



Before connecting, operating or adjusting this product, please read the instructions completely. Please keep this manual for future reference.

Operations in these instructions are described mainly using remote control, but you can do the operations on the main unit if the controls are the same.

# Panasonic®

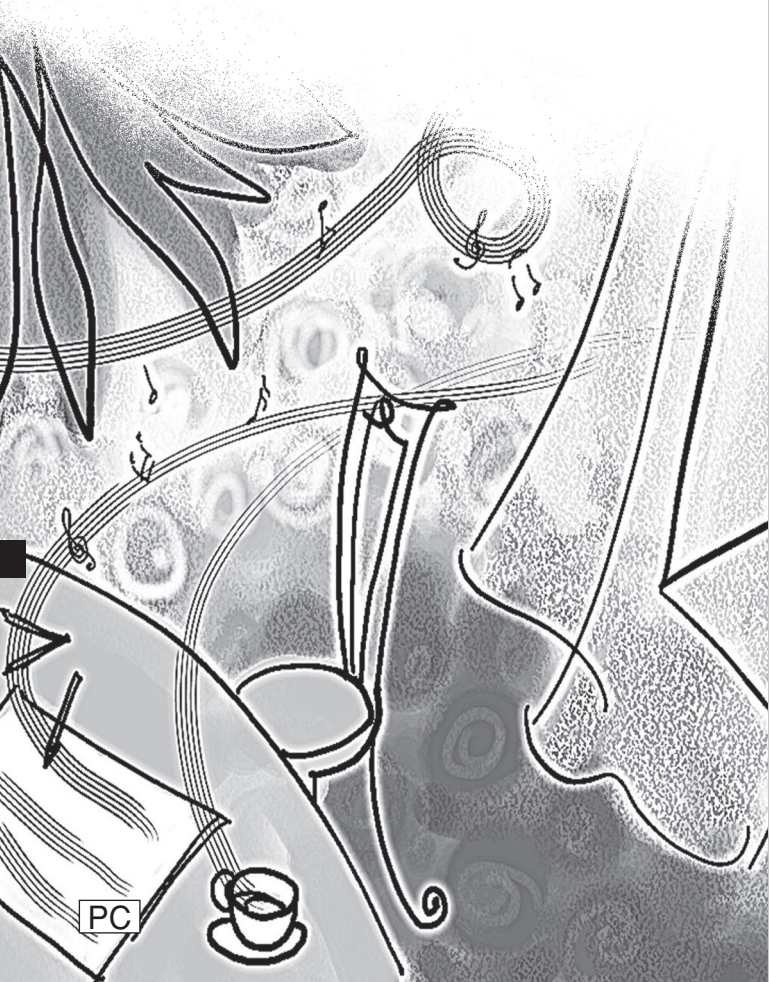
## Operating Instructions

### CD Stereo System

Model No. **SC-PM21**

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## Dear customer

Thank you for purchasing this product.

For optimum performance and safety, please read these instructions carefully.

These operating instructions are applicable to the following system.

<b>System</b>	<b>SC-PM21</b>
<b>Main unit</b>	<b>SA-PM21</b>
<b>Speakers</b>	<b>SB-PM21</b>

The model number and serial number of this product can be found on either the back or the bottom of the unit. Please note them in the space provided below and keep for future reference.

MODEL NUMBER \_\_\_\_\_  
SERIAL NUMBER \_\_\_\_\_

### User memo:

DATE OF PURCHASE \_\_\_\_\_  
DEALER NAME \_\_\_\_\_  
DEALER ADDRESS \_\_\_\_\_  
\_\_\_\_\_  
TELEPHONE NUMBER \_\_\_\_\_

### WARNING:

**TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK OR PRODUCT DAMAGE, DO NOT EXPOSE THIS APPARATUS TO RAIN, MOISTURE, DRIPPING OR SPLASHING AND THAT NO OBJECTS FILLED WITH LIQUIDS, SUCH AS VASES, SHALL BE PLACED ON THE APPARATUS.**

### CAUTION!

**THIS PRODUCT UTILIZES A LASER. USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE. DO NOT OPEN COVERS AND DO NOT REPAIR YOURSELF. REFER SERVICING TO QUALIFIED PERSONNEL.**

### CAUTION!

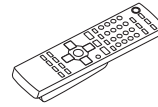
**DO NOT INSTALL OR PLACE THIS UNIT IN A BOOKCASE, BUILT-IN CABINET OR IN ANOTHER CONFINED SPACE. ENSURE THE UNIT IS WELL VENTILATED. TO PREVENT RISK OF ELECTRIC SHOCK OR FIRE HAZARD DUE TO OVERHEATING, ENSURE THAT CURTAINS AND ANY OTHER MATERIALS DO NOT OBSTRUCT THE VENTILATION VENTS.**

The socket outlet shall be installed near the equipment and easily accessible or the mains plug or an appliance coupler shall remain readily operable.

