES:
● The TUNED indicator will not light when a broadcast station is too far away or when the broadcast signal is weak.
● The MULTI JOG cannot be used in "Selecting broadcast stations ② Selecting automatically" on page 13.

Directly Inputting the Frequency [Direct Access (Remote Control Unit Only)]
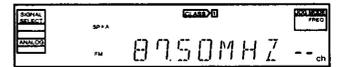
A broadcast station (frequency) can be directly selected using the number buttons on the remote control unit.

NOTE:
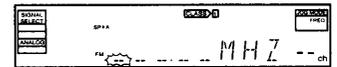Turn OFF the TAPE 2 MONITOR (the indicator will go off).
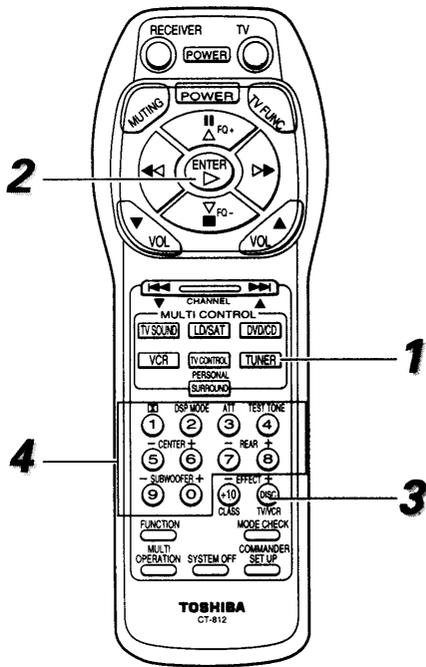
1. Set the TUNER function.
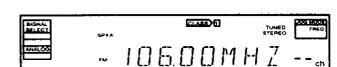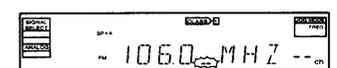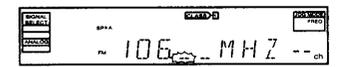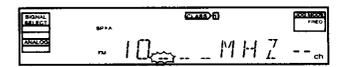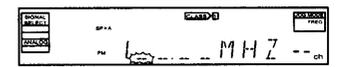
2. Select the band (FM or AM).

3. Set the direct access mode.

4. Select the broadcast station.

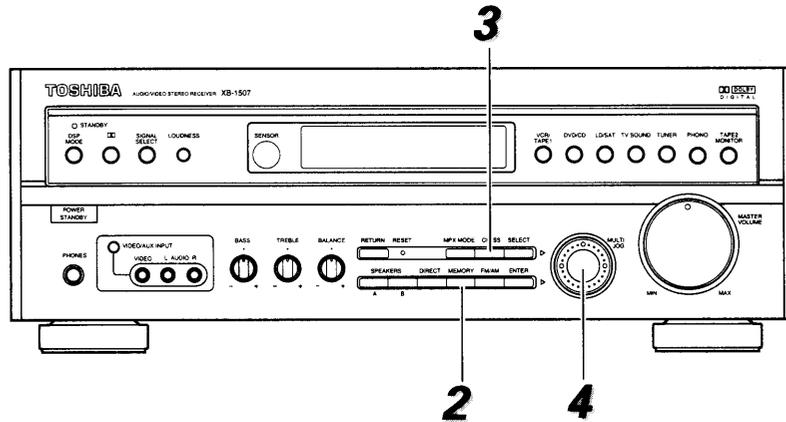Press the numbers of the frequency to be received.

For example, to receive FM 106.00 MHz.

■ **Canceling the frequency input**
The frequency input can be canceled by pressing the DISC button again. Input the frequency by repeating step 4.

Memorizing Frequently Used Stations (Main Unit Only)

NOTES:
- The frequency received and MPX MODE (FM only) can be memorized.
- Up to 10 stations can be memorized in each of three classes.

1. Receive the desired station. ➡ Refer to "Listening to FM/AM Broadcasts" (Pages 13 and 14)

2. Set the MEMORY mode.

3. Select the desired class number.

➡ CLASS 1 → CLASS 2 → CLASS 3 ↩

4. Select the desired station number.

Rotate the MULTI JOG to select the station number and press the ENTER button to memorize the selection. (**NOTE:** If ENTER is not pressed, the selection will be automatically memorized in 5 seconds.)
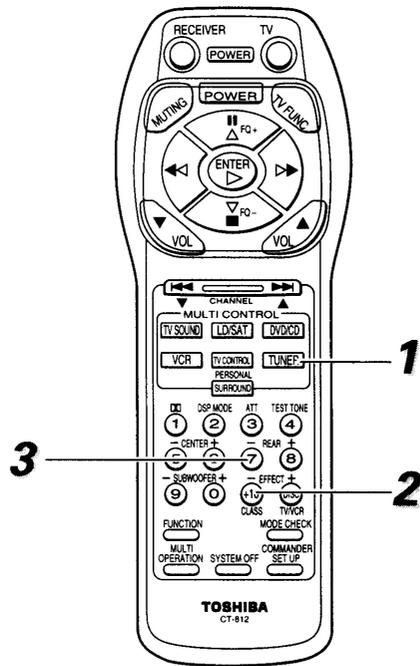
➡ CLASS 1(1 ↔ 10ch) → CLASS 2(1 ↔ 10ch) → CLASS 3(1 ↔ 10ch) ↩
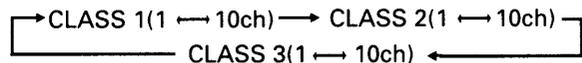
Repeat steps 1 to 4 to memorize up to 30 stations.
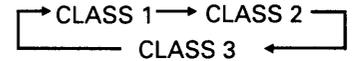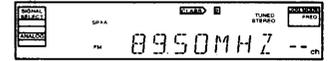
BASIC OPERATIONS 3

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Listening to Memorized Stations

1. Set the TUNER function.
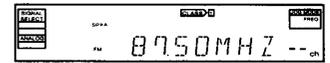
2. Select the CLASS number in which the desired station is memorized.

```
┌→ CLASS 1 ──→ CLASS 2 ─┐
└────── CLASS 3 ◄───────┘
```

3. Select the desired station number.
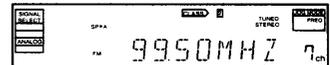
Example:
When FM99.50 MHz has been memorized in channel 7 of CLASS 2.

NOTE:
Use the CHANNEL ▲ (UP)/ ▼ (DOWN) buttons to select other memorized station numbers.
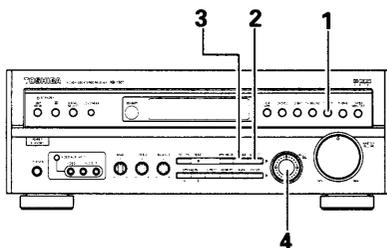
■ Operating with the main unit
1. Press the TUNER button.
2. Press the SELECT button to set the station mode.
   The ST indicator lights.
3. Press the CLASS button, and select the CLASS number in which the desired station has been memorized.
4. Rotate the MULTI-JOG, and select the desired station number.

NOTE:
If the power cord of the unit is disconnected from the wall outlet for several days, the stations memorized will be erased.

■ Last Station Memory
When turning ON the power and selecting TUNER, the station listened to before the power was turned OFF will be received.

16

RECORDING

Set the format of the input signal to "ANALOG" referring to "Switching the Input Signal" on page 34.

Recording with TAPE 1 or TAPE 2

NOTE:
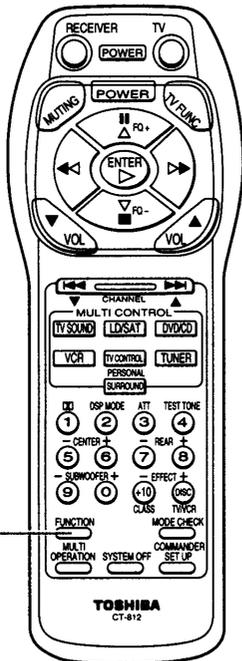
Turn ON the power of all equipment to be used.

1. Select the source to be recorded.
  * Except for PHONO and VIDEO, the sources can be selected directly using MULTI CONTROL.
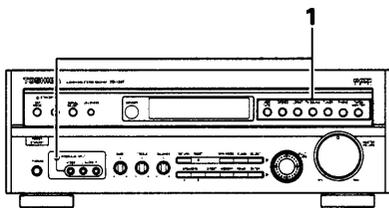
→ TUNER → PHONO → VIDEO ─┐
(TV SOUND) ← LD/SAT ← DVD/CD ← VCR/TAPE 1 ←┘

2. Start recording with TAPE 1 or TAPE 2.

3. Play back the recorded tape.

■ **Operating with the main unit**
1. Select the source to be recorded using the Function buttons.
2. Start recording with TAPE 1 or TAPE 2.
3. Play back the recorded tape.

NOTES:
● The VCR/TAPE 1 sounds cannot be recorded with TAPE 1.
● The volume, tone, balance, and surround setting of this unit have no effect on the recording signal.

┌───┐
■ **Recording Monitor**
When recording with TAPE 2, if the recording device connected has a recording monitor function, turning ON the TAPE 2 MONITOR button will enable recording to be carried out simultaneously with playback monitoring (the TAPE 2 indicator lights).
└───┘

Recording with a VCR

1. Select the source to be recorded.

$\longrightarrow$ (TUNER) $\rightarrow$ (PHONO) $\rightarrow$ VIDEO $\longrightarrow$

(TV SOUND) $\leftarrow$ LD/SAT $\leftarrow$ DVD/CD $\leftarrow$ (VCR/TAPE 1) $\leftarrow$

2. Start recording with a VCR.

3. Play back the source to be recorded.

NOTE:
The signal from VCR/TAPE 1 cannot be recorded. DVD-video signals may not be able to be recorded.
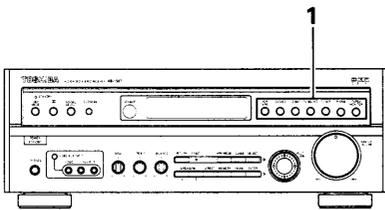
■ **Operating with the main unit**
1. Select the source to be recorded using the Function buttons.
2. Start recording with a VCR.
3. Play back the recorded tape.

NOTE:
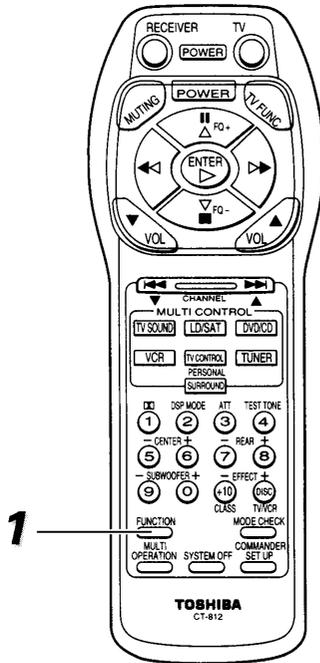The volume, tone, balance, and surround setting of this unit have no effect on the recording signal.