## Supplied accessories

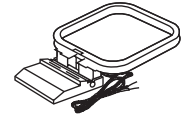
Use numbers indicated in parentheses when asking for replacement parts. (As of January 2005)

1 x Remote control



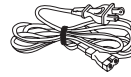
(N2QAJB000131)

1 x AM loop antenna



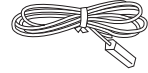
(N1DAAAA00001)

1 x AC power supply cord



(K2CB2CB00006)

1 x FM indoor antenna



(RSA0007-L)

2 x Remote control batteries



### CAUTION

**RISK OF ELECTRIC SHOCK  
DO NOT OPEN**



**CAUTION:** TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE SCREWS. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



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



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

### CAUTION

INVISIBLE LASER RADIATION  
WHEN OPEN, AVOID  
EXPOSURE TO BEAM.

IEC60825-1 / Class IIIb

### ATTENTION


RADIATION LASER LORSQUE  
OUVERT. ÉVITER TOUTE  
EXPOSITION AU FAISCEAU.

RQLV50003

Inside of product

# IMPORTANT SAFETY INSTRUCTIONS

Read these operating instructions carefully before using the unit. Follow the safety instructions on the unit and the applicable safety instructions listed below. Keep these operating instructions handy for future reference.

- 1) Read these instructions.
- 2) Keep these instructions.
- 3) Heed all warnings.
- 4) Follow all instructions.
- 5) Do not use this apparatus near water.
- 6) Clean only with dry cloth.
- 7) Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- 8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- 9) Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- 10) Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- 11) Only use attachments/accessories specified by the manufacturer.
- 12) Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over. 
- 13) Unplug this apparatus during lightning storms or when unused for long periods of time.
- 14) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

## Product Service

- 1. Damage requiring service**—The unit should be serviced by qualified service personnel if:
  - (a) The AC power supply cord or the plug has been damaged; or
  - (b) Objects or liquids have gotten into the unit; or
  - (c) The unit has been exposed to rain; or
  - (d) The unit does not operate normally or exhibits a marked change in performance; or
  - (e) The unit has been dropped or the cabinet damaged.
- 2. Servicing**—Do not attempt to service the unit beyond that described in these operating instructions. Refer all other servicing to authorized servicing personnel.
- 3. Replacement parts**—When parts need replacing ensure the servicer uses parts specified by the manufacturer or parts that have the same characteristics as the original parts. Unauthorized substitutes may result in fire, electric shock, or other hazards.
- 4. Safety check**—After repairs or service, ask the servicer to perform safety checks to confirm that the unit is in proper working condition.

The servicer will require all components to service your system. Therefore, should service ever be necessary, be sure to bring the entire system.

### Product information

For product information or assistance with product operation: Contact the Panasonic Canada Inc. Customer Care Centre at 905-624-5505, or visit the website ([www.panasonic.ca](http://www.panasonic.ca)), or an authorized Servicentre closest to you.

## Listening caution



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.

We recommend that you avoid prolonged exposure to excessive noise.

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.

## Getting started

### Step 1 - Making the connections

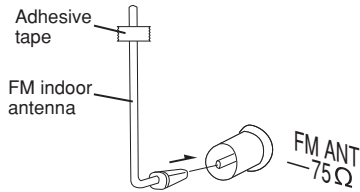
Connect the AC power supply cord only after all other connections have been made.

#### Preparation

Twist and pull off the vinyl tip of the speaker cords.



#### 1 Connect the FM indoor antenna.



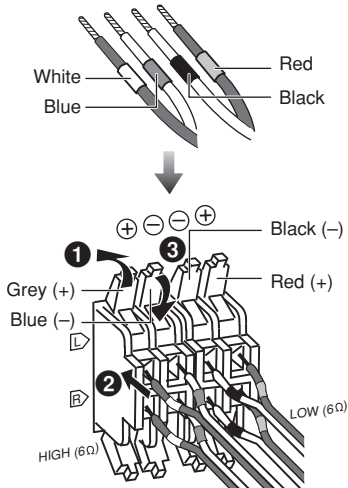
Tape the antenna to a wall or column, in a position with least amount of interference.