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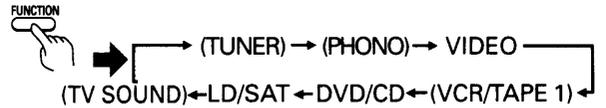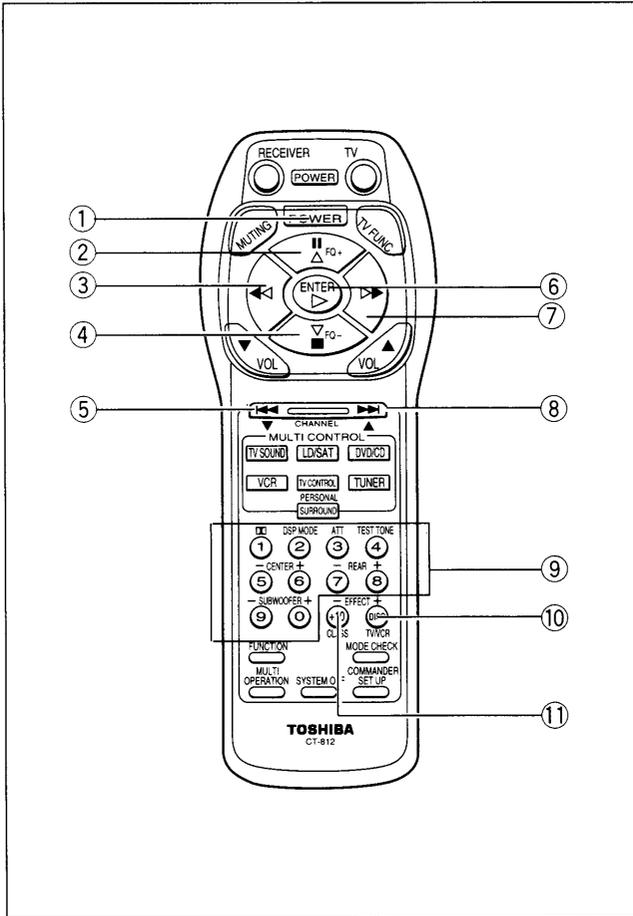## OPERATING OTHER COMPONENTS

LD PLAYER/DVD PLAYER Operation

Set the input source to LD/SAT or DVD/CD, and operate as desired using the following buttons.

① **POWER**

Use to turn ON/OFF the LD player or DVD player.

② **II**

Use to pause. (In some players, pressing this button may pause pictures.)

③ **◀◀**

Continuously pressing this button will set fast reverse playback.

④ **■**

Pressing this button during playback will stop the unit. (With some LD players, the disc tray may open if pressed during stop.)

⑤ **I◀◀**

Pressing and releasing this button immediately returns playback to the beginning of the chapter (track) currently being played. Pressing it continuously returns playback to the beginning of a previous chapter (track).

⑥ **▶**

Starts playback.

⑦ **▶▶**

Pressing this button continuously will start fast forward playback.

⑧ **▶▶I**

Pressing and releasing this button immediately advances playback to the beginning of the next chapter (track). Pressing it continuously advances playback to the beginning of a future chapter (track).

⑨ **Number buttons**

Use to select the chapter (track).

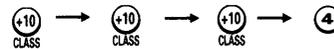⑩ ⊚**(SIDE A/B for LD) (MENU for DVD)**

LD: Switches between sides A and B of the disc.
DVD: Turns ON/OFF the menu screen.

⑪ **+10 button**

Use to select chapter (track) numbers higher than 10.
Example: Chapter (track) 34

$$\underset{CLASS}{\boxed{+10}} \rightarrow \underset{CLASS}{\boxed{+10}} \rightarrow \underset{CLASS}{\boxed{+10}} \rightarrow \boxed{4}$$

SAT (Satellite Tuner) Operation

Set the input source to LD/SAT, and operate as desired using the following buttons.

① **POWER**

Use to turn ON/OFF the power. Pressing the button each time turns the power on or off, alternately.

②▲,③◀,④▼,⑦▶

Use to move the cursor up, left, down or right, respectively.

⑥ **ENTER (MENU/SELECT)**

First pressing opens the MENU and next pressing sets the SELECT mode, allowing you to select a desired program.

⑤I◀◀, ⑧▶▶I **(GUIDE)**

Use to see the program guide. Pressing one of two shows GUIDE.

⑨ **Number buttons**

Use to enter channel numbers.

⑩ ⊚**(EXIT)**

Use to exit the MENU.

NOTE:

With some manufacturer's models, press ⊚ instead of ⊕ to open the "Menu".

3

BASIC OPERATIONS

⑦ ►►
Pressing this button continuously will start fast forward playback.

⑧ ►►|
Pressing and releasing this button immediately advances playback to the beginning of the next track. Pressing it continuously will advances playback to the beginning of a future track.

⑨ **Number buttons**
Use to select songs directly.

⑩ **DISC**
Use to select the disc number.
(Some CD players cannot be operated.)
Example:
When selecting disc number 27

② → ⑦ → ⑩

⑪ ⑩ **(track) button**
Use to select the track number.
(Some CD players cannot be operated.)
Example:
When selecting track number 15

⑩ → ⑤

CD PLAYER Operation

Set the input source to DVD/CD, and operate as desired using the following buttons.

① **POWER**
Use to turn ON/OFF the CD player.

② **II**
Use to pause playback.

③ **◄◄**
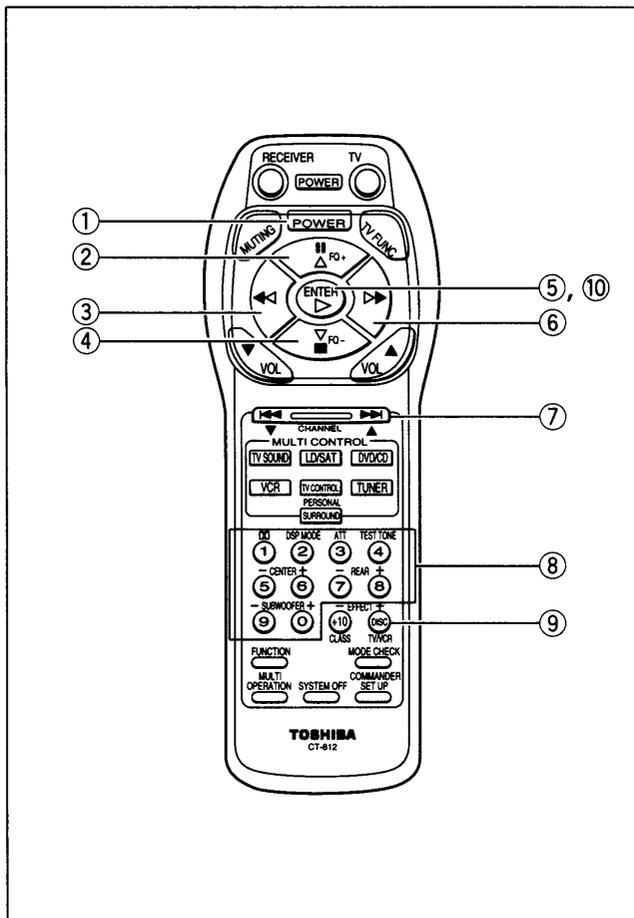Continuously pressing this button will start fast rewind playback.

④ **■**
Stops playback.

⑤ **|◄◄**
Pressing and releasing this button immediately returns playback to the beginning of the track currently being played. Pressing it continuously returns playback to the beginning of a previous track.

⑥ **►**
Starts playback.

CASSETTE DECK/VCR Operation

Set the input source to VCR, and operate as desired using the following buttons.

NOTE:
Both the cassette deck and VCR can not be used at the same time.

[Operations common to the cassette deck/VCR]

① POWER
Use to turn ON/OFF the power of the cassette deck and VCR.
(Cannot turn ON/OFF some cassette decks.)

② II
Pauses playback and recording (sets still pictures).

③ ◄◄
Rewinds the tape. Pressing this button during playback will start fast rewind playback.

④ ■
Stops tape.

⑤ ►
Starts playback.

⑥ ►►
Fast forwards the tape. Pressing this button during playback will start fast forward playback.

[VCR only]

⑦ CHANNEL ▲ (UP), ▼ (DOWN)
Changes the channels of the TV tuner in the VCR.

⑧ Number buttons
Used for selecting the channels of the TV tuner in the VCR.

⑨ TV/VCR
Used to switch the VCR antenna output to TV or VCR.

⑩ ENTER
Sets the channels selected using the Number buttons.
(Some models may not require this step.)

[Cassette deck only]
For double cassette decks, the ⑧ Number buttons can be used to operate deck 1 also.
(Some models cannot be operated.)

⑧ ①(◄◄)
Fast forwards the tape in the direction of the arrow.

②(■)
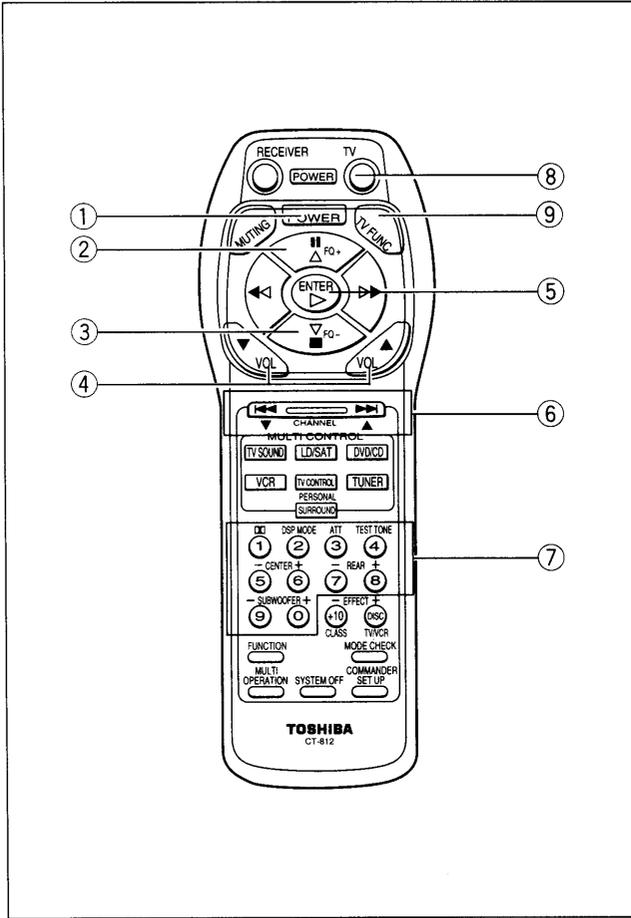Stops tape running.

③(►)
Plays back.

④(►►)
Fast forwards the tape in the direction of the arrow.

NOTE:
Pressing ② II and ④ ■ simultaneously will also set REC for the VCR and cassette deck.
REC cannot be set for deck 1 of double cassette decks.

BASIC OPERATIONS 3

TV Operation

Set the input source to TV CONTROL, and operate as desired using the following buttons.

① **POWER**

Use to turn ON/OFF the TV power.

② ▲

Raises the TV volume.

③ ▼

Lowers the TV volume.

④ **VOL ▲, ▼**

Use to adjust the TV volume. (When operating other devices, this is used for adjusting the volume of this unit.)

⑤ **ENTER**

Sets the channels selected using the Number buttons. (Some models may not require this operation.)

⑥ **CHANNEL ▲, ▼**

Use to select a TV broadcast channel.

⑦ **Number buttons**

Use to select TV broadcast channels.
Example: When selecting channel 25

② → ⑤

With some models, press ⑤ ENTER after selecting the channel to set the selection.

The following buttons can be used regardless of the input source setting.

⑧ **TV POWER**

Use to turn TV power ON/OFF.

⑨ **TV FUNC**

Used to select TV/VIDEO inputs. (Cannot be selected in some TVs.)

NOTE:

In "TV Sound" Function, TV set can also be operated, except ④ VOL ▲, ▼ as same as in "TV CONTROL". In this function, ④ VOL ▲, ▼ is used for adjusting the volume of this unit (XB-1507) instead of TV set.
TV volume can be operated by pushing ② ▲ ③ ▼ buttons.

MODE CHECK BUTTON

When the MODE CHECK button is pressed once, the MULTI CONTROL button currently selected will light.
When the MODE CHECK button is pressed again while lit, the MULTI CONTROL buttons will light in order, enabling the selected device to be remote controlled without changing the function of this unit.

4. VARIOUS OPERATIONS

USEFUL FUNCTIONS OF THE REMOTE CONTROL UNIT

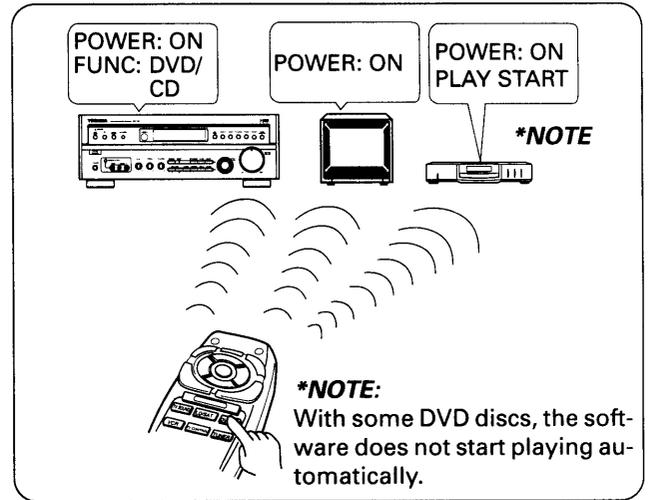With the supplied remote control unit, the following operations can be performed.

■ Control of other devices

Your TOSHIBA products and other manufacturer's equipment (VCR, TV, DVD player, CD player, etc.) can be operated. (This requires the learning and setting of the remote control codes of other manufacturer's products.)
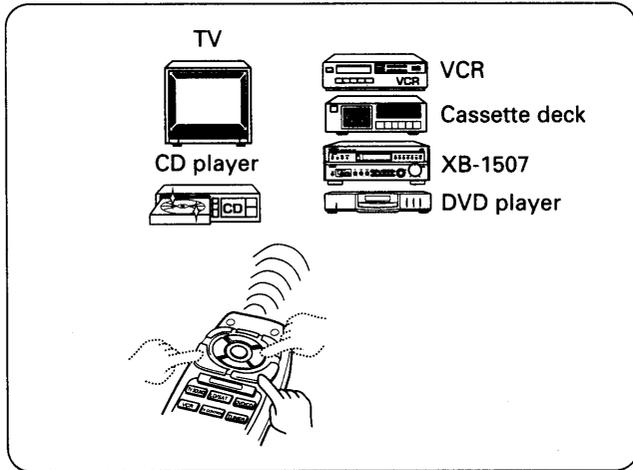
■ Multi Operation

Performing multi operation settings using this unit's remote control enables several devices to be operated in tandem.

*NOTE:
With some DVD discs, the software does not start playing automatically.

Operating Other Equipment Using The Remote Control (Controlling Other Equipment)

The remote control unit can be used to operate your TOSHIBA products and other manufacturer's audio/video equipment (VCR, TV, DVD player, CD player, etc.).
Perform the following procedures to enable operation of other manufacturers' equipment.
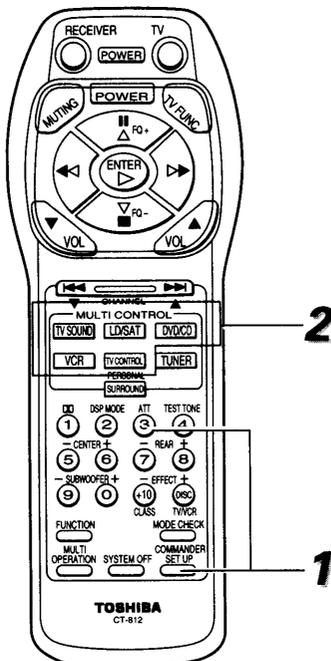
1. Set the preset mode.
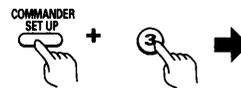
While pressing the COMMANDER SET UP button, press ③.

* Multi control section of the remote control unit will blink.

2. Select the function to be set.

* The function selected illuminates.

3. **While monitoring the display, locate the manufacturer name and code.**

. Each time the button is pressed, a different preset manufacturer name will be displayed. The code for each manufacturer will be displayed automatically.
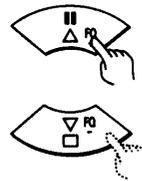
When the ▼ button is pressed, the manufacturer names are displayed in the reverse order.
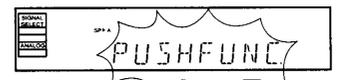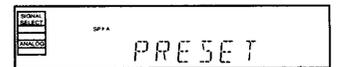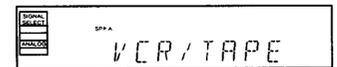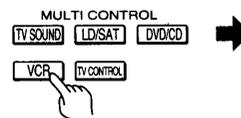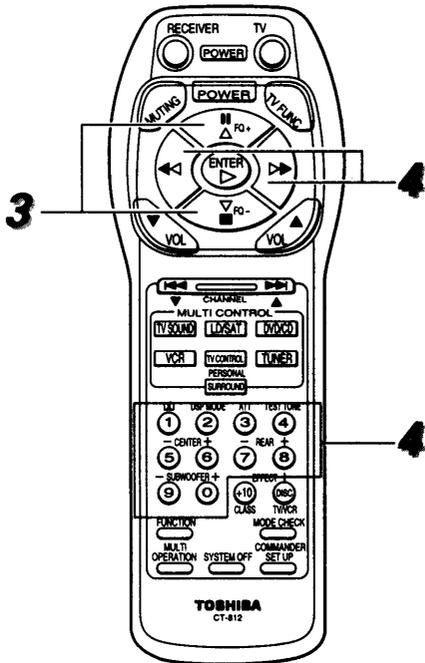
```
VCR/TAPE  →  VCR  →  RCA
   ↕           ↕         ↕
PUSH 4**     PUSH 401
```
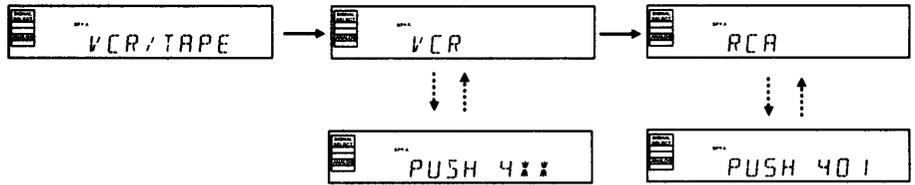
4. **Point the remote control unit towards the device to be operated, and input the three-digit code number confirmed in step 3.**
* Refer to the LIST OF MANUFACTURER CODES on page 45.
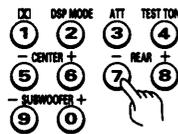
When a three digit code number is input, the power ON/OFF signal will be output from the remote control unit. If the power of the device turns ON or OFF the device has been set properly. If the power does not turn ON/OFF, input another code or use the learn function.

- -

■ When there are several manufacturer codes for one manufacturer

Some manufacturers use several remote control signals. In such cases, the device may not operate even if the manufacturer code displayed at the beginning is input. Perform the following steps, and look for another manufacturer code.

Look for another code of the manufacturer.
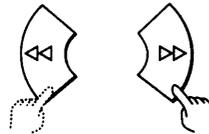
Each time these buttons are pressed, other preset codes of the manufacturer will be displayed.

Example: For TOSHIBA

```
TOSHIBA  →  TOSHIBA  .........
   ↕            ↕
PUSH 405     PUSH 409
```
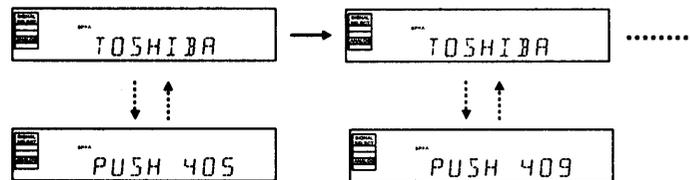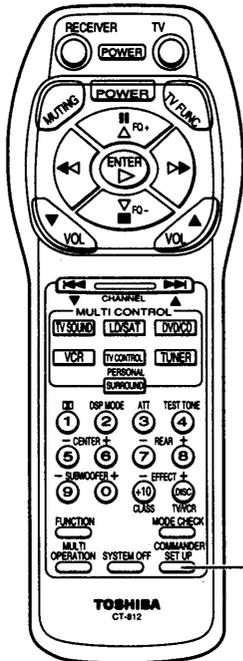
5. Repeat steps 2 and 4 and set other functions.

6. Exit the preset mode.

Returns to normal operations.

* Multi control section of the remote control unit will go off.

VARIOUS OPERATIONS

Memorizing Other Manufacturer's Signals (Learning Mode)

If your equipment does not operate in the preset mode, you can teach remote control signals so that it can be operated. If set properly in the preset mode, remote control signals of additional functions can also be set through the learning function (those not shown in pages 19 to 22).

1. **Set the learning mode.**

While pressing the COMMANDER SET UP button, press ①.
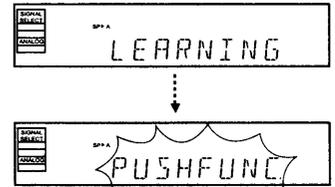
* Multi control section of the remote control unit will blink.

2. **Select the function to be memorized.**
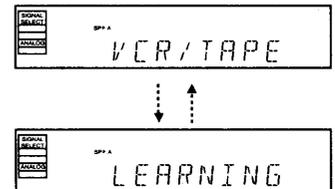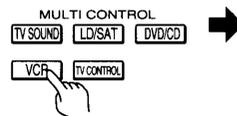
* Only the multi control button selected blinks.

3. **Select the button of the function to be memorized using the remote control unit.**
* Select from the gray buttons in the left figure of the remote control unit.

The remote control unit is ready to memorize the operation in the selected button.
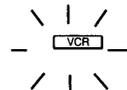
* The multi control button of the remote control unit stops blinking and lights.

4. **Face the remote control units at each other. Press the button of the operation of the other manufacturer's device to be memorized. (Press until the multi control button blinks.)**

2~5cm
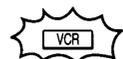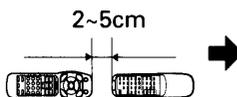
* When memorized, the multi control button of the remote control unit starts blinking.