#### 2 Connect the AM loop antenna.



Stand the antenna up on its base. Keep loose antenna cord away from other wires and cords.

#### 3 Connect the speaker cables.



Cords with white and blue tags are for high frequency. Cords with red and black tags are for low frequency.

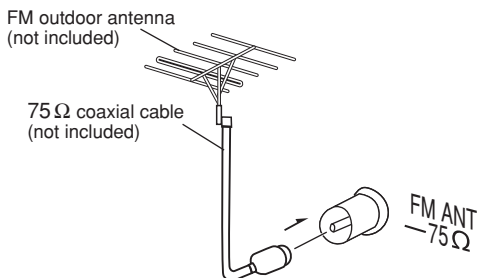
**Incorrect connection can damage the unit.**

#### 4 Connect the AC power supply cord.

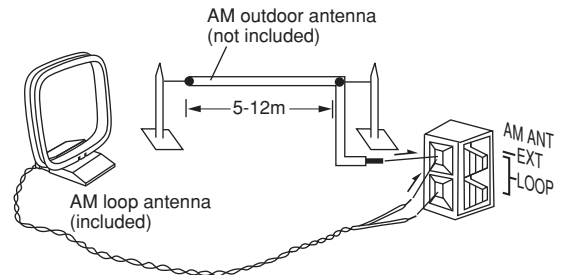
- The included AC power supply cord is for use with this unit only. Do not use it with other equipment.

### Optional antenna connections

#### FM outdoor antenna

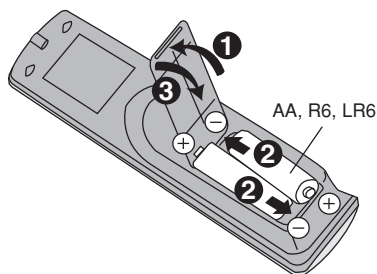


#### AM outdoor antenna



- Never use an outdoor antenna during a lightning storm.
- You can connect the FM outdoor antenna for better reception. Please consult your dealer for installation.
- Disconnect the FM indoor antenna if an FM outdoor antenna is installed.
- Connect the AM outdoor antenna without removing the AM loop antenna. Run 5 to 12m vinyl-covered wire horizontally along a window or other convenient location.

## Step 2 - Inserting batteries into the remote control



### ■ Batteries

- Insert so the poles (+ and -) match those in the remote control.
- Remove if the remote control is not going to be used for a long period of time. Store in a cool, dark place.
- Do not use rechargeable type batteries.
- Mishandling of batteries can cause electrolyte leakage which can damage items the fluid contacts and may cause a fire.

### Do not:

- mix old and new batteries.
- use different types at the same time.
- heat or expose to flame.
- take apart or short circuit.
- attempt to recharge alkaline or manganese batteries.
- use batteries if the covering has been peeled off.

### ■ Use

- Aim at the remote control sensor, avoiding obstacles, at a maximum range of 7 m (23 feet) directly in front of the unit. Refer to page 6 for remote control signal sensor position.

## Step 3 - DEMO function



STOP ■, -DEMO

When the unit is first plugged in, a demonstration of its functions may be shown on the display. If the demo setting is off, you can show a demonstration by selecting "DEMO ON".

### Press and hold [STOP ■, -DEMO].

The display change each time the button is held down.

→ DEMO OFF → DEMO ON →

While in standby mode, select "DEMO OFF" to reduce power consumption.

## Placement of speakers



Speakers are designed identically so that no left or right channel orientation is necessary.

- These speakers do not have magnetic shielding. Do not place them near televisions, personal computers or other devices easily influenced by magnetism.
- To avoid damage to the speakers, do not touch the speaker cones if you have taken the nets off.

### Note

- Keep your speakers at least 10 mm ( $13/32$ " ) away from the system for proper ventilation.

### Use only the supplied speakers.

- The combination of the main unit and speakers provide the best sound. Using other speakers can damage the unit and sound quality will be negatively affected.

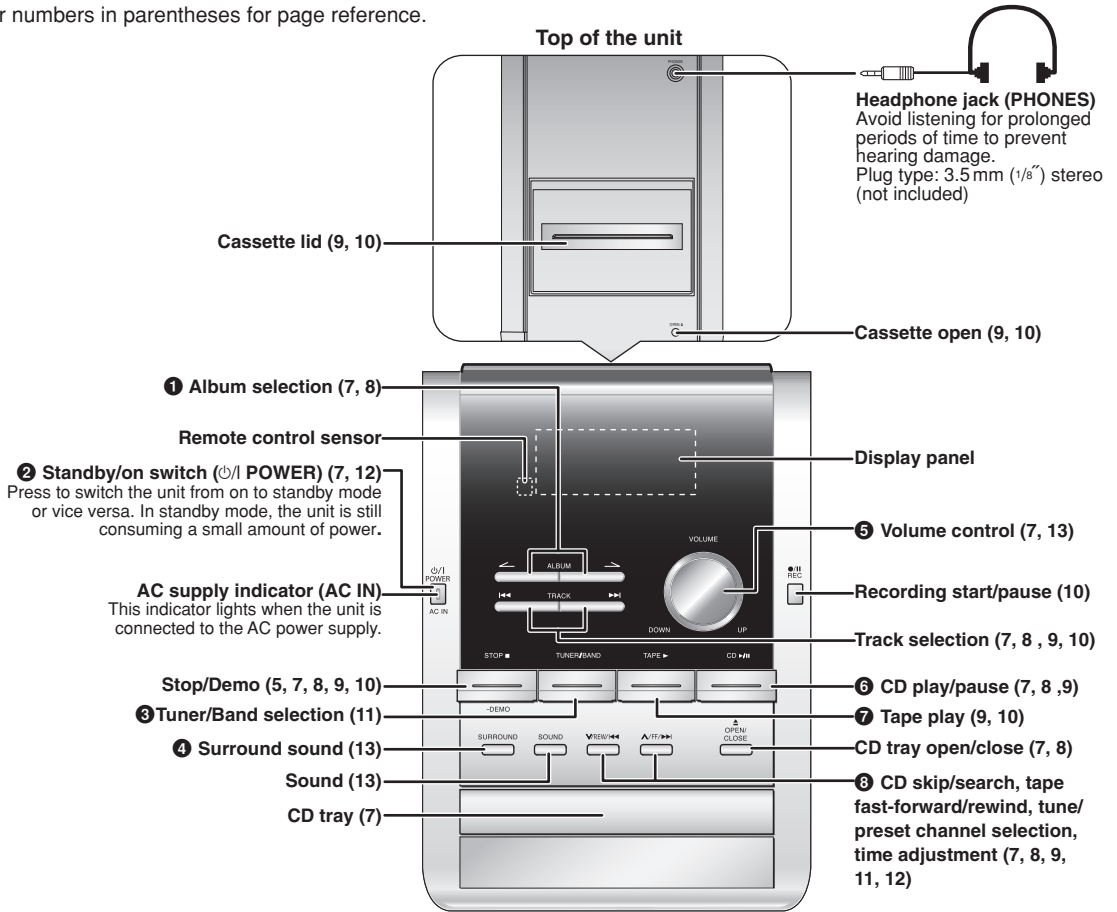
### ⚠ Caution

- Use the speakers only with the recommended system. Failure to do so can damage the amplifier and speakers, and can cause fire. Consult a qualified service person if damage occurs or if a sudden change in performance is apparent.
- Do not attach these speakers to walls or ceilings.

# Overview of controls

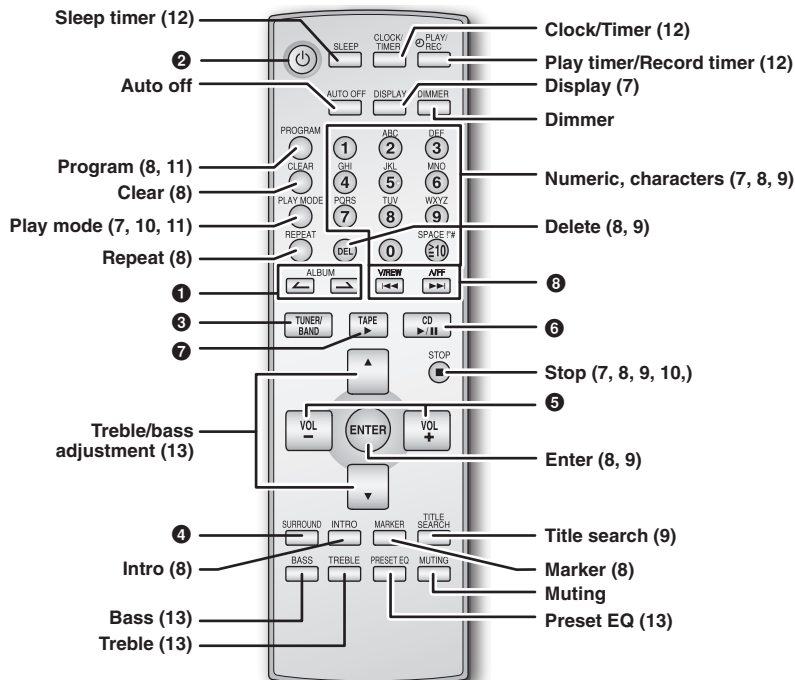
## Main unit

Refer numbers in parentheses for page reference.