5. Repeat steps 2 to 4, and learn other required functions.

6. **Exit the learning mode.**

Return to normal operations.
* All multi control buttons will go off.

NOTES:
- The TV POWER, TV FUNC, VOL ▼ and ▲ buttons can only be used for learning when TV CONTROL is selected.
- When TV CONTROL has been selected, memorize the same remote control signal into both TV POWER and POWER.

26

Turning ON/OFF the Power of Several Devices (Multi Operation)

The power of devices connected to this unit can be turned ON/OFF with its remote control unit, and operated with the MULTI-OPERATION button of this remote control unit.
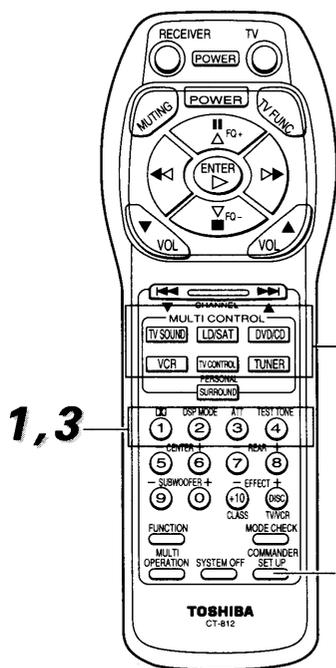
1. Set the multi operation mode.

While pressing the COMMANDER SET UP button, press ②.
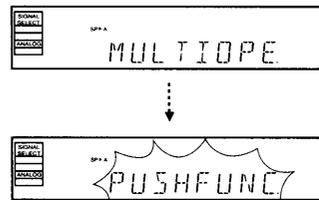
* Multi control section of the remote control unit blinks.

2. Select the desired function.
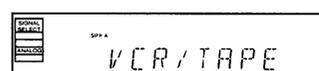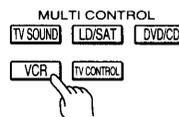
* Only the multi control button selected lights.

3. Select the operation to be set from the following table, and press the corresponding number button.

* Multi control section of the remote control unit blinks.

4. To continue settings, repeat steps 2 and 3, and set each multi operation function.

5. Exit multi operation mode.
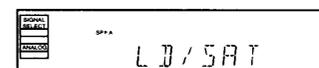
Return to normal operations.
* Multi control section will go off.

NOTES:
- For the DVD player, CD player, VCR, and cassette deck, the PLAY signals are output from the remote control unit.
- When the TV preset code is set to the TV SOUND function and "SELECTED DEVICE POWER" described above is TV, a remote control signal is not output in ③. To turn ON/OFF the TV POWER, set to ② or ④.

■ Multi Operation Table

Number Button	RECEIVER POWER	TV POWER	SELECTED DEVICE POWER	▶
①	YES	NO	NO	YES
②	YES	NO	YES	YES
③	YES	YES	NO	YES
④	YES	YES	YES	YES

YES: Activated   NO: Not activated

NOTE:

The multi operation can be set while watching the display. (Refer to step 3 on page 27.)
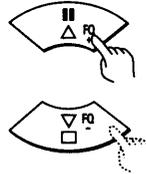
Each time the buttons are pressed, a multi operation is displayed.

| $VCR/TAPE$ | → | $PUSH(1)$ | → | $PUSH(2)$ | .... |

| $NO\ SET$ | | $VCR\ SET$ |
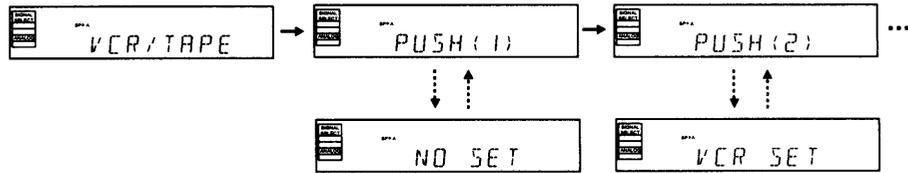
Performing Multi Operation
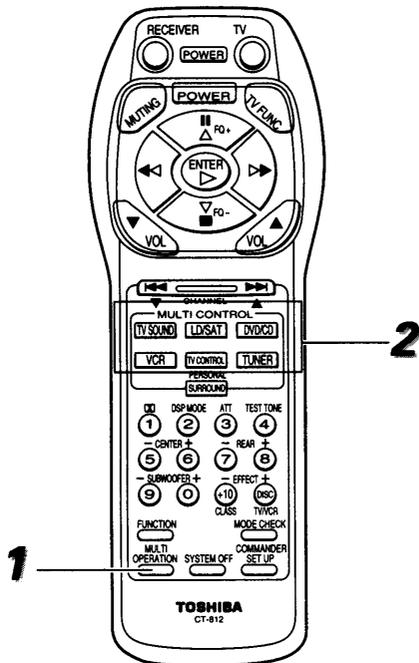
1. Enter the multi operation mode.

All multi control buttons of the remote control unit blinks.

2. Select the desired function.
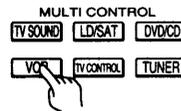
The power of this unit is turned ON, the function switches, and the power of the selected device turns ON/OFF according to the settings on page 27. (Some devices may start playback after this, such as a DVD player, CD player, LD player, VCR or cassette deck.)

NOTE:
The power of this unit does not turn on when TV CONTROL is selected.

Multi Operation/Personal Mode

Up to 10 sequential signals sent from the remote control unit can be selected and set freely. By combining with the memorized signals, customs control is possible.
The remote control signals of the shaded buttons in the following diagram can be set.
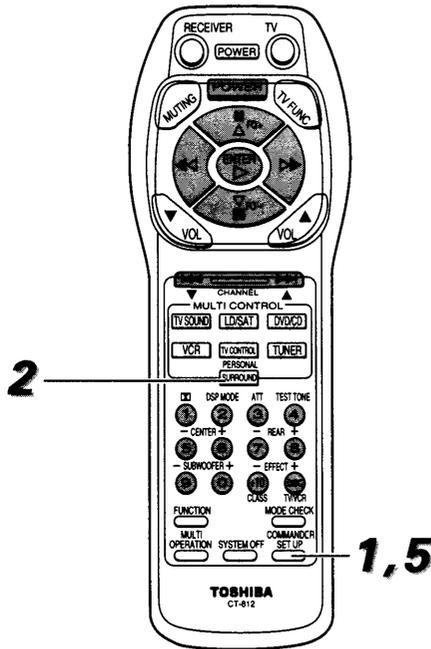
1. Set the multi operation mode.

Press ② while pressing the COMMANDER SET UP button.

`MULTIOPE`

`PUSHFUNC`

2. Set the personal mode.

`PERSONAL`

`FREE`

3. Set the functions to be learnt in order.

Example:

4. Repeat step 3, and memorize the remote control signals (up to 10).

5. End the multi operation (personal mode).

`DVD/CD`

Return to normal operations.

NOTE:
When 10 signals are memorized, the setting mode is automatically terminated and the unit returns to normal operation.

Operating the Personal Mode
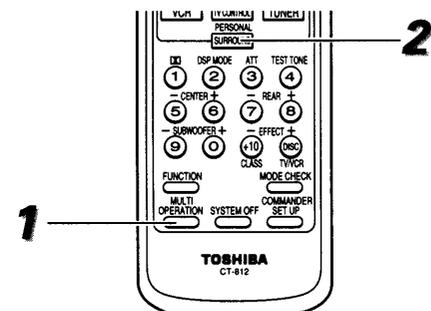
1. Set the multi operation mode.

2. Set the multi operation mode (personal mode).

Example: Turns ON the power of the unit, TV and DVD player and plays the DVD player.

VARIOUS OPERATIONS

4

Turning OFF System Power
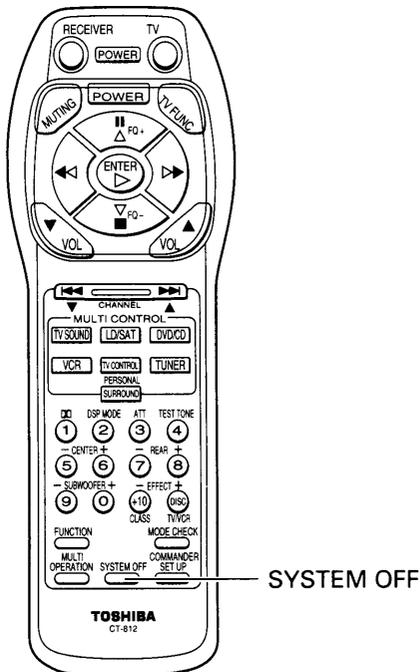
Turn OFF system power including this unit.

SYSTEM OFF ➡ Devices will turn OFF according to the multi operation settings.

Example:
When you are using the remote control unit for VCR operation, and VCR/TAPE is set to "4" in the Multi Operation on page 29, this unit, TV and VCR will turn OFF via this operation.

NOTE:
In some devices that have been turned OFF, turning OFF the system will turn ON the power.

SYSTEM OFF

Canceling All Remote Control Settings
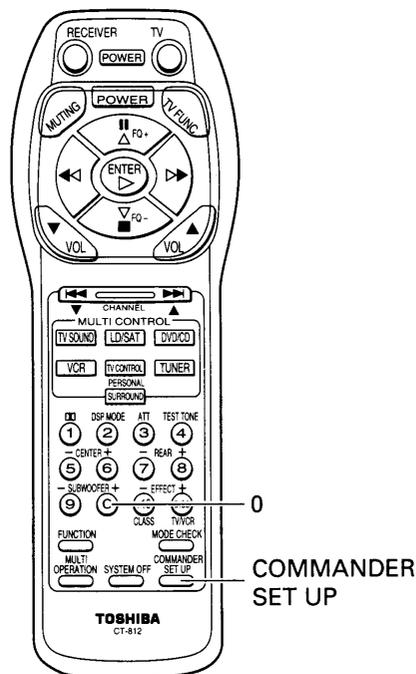
Cancels all settings that have been set or memorized.

Cancel the setting.
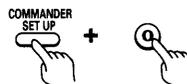
COMMANDER SET UP + ➡ All multi control buttons of the remote control will blink. After blinking three times, all settings will be canceled.

While pressing the COMMANDER SET UP button, press ⓪ for more than 3 seconds.

0

COMMANDER SET UP

TOSHIBA
CT-812

ENJOYING SURROUND EFFECTS

NOTES:
- Select SPEAKER A before operation.
- If SPEAKER A and B are turned ON, SPEAKER B is turned off automatically.
- If SPEAKER B is ON, surround mode will not be ON.

Press the SURROUND Button to Enable Surround Operations.

Switching the Sound Effects [DSP MODE]
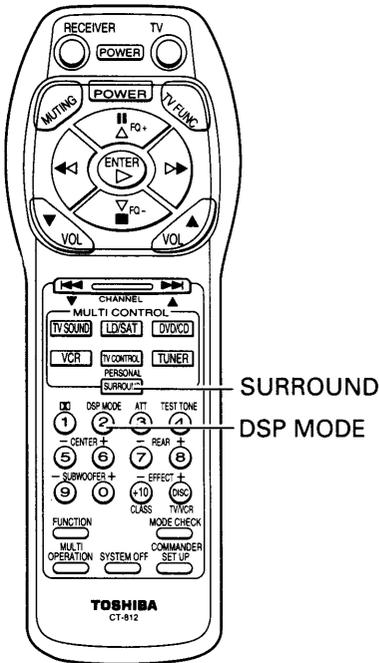
Select the sound effects.


```
  ┌──→ HALL ──→ JAZZ ──→ DANCE ┐
  └─ OFF ←─ THEATER 2 ←─ THEATER 1 ←─┘
```

SURROUND

DSP MODE

TOSHIBA
CT-812
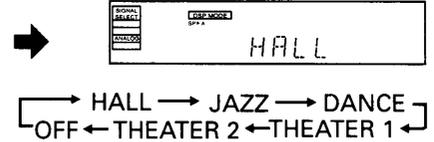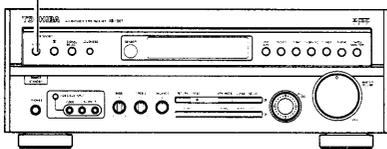
DSP MODE

■ Operations of this unit

Press the DSP MODE button.
Each time it is pressed, the surround effect changes as follows.

```
  ┌──→ HALL ──→ JAZZ ──→ DANCE ┐
  └─ OFF ←─ THEATER 2 ←─ THEATER 1 ←─┘
```

Switching the Dolby Surround Mode

When Dolby Surround mode is ON, the Dolby Pro Logic Surround and Dolby Digital (AC-3) are automatically switched according to the input signal.
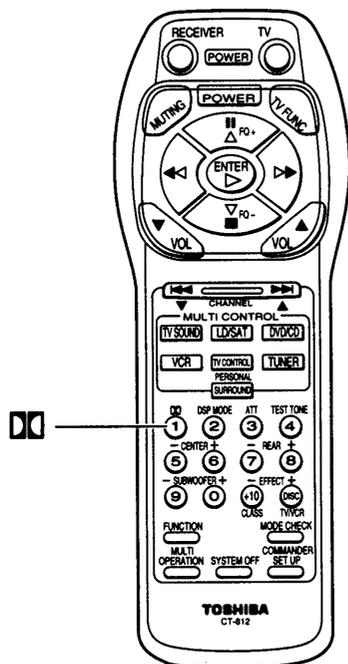
Select the desired Dolby Surround mode.

Each time it is pressed, the mode is turned ON/OFF.

NOTE:
When connecting a LD player with AC-3 RF OUTPUT or DVD player with coaxial AC-3 output as shown in the figure on page 12, the unit is automatically switched to Dolby Digital (AC-3) mode.
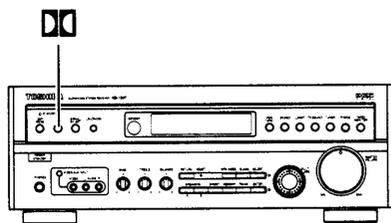
■ Operations with this unit
Press the ꞏꞏ (DOLBY MODE) button.
The mode is turned ON/OFF each time it is pressed.

Enjoying Movie and Music Sources in Surround Sound
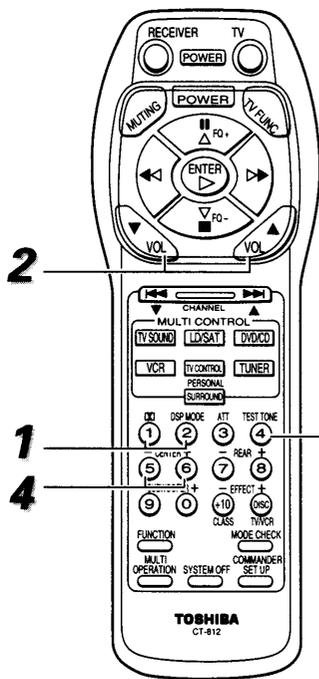
1. Select the Dolby Surround mode and DSP mode. (Either mode can be set independently.)

HALL

2. Adjust to the desired volume.

3. Set the test tone.

FRONT L

┌→ Front L → Center → Front R ┐
└ Sub woofer ← Rear L ← Rear R ◄┘
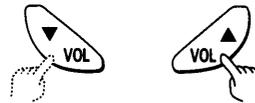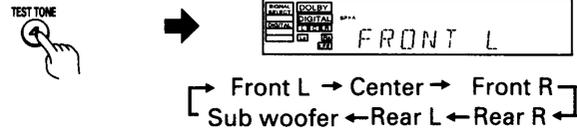
4. Adjust the center level, rear level, rear balance and sub woofer level so that the test tone volume output from each speaker is the same.

CENT. + 5 dB

● Level can be set for each surround mode.
● When both the DSP mode and Dolby Surround mode are turned ON, priority is given to the Dolby Surround mode.

5. Turn OFF the test tone.

6. Play the desired source.

NOTES:

*1 When 3CH LOGIC is selected in the center mode, no test tone is output from the rear speakers.

● This operation need not be performed each time the Dolby Surround mode and DSP mode are turned ON.

● Although test tone is output independently for the Lch and Rch of the rear speakers, the Lch and Rch are operated together when adjusting the rear level.
If there is a difference between the Lch and Rch, adjust it based on "⑨ Rear balance setting mode" on page 39. (PRO LOGIC MODE ONLY)

VARIOUS OPERATIONS

4

SWITCHING THE INPUT SIGNAL

The functions DVD and LD have a digital input terminal and AC-3 RF input terminal (LD player only) in addition to the analog input terminal. When the input terminals are connected to the DVD player and LD player output terminals, multiple input signals will be sent from each player. Use the SIGNAL SELECT button to select input signal. Normally when set to "AUTO", the SIGNAL SELECT mode will change automatically according to the input signal of the player.
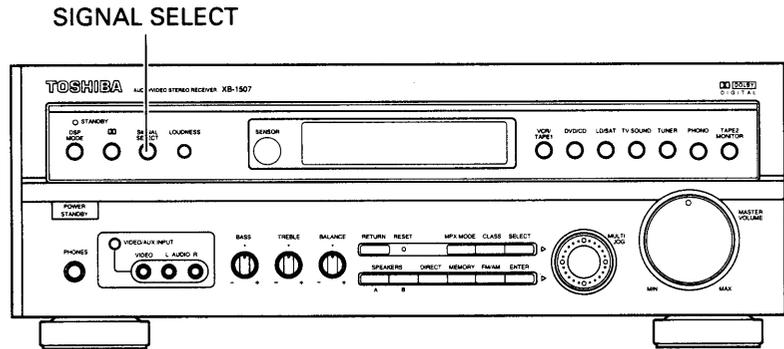
SIGNAL SELECT

Switch according to the input signal format.

SIGNAL SELECT

➡
```
 ┌→ AUTO ──────→ ANALOG ┐
 └─ AC-3 RF ←── DIGITAL ←┘
```
(LD players only)
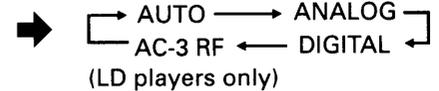
NOTES:
● When set to "AUTO", and multiple signals such as analog, digital, and AC-3 RF are preset, the signals with priority are:
AC-3 RF, digital, analog.
● When selecting functions other than the DVD and LD functions, the SIGNAL SELECT will be set to "ANALOG".

SETTING MODE

To maximize sound performance from your receiver, you must conform your receiver to your speaker system.

Operating the Setting Mode
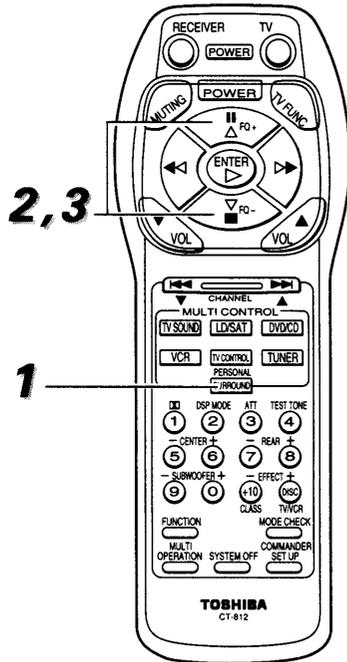
1. Select the SUR-ROUND button to enable SURROUND operation.

2. Press the ▲ (UP)/ ▼ (DOWN) buttons to change the set-tings.

➡ The previously set mode will be displayed. The settings are displayed for 20 seconds.
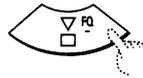
3. Select the setting mode.

➡
SPEAKER setting mode
↓
SUB WOOFER ON/OFF mode
↓
Crossover frequency setting mode
↓
LFE attenuator setting mode
↓
Low cut filter ON/OFF setting mode
↓
CENTER delay time setting mode
↓
REAR delay time setting mode
↓
Dynamic range compression setting mode
↓
REAR balance setting mode
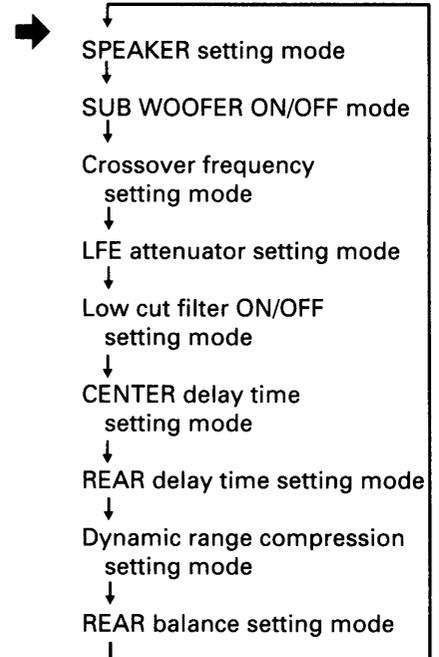
4. While the setting mode is displayed, set in detail according to the "Contents and Changes of the Setting Mode" on page 36.

4

VARIOUS OPERATIONS

Contents and Changes of the Setting Mode

①SPEAKER setting mode
Sets front, center, rear speakers of the system.

Switch the setting mode according to the speaker system presently utilized.
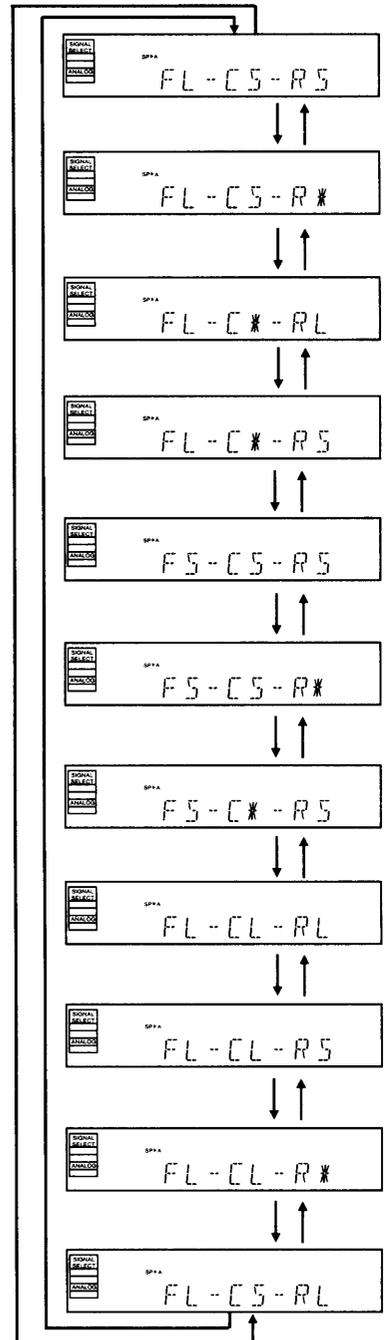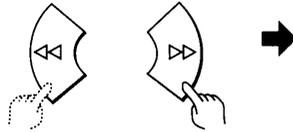
On the fluorescent display, F stands for FRONT, C for CENTER, R for REAR, L for LARGE, S for SMALL, and * for no speakers.