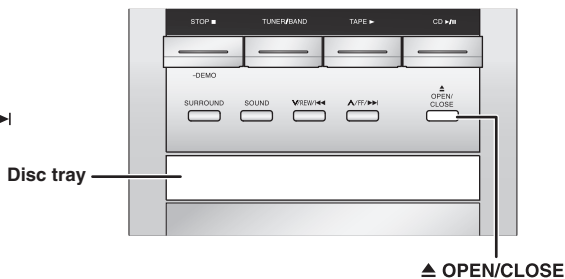
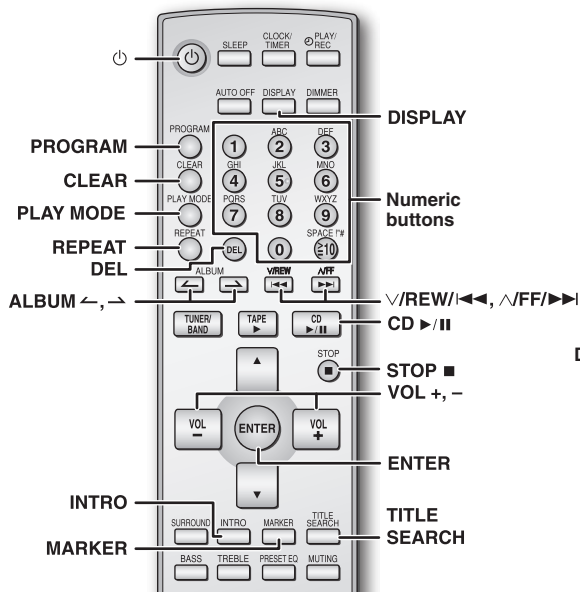
## Remote control

Buttons such as 3 function the same as the controls on the main unit.



- AUTO OFF** This function allows you to turn off the unit in **CDs or tape** mode only after left unused for 10 minutes.
- The setting is maintained even if the unit is turned off.
- DIMMER** To dim the display panel.
- MUTING** To mute the sound
- Press the button to activate.
  - Press again to cancel.

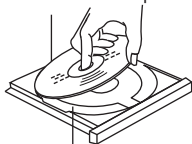
# CDs and MP3 – Play



## Playing a disc

- 1 Press [POWER] to turn the unit on.
- 2 Press [OPEN/CLOSE] to open the disc tray and then load the disc. Press again to close the tray.

Label must face upward



Disc tray

- 3 Press [CD] to start play.
- 4 Adjust the volume.

## Other basic operations

To	Action
stop the disc	Press [STOP].
pause play	Press [CD]. Press again to resume play.
skip tracks	Press [REVERSE] or [SKIP].
search through tracks (CD-DA Only)	Press and hold [REVERSE] or [SKIP] during play or pause.
skip album (MP3 Only)	Press [ALBUM] in the play mode. Press [ALBUM] once and then the numeric buttons in the stop mode.

## Play Mode function

- 1 Press [CD].
- 2 Press [PLAY MODE] to select the desired mode.

Mode	To play
1-TRACK 1TR	one selected track on the disc. Press the numeric buttons to select the track.
1-ALBUM 1ALBUM (MP3 only)	one selected album on the disc. Press [ALBUM] to select the album.
RANDOM RND	a disc randomly.
1-ALBUM RANDOM 1ALBUM RND (MP3 only)	all tracks in one selected album randomly. Press [ALBUM] to select the album.

- During RANDOM or 1-ALBUM RANDOM play, you cannot skip to tracks which have been played.
- During CD-DA RANDOM play, you can search backward or forward only within the current track.

## CD display

DISPLAY This function allows you to display the information of the current track.

Press [DISPLAY] repeatedly during play or pause mode.

CD-DA

Elapsed play time ↔ Remaining play time

MP3

Elapsed time → Album name → Track name  
ID3 (Artist) ← ID3 (Track) ← ID3 (Album) ←

- Maximum number of displayable characters: 30
- This unit supports ver. 1.0 & 1.1 ID3 tags. Text data that is not supported will not be displayed.
- ID3 is a tag embedded in MP3 track to provide information about the track.

## Advanced CDs and MP3 functions

### Direct access play

This function allows you to start play from a specific track.