NOTE:
Initially, the speakers are set as follows.
FRONT: Large, CENTER: Small, REAR: Small

②SUB WOOFER ON/OFF setting mode

Sets SUB WOOFER (special bass speaker).

Turn ON/OFF the SUB WOOFER.

`SUBWF ON`
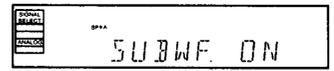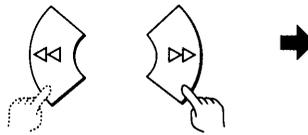
It turns ON or OFF each time the button is pressed.

NOTES:
- Initially it is set to OFF.
- If SMALL setting is selected for the FRONT speaker in the SPEAKER mode, SUB WOOFER is set to ON, and cannot be turned OFF.

③Crossover frequency setting mode

Sets crossover frequency for subwoofer and main speakers when speakers are in SMALL settings.

Set the crossover frequency.

`X.OVER 100 Hz`

100 Hz → 150 Hz
200 Hz ←
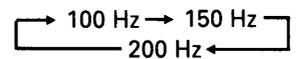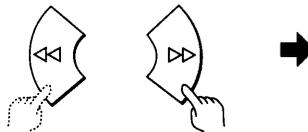
NOTES:
- Initially, crossover frequency is set to 100Hz.
- It is recommended that it be set to 200Hz when only small speakers are used, although this will depend on the efficiency of the speaker.
- If all speakers (front, center, rear) are set to LARGE mode, crossover frequency of the subwoofer cannot be one set.

④LFE Attenuator setting mode

Adjusts the gain of LFE signal to minimize subwoofer speaker distortion.

Set the attenuation level.

`LFE ATT 0 dB`

0dB → 10dB
∞ (Display/**) ↵
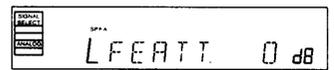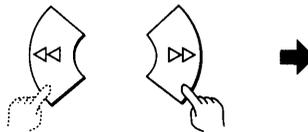
NOTE:
Initially, the level is set to 0 dB.

⑤Low cut filter ON/OFF setting mode

Turn the low cut filter ON if low frequency distortion is present in.

Turn the low cut filter ON/OFF.
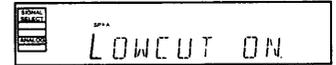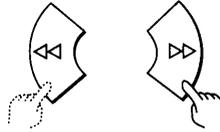
➡ `LOWCUT ON`

Display reads ON or OFF each time the button is pressed.

NOTES:

● Initially, the low cut filter is set to OFF.
● If the SUB WOOFER is set to OFF, the low cut filter cannot be set.

⑥CENTER delay time setting mode

Normally as the CENTER speaker is placed directly in front in the listening room, it is closer to the listening position than the FRONT speakers. The sound from the CENTER speaker may be heard before the FRONT (L/R) speakers. To prevent this, use the CENTER delay time setting mode to set equal distance to the listening position for the FRONT and CENTER speakers.
One step sets about 30 cm (1 foot).

Set the CENTER delay time.
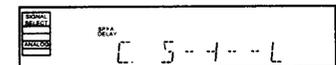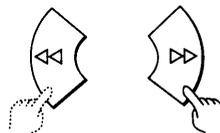
Moves by one step each time the buttons is pressed.

➡ `C S-1--L`

S:SHORT
L:LONG
Can be set up to 6 steps.

NOTES:

● Initially, the delay time is set to the shortest level (0 ms).
● When the display is set to no CENTER speaker in the SPEAKER setting mode at surround mode, the CENTER delay time cannot be adjusted.
● The CENTER delay time is active only in Dolby Digital.

⑦REAR delay time setting mode

Like the ⑥CENTER delay time setting mode, set so that the distance from the FRONT and REAR speakers are virtually identical to the listening position.
One step sets about 1 to 1.5m (3 to 5 feet).

Set the REAR delay time.

Moves by one step each time the button is pressed.

➡ `R S-I--L`
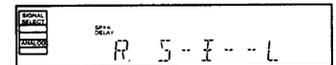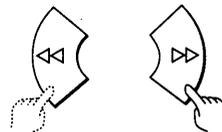
Can be set up to 4 steps.

NOTES:

● Initially, the distance from the listening position to the REAR speakers is set shorter than that to the FRONT speakers.
● When the display is set to no REAR speakers in ① SPEAKER setting mode, the REAR delay time cannot be adjusted.
● The REAR delay time is effective in both Dolby modes (Dolby Digital and Pro-Logic).

⑧Dynamic range compression mode

Dynamic range indicates numerically (dB) how loud and low-level sounds can be maximized back properly so that low-level sounds are not covered by noises and the loud sounds are not distorted. Dynamic range compression is a function which compresses the dynamic range of the audio signal. When watching a movie with the volume set to a low-level, setting this function enables quieter sounds to be heard more easily.

Set the dynamic range compression level.

$$\boxed{\rightarrow \text{OFF} \rightarrow} \\ \boxed{\text{MAX} \leftarrow \text{MID} \leftarrow}$$
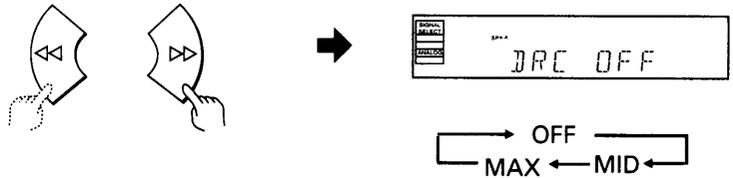
NOTES:
- Initially, the level is set to OFF.
- When raising the volume level, set to OFF.

⑨REAR balance setting mode

Adjusts the left and right volume balance of the REAR speakers.

Set the REAR balance.

L side   CENTER   R side
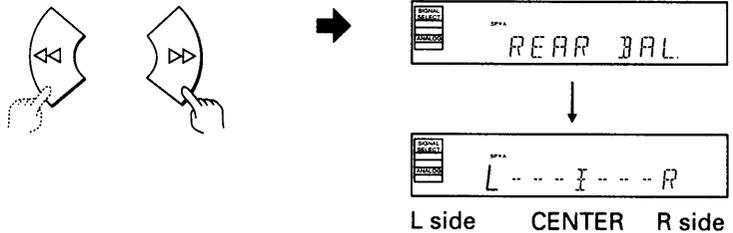
NOTES:
- Initially, the rear balance is set to the CENTER.
- When the ①SPEAKER setting mode is set to no REAR speaker or when the Surround mode is OFF, REAR balance cannot be adjusted.

RETURNING TO BROADCAST RECEPTION MODE (RETURN BUTTON)
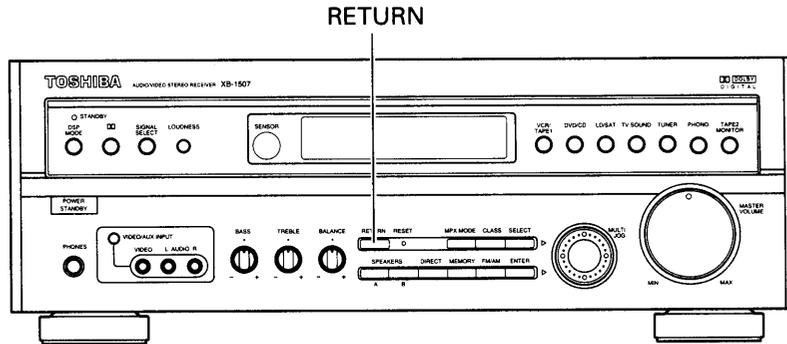
RETURN

If no sound is produced while this unit is operating or when help is required, press this button to return to the broadcast reception mode.

To return to the broad-cast reception mode.

RETURN

Settings will be as follows.
● TAPE 2 MONITOR: OFF
● MUTING: OFF
● Function: TUNER
The last station tuned will be received. If the last station cannot be received, the receiver will automatically tune to a live station.
● If the SURROUND MODE, LOUD-NESS and DIRECT settings are ON, they will be set to OFF.
These settings are memorized for each function, settings of functions other than TUNER will be maintained.
● SPEAKERS A,B: Only A is ON

5. OTHER

SURROUND

Surround Type

Dolby Digital (AC-3)	Dolby Pro Logic Surround
Mode for enjoying movie and music software with the ▢▢[DOLBY] (▢▢[DOLBY SURROUND]) mark. Dolby Digital (AC-3) is a compression format which records the sound of 6 channels of the theater surround system (Dolby Digital) on the movie film digital track. Of the 6 channels, the sub woofer channel is intended for low frequency effects only, and because the frequency range is smaller than the main channel, it is expressed as the .1 channel in the 5.1 system.	Set to this position for movie and music sources (especially software with the ▢▢[DOLBY SURROUND] mark). The Dolby Pro Logic Surround continuously detects the size and direction of the signal. Accurate positioning of the sound source, reproducing natural sound flow. Listening Position * In the above figure, F stands for FRONT speakers, R for REAR speakers, C for CENTER speaker, SW for sub woofer, r for right, and l for left.
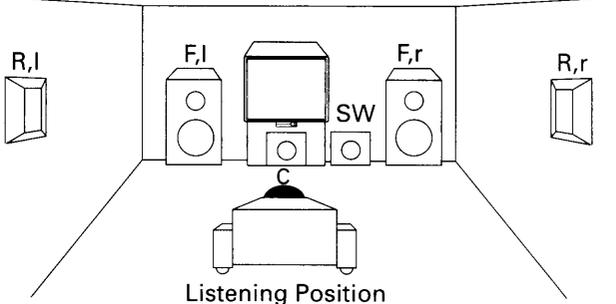
■ DSP mode

HALL	Simulates the acoustic effects of a large concert hall in Europe. Suitable for classical music. Long delay time of reflected sounds (approx. 20 to 200 ms), coupled with reverberation effects let the listener enjoy the dynamics and sound characteristics of concert halls and powerful orchestral performances.
JAZZ	Simulates the acoustic effects of jazz clubs with a floor space of around 400m^2 (approx.4200ft^2). Reflected sound is virtually below 100 ms, allow the listener to enjoy live-band effects.
DANCE	Simulates the acoustic effects of discos with a square dance floor. Features strong bass sound. Reflected sound delay time is virtually below 50 ms, creating a lively sound stage.
THEATER 1	Sets the delay time of the reflected sound to match the acoustic parameters of a medium movie theater (with seating capacity of 300) in your living room. (About 30 to 120 ms time delay)
THEATER 2	Reproduces theater sound field effects without losing the localization of each channel. Theater effects can be enjoyed without losing Dolby Digital (AC-3) or Dolby Pro Logic effect when used in combination.

NOTE:

Use of THEATER 1 or 2 together with the Dolby Surround mode [Dolby Digital (AC-3) or Dolby Pro Logic] will produce more dramatic surround effects.

OTHER

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Dolby Digital (AC-3)

Dolby Digital (AC-3) is the name of the Dolby surround multi-channel digital system that was developed after the Dolby Surround System and Dolby Pro Logic Surround System.

5.1 channel digital surround track

4 channel analog sound track (Matrix)

AC-3 encoding

AC-3 for movie films
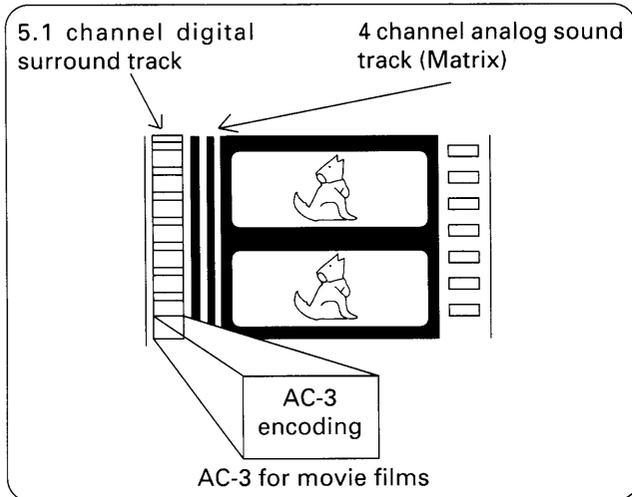
The number of movies made using Dolby Digital since 1992 has exceeded 300 and continues to increase. For compact disc players and laser disc digital sounds, 16 bits are used to quantize the original analog audio waveform and sampling is carried out at 44,100 times every second. However because an enormous amount of recording signal data is required for the multi channel system with this method, AC-3 is used to compress the data. Dolby Digital AC-3 is also the selected multichannel audio format for DVD video discs.

In reproducing audio signals, the smaller the bit number used, the lower the sound quality. With AC-3, drop in auditory sound quality is prevented by using masking technology and digital filtering technology based on perceptual auditory characteristics.

■ Laser disc format

Laser discs are now available on the market in large numbers. This means that the recording of different format audio signals on the laser disc raises the important question of compatibility with existing laser discs. Dolby Digital (AC-3) records signals using one analog audio channel to maintain this compatibility with existing discs and players.

As shown in the following figure, the digital audio sounds of Dolby Digital (AC-3) discs can be played back as currently done. Analog sounds are played back by using the other channel without the Dolby Digital (AC-3) signals for monaural audio signals.

Analog sound (Monaural)

Dolby Digital (AC-3) sound (Monaural)

Video

Digital sound
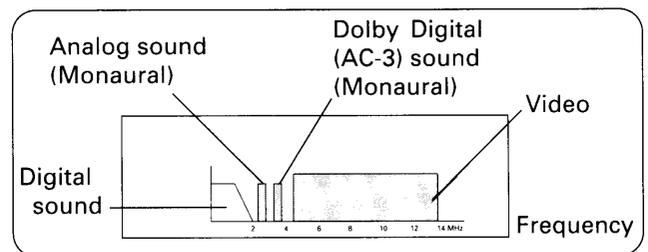
Frequency

■ Comparison with Dolby Pro Logic Surround

Dolby Digital (AC-3) is also known as the 5.1 channel system. It is equipped with 5 channels (front left, front right, center, rear left, rear right) in the frequency range from 20 Hz to 20 kHz and an independent sub woofer channel. The sub woofer channel is also called LFE (Low Frequency Effect).

The LFE channel can be used as desired to enjoy strong bass sounds effects adding impact to crashes explosions etc.

The following table shows the comparison with Dolby Pro Logic Surround effects.

	Dolby Digital (AC-3)	Dolby Pro Logic Surround
No. of recording channels	5.1 channels (Max.)	2 channels
No. of playback channels	5.1 channels (Max.)	4 channels
Playback channel structure	Front left, front right, center, rear left, rear right, sub woofer	Front left, front right, center, rear
Sound processing	Digital discrete processing	Analog matrix processing (4:2:4)
Rear (Surround) high frequency playback limit	20,000 Hz	7,000 Hz
Other	● 5.1 channel is completely independent ● High dynamic range ● Stable position, high phase characteristics, and advanced surround effects reproduction	

TROUBLESHOOTING

Incorrect operations are often mistaken for trouble and malfunctions. If you think that there is something wrong with this component, check the points below. Sometimes the trouble may lie in another component. Investigate the other components and electrical appliances being used. If the trouble cannot be rectified even after exercising the checks listed below, ask your nearest TOSHIBA authorized service center or your dealer to carry out repair work.

Symptom	Cause	Remedy
The power does not turn ON.	● The power plug is disconnected from the outlet. ● The cause may lie in the protection circuit.	● Insert into the wall outlet. ● Disconnect the power plug from the outlet, and insert again.
The unit does not work even when the buttons are pressed.	● Due to effects of static electricity when the air is dry.	● Press the front panel RESET button. ● Disconnect the power plug from the outlet, and insert again.
No sound is output when a function is set.	● Not properly connected. ● Sound is muted. ● The volume is turned down. ● The TAPE 2 MONITOR is ON. ● The speaker switch is OFF.	● Refer to pages 10, 11 and 12 and connect again. ● Press the MUTE button on the remote control unit to release muting. ● Adjust MASTER VOLUME. ● Press the TAPE 2 MONITOR button. ● Press the SPEAKER button of terminal (A/B) connected to the speakers.
No video signal is output when a function is selected.	● Not properly connected. ● The input source is not properly selected.	● Refer to pages 10 and 11, and connect again. ● Press the correct button.
Considerable noise in radio broadcasts	● Not received at proper frequency. ● The antenna is not connected. ● AC-3 RF and digital signal connection wires are near the antenna terminal and antenna wires.	● Tune the correct frequency. ● Connect the antenna properly. (P. 10, 11) ● Distance the AC-3 RF and digital signal wires from the antenna terminal and antenna wires.
	[FM broadcast reception] ● The FM antenna is not stretched out, and faces an inappropriate direction. ● Weak broadcast signals.	● Stretch out the antenna and secure it to a wall while selecting the direction and position with the best reception state. ● Change the FM antenna to an outdoor antenna with multiple elements. (P. 10)
	[AM broadcast reception] ● The AM antenna faces inappropriate direction. ● Weak broadcast signals. ● Affected by other equipment. (Fluorescent lamp, motor, computer; etc.)	● Select the direction and position with the best reception state. ● Turn off the equipment which cause noise or move them away from the unit. ● Distance the antenna from the equipment which causes the noise.
Broadcast stations cannot be selected automatically.	● Weak radio waves.	● Change the FM antenna to an outdoor antenna with multiple elements. (P. 10)

OTHER

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Symptom	Cause	Remedy
No sound from rear or center speakers.	● Settings are incorrect. ● Rear or Center level is turned down. ● The REAR or CENTER speaker is disconnected.	● Refer to page 36 and set. ● Raise the level. ● Connect. (P. 10, 11)
Sound is produced from other functions, but no sound from LD player or DVD player.	● SIGNAL SELECT is set to other input signal than connected device.	● Set the SIGNAL SELECT to AUTO.
No remote control operation.	● The remote control unit batteries have worn out. ● Too great of a distance. Bad angle. ● There is an obstacle in the path blocking signals. ● Strong light such as fluorescent light is shining onto the unit's remote control signal light-receiving window.	● Replace the batteries. (P. 5) ● Operate within 7m, 30 deg. from the left and right. ● Remove the obstacle or operate from somewhere else. ● Avoid direct exposure of the remote control light-receiving window to the light.

If the unit does not operate normally due to external effects such as static electricity, press the RESET button on the front panel or disconnect the power plug from the outlet and insert again to return to the normal operating conditions.

LIST OF MANUFACTURER CODES

Device	Manufacturer	Manufacturer Code	Device	Manufacturer	Manufacturer Code
DVD	TOSHIBA	330	TAPE	OPTIMUS	800
	PIONEER	329		PIONEER	800
LD	TOSHIBA	100	CD	SONY	301,316,317,318
	SONY	101		TECHNICS	304,326
	PANASONIC	105,106		KENWOOD	310,321,311
	KENWOOD	103		DENON	309
	PHILIPS	104		RCA	302,319,313
	MITSUBISHI	100		PHILIPS	312,322
	RCA	107		YAMAHA	315,314,328
	PIONEER	100		JVC	303
		102 (DVD code)		TEAC	305,306,327,324,325
SAT	TOSHIBA	204		ONKYO	320,308,307
	RCA	201,203		MARANTZ	323,312,324
	SONY	202		SANYO	313
	PIONEER	200		OPTIMUS	300
VCR	TOSHIBA	405,409,426		PIONEER	300
	RCA	401,406,408,414,405,413,411 415	TV	TOSHIBA	605,602,626,621
				RCA	601,610,615,616,617,618
	ZENITH	403,404,417		ZENITH	603,620
	MAGNAVOX	414,408,426,403		MAGNAVOX	607,610,603,612,629
	FISHER	410,426,412,427,425,420		GE	601,608,607,610,617,602,628 618
	PANASONIC	408,432,433			
	JVC	428,430,429,408,414,431,407		PANASONIC	608,622,607
	HITACHI	408,401,406,436,434		SONY	604
	SONY	416,417,404,408		MITSUBISHI	609,610,602,621
	MITSUBISHI	409,420,421,422,423,424,408 407		HITACHI	606,610,624,625,618
				JVC	613,623
	SANYO	410,412,425,435		SHARP	602,619,627
	SHARP	402,418,419		SANYO	621,614
	GOLDSTAR	411,409		PHILIPS	607
	OPTIMUS	408,432,433,402,418,419		GOLDSTAR	610,623,621,602
	PIONEER	400		RADIO SHACK	610,623,621,602
TAPE	SONY	801,806		PIONEER	600
	TECHNICS	803	CATV	JERROLD	711,701,702,712,704,713,703 714,716,715
	KENWOOD	804,807		S.A.	705,706,708,709
	TEAC	805		ZENITH	707,717,710
	DENON	810		PIONEER	700
	ONKYO	809,808			
	YAMAHA	811,812			
	JVC	802			
	FISHER	813			

OTHER

SPECIFICATIONS

Amplifier Section

Continuous average power output of 100 watts* per channel, min., at 8 ohms, from 20 Hz to 20,000 Hz with no more than 0.09 %** total harmonic distortion (front).