CD-DA

Press the numeric buttons to select and play your desired track.

MP3

- 1 Press [ALBUM ← or →] to select the album.
- 2 Press [V/REW/◀◀] or [V/FF/▶▶] once and then the numeric buttons to select and play your desired track.

For two-digit track, press [≥10] once then the two digits.  
For three-digit track, press [≥10] twice then the three digits.

- This function does not work during any random/program mode.

### Repeat play

CD-DA

MP3

REPEAT You can repeat program play or other selected play mode.

Press [REPEAT] before or during play.  
“REPEAT ON” and “☑” are displayed.

To cancel

Press [REPEAT] again.

“REPEAT OFF” is displayed and “☑” is cleared.

### Marking a track

CD-DA

MP3

MARKER Enable you to mark one track on the disc loaded so that you can directly play the track later.

During play, press and hold the [MARKER] until “STORING” blinks on the display to mark your favorite track.

Press [MARKER] during play or stop mode to recall and play a marked track.

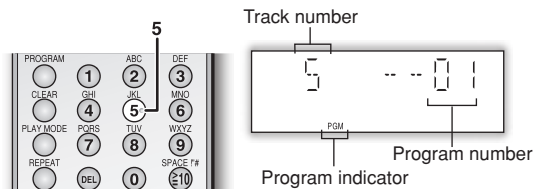
- The marker memory is cleared when you open the CD tray.
- This function does not work during any random/program mode.

### Program play

PROGRAM This function allows you to program up to 24 tracks.

CD-DA

- 1 Press [CD ▶/II] and then [STOP ■].
- 2 Press [PROGRAM].
- 3 Press the numeric buttons to select your desired track.  
Repeat this step to program other tracks.  
Example:

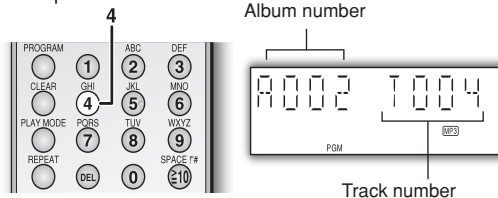


- 4 Press [CD ▶/II] to start play.

MP3

- 1 Press [CD ▶/II] and then [STOP ■].
- 2 Press [PROGRAM].
- 3 Press [ALBUM ← or →] to select your desired album.
- 4 Press [V/FF/▶▶] once and then numeric buttons to select your desired track.

Example:



- 5 Press [ENTER] to store the program.  
Repeat steps 3 to 5 to program other tracks.
- 6 Press [CD ▶/II] to start play.

To	Action
cancel program mode	Press [PROGRAM] in the stop mode.
replay the program	Press [PROGRAM] then [CD ▶/II].
check program contents	Press [V/REW/◀◀] or [V/FF/▶▶] when “PGM” is displayed in the stop mode. To check while programming, press [PROGRAM] twice after “PGM” appears, then press [V/REW/◀◀] or [V/FF/▶▶].
add to the program	Repeat step 3 in the stop mode for CD-DA. Repeat steps 3 to 5 in the stop mode for MP3.
clear the last track	Press [DEL] in the stop mode.
clear all programmed tracks	Press [CLEAR] in the stop mode. “PGM CLEAR” is displayed.

- When you try to programme more than 24 tracks “PGM FULL” appears.
- During program play for CD-DA, you can search backward or forward only within the current track.
- The program memory is cleared when you open the CD tray.

### INTRO function (Album scan)

MP3

INTRO This function allows you to find an album by listening to the first track of all albums in the current disc for 10 seconds each.

- 1 Press [CD ▶/II] and then [STOP ■].
- 2 Press [INTRO] to start the intro function.
- 3 While your desired album is playing, press [CD ▶/II].  
Intro mode cancelled and the playback continues.

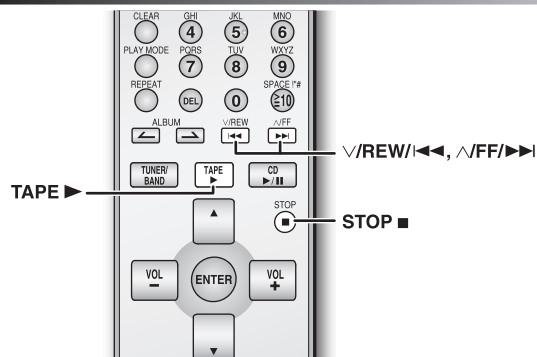
INTRO function is cancelled after playing the first track in the last album.

To stop during the process, press [INTRO] or [STOP ■].

- This function does not work during any random/program mode.



## Cassette tape – Play



## Album/Track title search

MP3

**TITLE SEARCH** Enable you to search your desired album or track.

- 1 Press [CD ►/II] and then [STOP ■].
- 2 For album title search, press [TITLE SEARCH] once. For track title search, press [TITLE SEARCH] twice.
- 3 Press the numeric buttons repeatedly to select your desired character then press [∨/FF/►►] to key in the next character.
  - You can enter up to 9 characters.
  - To edit, press [∨/REW/◄◄] or [∨/FF/►►] to revise any characters.
  - To delete, move the cursor over the character and then press [DEL].

Numbered buttons	Characters	Numbered buttons	Characters
1	1	6	M N O 6
2	A B C 2	7	P Q R S 7
3	D E F 3	8	T U V 8
4	G H I 4	9	W X Y Z 9
5	J K L 5	0	0
≥10	space !"# \$ % & '()*+,- ./:;=?_ II		

- 4 Press [ENTER]. Press [∨/REW/◄◄] or [∨/FF/►►] to search for previous or next match.
- 5 Press [CD ►/II] to start play from the album/track found.
  - "NOT FOUND" is displayed when there is no match.
  - This function does not work during any random/program mode.

### NOTE on CDs

- This unit can access up to 99 tracks.
- Choose CD with this mark.



- This unit can play MP3 files and CD-DA format audio CD-R/RW that have been finalized.
- It may not be able to play some CD-R/RW due to the condition of the recording.
- Do not use irregular shaped disc.
- Do not use disc with labels and stickers that are coming off or with adhesive exuding from under labels and stickers.
- Do not attach extra labels or stickers on the disc.
- Do not write anything on the CD.

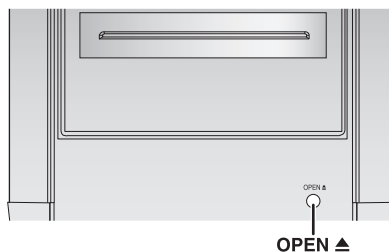
### NOTE on MP3

- Files are treated as tracks and folders are treated as albums.
- This unit can access up to 999 tracks, 255 albums and 20 sessions.
- Disc must conform to ISO9660 level 1 or 2 (except for extended formats).
- To play in a certain order, prefix the folder and file names with 3-digits numbers in the order you want to play them.

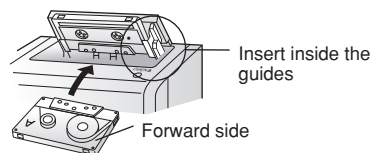
MPEG Layer-3 audio decoding technology licensed from Fraunhofer IIS and Thomson multimedia.

## Basic play

- 1 Press [OPEN ▲] on top of the unit.



- 2 Insert a cassette.



- 3 Close the lid by hand.

- 4 Press [TAPE ►] to start play. To play the other side of the cassette, turn the cassette over.

To	Action
stop tape playback	Press [STOP ■].
start one touch play	Press [TAPE ►] when the unit is OFF with the cassette loaded.
fast-forward and rewind	Press [∨/REW/◄◄] or [∨/FF/►►] in the stop mode.

## TPS (Tape Program Sensor)

This function enables you to search the beginning of a track, up to a maximum of 9.

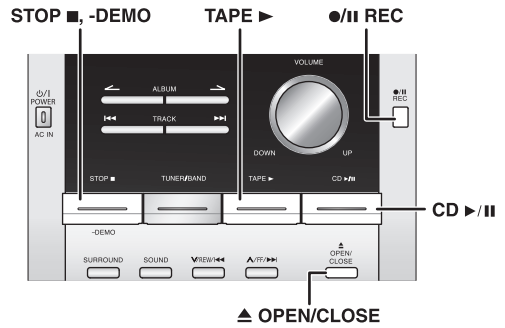
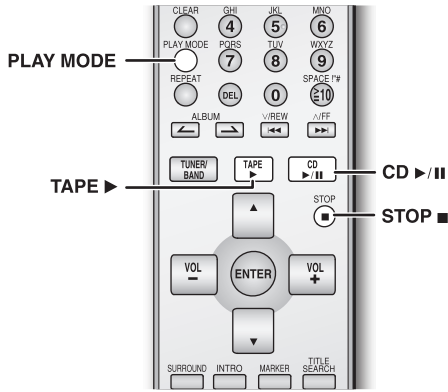
Press [∨/REW/◄◄] or [∨/FF/►►] during play.

Play resumes from the track found.