Continuous Power Output
Front .... 100 W + 100 W (1 kHz, 0.8 %, 8 Ω)
Center .... 100 W (1 kHz, 0.8 %, 8 Ω)
Rear .... 100 W (1 kHz, 0.8 %, 8 Ω)

Input (Sensitivity/Impedance)
PHONO MM .... 2.8 mV/47 kΩ
LD/SAT, VCR/TAPE 1, TAPE 2, TV SOUND,
DVD/CD, VIDEO/AUX .... 200 mV/47 kΩ

Phono Overload Level (T.H.D. 0.1 %, 1kHz)
PHONO MM .... 100 mV

Frequency Response
PHONO MM .... 20 Hz to 20,000 Hz ± 0.3 dB
LD/SAT, VCR/TAPE 1, TAPE 2, TV SOUND,
DVD/CD, VIDEO/AUX .... 5 Hz to 100,000 Hz $^{+0}_{-3}$ dB

Output (Level/Impedance)
VCR/TAPE 1 REC, TAPE 2 REC .... 200 mV/2.2 kΩ

Tone Control
BASS .... ± 9 dB (100 Hz)
TREBLE .... ± 9 dB (10 kHz)

Signal-to-Noise Ratio (IHF, short circuited, A network)
PHONO MM .... 75 dB
LD/SAT, VCR/TAPE 1, TAPE 2, TV SOUND,
DVD/CD, VIDEO/AUX .... 97 dB

Signal-to-Noise Ratio [EIA, at 1 W (1kHz)]
PHONO MM .... 75 dB
LD/SAT, VCR/TAPE 1, TAPE 2, TV SOUND,
DVD/CD, VIDEO/AUX .... 80 dB

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

VIDEO Section

Input (Sensitivity/Impedance)
LD/SAT, VCR, DVD/CD, VIDEO/AUX .... 1 Vp-p/75 Ω
Output (Level/Impedance)
VCR REC, MONITOR TV .... 1 Vp-p/75 Ω
Frequency Response
LD/SAT, VCR, DVD/CD, VIDEO/AUX
→ MONITOR .... 5 Hz to 7 MHz $^{+0}_{-3}$ dB
Signal-to-Noise Ratio .... 55 dB
Cross Talk .... 55 dB

FM Tuner Section

Frequency Range .... 87.5 MHz to 108 MHz
Usable Sensitivity .... Mono: 11.2 dBf, IHF (1.0 µV/75 Ω)
50 dB Quieting Sensitivity .... Mono: 16.8 dBf
Stereo: 38.6 dBf
Signal-to-Noise Ratio .... Mono: 73 dB (at 85 dBf)
Stereo: 70 dB (at 85 dBf)
Distortion .... Stereo: 0.5 % (1kHz)
Alternate Channel Selectivity .... 60 dB (400 kHz)
Stereo Separation .... 40 dB (1 kHz)
Frequency Response .... 30 Hz to 15 kHz (± 1) dB
Antenna Input .... 75 Ω unbalanced

AM Tuner Section

Frequency Range ....
530 kHz to 1,700 kHz (10 kHz step)
Sensitivity (IHF, Loop antenna) .... 350 µV/m
Selectivity .... 25 dB
Signal-to-Noise Ratio .... 50 dB
Antenna .... Loop antenna

Miscellaneous

Power Requirements .... AC 120 V, 60 Hz
Power Consumption .... 280 W, 400 VA
In Standby Condition .... 2.5 W
AC Outlet SWITCHED .... 100 W (0.8 A) MAX
Dimensions .... 430 (W) × 160 (H) × 374 (D) mm
16-15/16 (W) × 6-5/16 (H) × 14-3/4 (D) in
Weight (without package) .... 9.4 kg (20 lb 12 oz)

Furnished Parts

FM Antenna 1
AM Loop Antenna 1
Dry Cell Batteries (AA/LR6) 2
Remote Control Unit 1
Owner's Manual 1
Sub instruction manual (Remote Control Unit) 1
Sub instruction manual [Dolby Digital (AC-3)] 1
Product Registration Card 1

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

Limited Warranty

Toshiba America Consumer Products, Inc. ("TACP") and Toshiba Hawaii Inc. ("THI") make the following limited warranties. These limited warranties extend to the original consumer purchaser or any person receiving this set as a gift from the original consumer purchaser and to no other purchaser or transferee.

Limited One (1) Year Warranty (Labor)

TACP and THI warrant this product against defects in materials or workmanship for a period of one year after the date of original retail purchase. During this period, TACP and THI will repair a defective product or part, without charge to you. You must deliver the entire product to an Authorized TACP/THI Service Station. You pay for all transportation and insurance charges for the product to and from the Service Station.

Limited One (1) Year Warranty of Parts

TACP and THI warrant the parts in this product against defects in materials or workmanship for a period of one year after the date of original retail purchase. During this period, TACP and THI will replace a defective part, without charge to you. You must deliver the entire set to an Authorized TACP/THI Service Station. You pay for all transportation and insurance charges for the set to and from the Service Station.

To Obtain Service

Should your product require service, return it to your retail dealer or an Authorized Service Station. In order to receive warranty service you will need to present your sales receipt showing place and date of original owner's retail purchase.

Owner's Manual

You should read the owner's manual thoroughly before operating this product.

Your Responsibility

The above warranties are subject to the following conditions:

(1) You must retain your bill of sale or provide other proof of purchase.
(2) You must notify an Authorized TACP/THI Service Station within thirty (30) days after you discover a defective product or part.
(3) All warranty servicing of this product must be made by an Authorized TACP/THI Service Station.
(4) These warranties are effective only if the product is purchased and operated in the U.S.A.
(5) You will be responsible for removal and installation of the product. Toshiba will pay for the cost of returning the repaired or replacement product to you within the United States.
(6) This warranty does not apply to any receiver that has been subjected to use in excess of its published power rating.

This warranty does not cover the cabinet or any appearance item (including user attached antennas), any damage to connected products, or any damage to the product resulting from alterations, accident, misuse or abuse or improper installation, subsequent damage from leaking, damaged or inoperative batteries or the use of batteries not conforming to those specified in the owner's instructions.

This warranty does not cover the cost of parts or labor, which would be otherwise provided without charge under this warranty, obtained from any source other than a Toshiba Authorized Service Station or other designated location. This warranty does not cover defects or damage caused by the use of unauthorized parts or labor, or from improper maintenance.

ALTERED, DEFACED OR REMOVED SERIAL NUMBERS VOID THIS WARRANTY.

Step-By-Step Procedures – How To Obtain Warranty Service

**IN THE EVENT A PROBLEM SHOULD DEVELOP WITH YOUR PRODUCT, PLEASE PROCEED AS FOLLOWS:**

(1) Refer to the troubleshooting guide in your owner's manual. This check list may help to solve your problem.
(2) Contact Toshiba toll free number (PH #: **800-631-3811**) and give product category and model number.
(3) Arrange for the delivery of the product to the Authorized TACP/THI Service Station. Products shipped to the Service Station must be insured and safely and securely packed, preferably in the original shipping carton, and a letter explaining the defect and also a copy of the bill of sale or other proof of purchase must be enclosed. All transportation and insurance charges must be prepaid by you.

IN THE CONTINENTAL UNITED STATES . . .
Should your unit require service or parts, CALL

Toll Free 1-800-631-3811

IMPORTANT: PACKING AND SHIPPING INSTRUCTIONS
When you send the product to a service center, we recommend you use the original carton box and packing material, then insert the original carton box containing the unit into another carton, using more packing material.
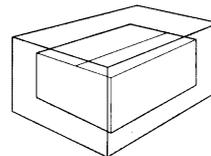
ALL WARRANTIES IMPLIED BY STATE LAW, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE EXPRESSLY LIMITED TO THE DURATION OF THE LIMITED WARRANTIES SET FORTH ABOVE. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. **WITH THE EXCEPTION OF ANY WARRANTIES IMPLIED BY STATE LAW AS HEREBY LIMITED, THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, GUARANTEES, AGREEMENTS AND SIMILAR OBLIGATIONS OF MANUFACTURER OR SELLER WITH RESPECT TO THE REPAIR OR REPLACEMENT OF ANY PRODUCT OR PARTS. IN NO EVENT SHALL TACP OR THI BE LIABLE FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES.** Some states do not allow the exclusion or limitation of incidental or consequential damages so the above limitation may not apply to you.

No person, agent, distributor, dealer, service station or company is authorized to change, modify or extend the terms of these warranties in any manner whatsoever. The time within which an action must be commenced to enforce any obligation of TACP and THI arising under this warranty or under any statute, or law of the United States or any state thereof, is hereby limited to one year from the date you discover or should have discovered, the defect. This limitation does not apply to implied warranties arising under state law. Some states do not permit limitation of the time within which you may bring an action beyond the limits provided by state law so the above provision may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

MANUFACTURED FOR
TOSHIBA AMERICA CONSUMER PRODUCTS, INC.

TOSHIBA

Dear Customer:

Selecting fine audio equipment such as the unit you've just purchased is only the start of your musical enjoyment. Now it's time to consider how you can maximize the fun and excitement your equipment offers. This manufacturer and the Electronic Industries Association's Consumer Electronics Group want you to get the most out of your equipment by playing it at a safe level. One that lets the sound come through loud and clear without annoying blaring or distortion—and, most importantly, without affecting your sensitive hearing.

Sound can be deceiving. Over time your hearing "comfort level" adapts to higher volumes of sound. So what sounds "normal" can actually be loud and harmful to your hearing. Guard against this by setting your equipment at a safe level BEFORE your hearing adapts.

To establish a safe level:
● Start your volume control at a low setting.
● Slowly increase the sound until you can hear it comfortably and clearly, and without distortion.

Once you have established a comfortable sound level:
● Set the dial and leave it there.

Taking a minute to do this now will help to prevent hearing damage or loss in the future. After all, we want you listening for a lifetime.

MAINTENANCE OF EXTERNAL SURFACES
● Use a polishing cloth or dry cloth to wipe off dust and dirt.
● When the surfaces are dirty, wipe with a soft cloth dipped in some neutral cleanser diluted five or six times with water, and wrung out well, and then wipe again with a dry cloth. Do not use furniture wax or cleaners.
● Never use thinners, benzine, insecticide sprays or other chemicals on or near this unit, since these will corrode the surfaces.

We Want You Listening For A Lifetime

Used wisely, your new sound equipment will provide a lifetime of fun and enjoyment. Since hearing damage from loud noise is often undetectable until it is too late, this manufacturer and the Electronic Industries Association's Consumer Electronics Group recommend you avoid prolonged exposure to excessive noise. This list of sound levels is included for your protection.

Decibel Level	**Example**
30	Quiet library, soft whispers
40	Living room, refrigerator, bedroom away from traffic
50	Light traffic, normal conversation, quiet office
60	Air conditioner at 20 feet, sewing machine
70	Vacuum cleaner, hair dryer, noisy restaurant
80	Average city traffic, garbage disposals, alarm clock at two feet.

THE FOLLOWING NOISES CAN BE DANGEROUS UNDER CONSTANT EXPOSURE

Decibel Level	**Example**
90	Subway, motorcycle, truck traffic, lawn mower
100	Garbage truck, chain saw, pneumatic drill
120	Rock band concert in front of speakers, thunderclap
140	Gunshot blast, jet plane
180	Rocket launching pad

Information courtesy of the Deafness Research Foundation.

Customer's Record
You will find the model number and serial number on the back of your AUDIO/VIDEO STEREO RECEIVER.
Record these numbers in the spaces provided below.
Refer to them whenever you call upon your TOSHIBA dealer regarding this product.

Model Number _____

Serial Number _____