TPS may not function properly with:

- Short silent parts
- Noise occurs between tunes
- Silent parts found within tunes

# Cassette tape – Record



## Before recording

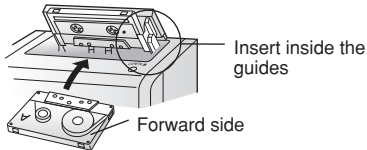
### Preparation:

Wind up the leader tape so that recording can begin immediately.

- Use normal position tapes.
- High position and metal position tapes can be used, but this unit will not be able to record or erase them correctly.

## Recording CDs

- 1 Insert the cassette to be recorded on.



- 2 Press [**▲ OPEN/CLOSE**] to insert the CD. Press again to close.
- 3 Press [**CD ►/||**] and then [**STOP ■, -DEMO**].
- 4 Press [**●/|| REC**] to start recording.

## Recording specific CDs or tracks

- 1 Press [**CD ►/||**] and then [**STOP ■, -DEMO**].
- 2 Press [**PLAY MODE**] to select your desired mode (refer page 7).
- 3 Press [**●/|| REC**] to start recording.

## Recording programmed tracks

- 1 Program the tracks you want (refer page 8).
- 2 Press [**●/|| REC**] to start recording.

## Recording the radio

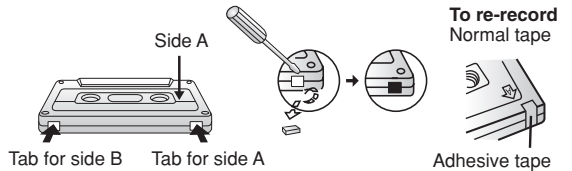
- 1 Insert the cassette to be recorded on.
- 2 Tune to the required station (refer page 11).
- 3 Press [**●/|| REC**] to start recording.

## Other basic operations

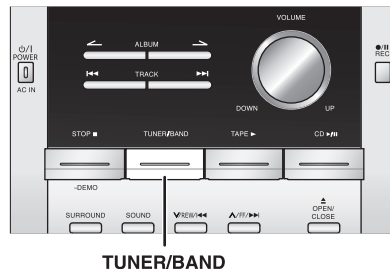
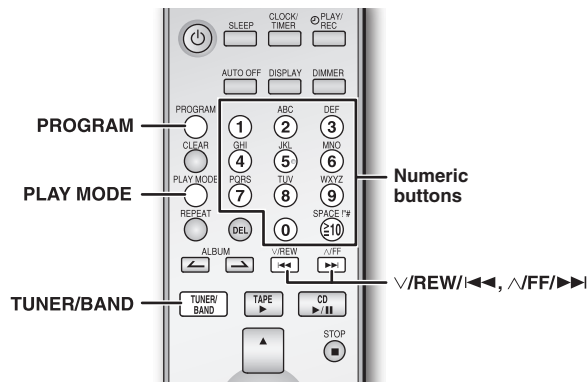
To	Action
erase a recorded sound	1) Insert the cassette to be recorded on. 2) Press [ <b>TAPE ►</b> ] and then [ <b>STOP ■</b> ]. 3) Press [ <b>●/   REC</b> ].
stop recording	Press [ <b>STOP ■</b> ].
stop recording temporarily	1) Press [ <b>●/   REC</b> ]. 2) Press again to resume recording.
record on the other side of the tape	Turn the cassette over and press [ <b>●/   REC</b> ].

## Erasure prevention

The illustration shows how to remove the tabs to prevent recording. To record on the tape again, cover as shown.



## Radio – Tune



### Manual tuning

- 1 Press [TUNER/BAND] to select “FM” or “AM”.
- 2 Press [PLAY MODE] to select “MANUAL”.
- 3 Press [√/REW/◀◀] or [√/FF/▶▶] to select the frequency of the required station.



- **ST** is displayed when a stereo FM broadcast is being received.

#### To tune automatically

Press [√/REW/◀◀] or [√/FF/▶▶] for a moment until the frequency starts changing rapidly. The unit begins auto tuning, stopping when it finds a station.

- Auto tuning may not function when there is excessive interference.
- To cancel auto tuning, press [√/REW/◀◀] or [√/FF/▶▶] once again.
- Sound is momentarily interrupted if you load or unload tapes while listening to an AM broadcast.

### To improve FM sound quality

Press and hold [PLAY MODE] to display “MONO”

#### To cancel

Press and hold [PLAY MODE] again until “MONO” disappear.

- MONO is also cancelled if the frequency is changed.
- Turn off “MONO” for normal listening.

### Memory preset

Up to 15 stations each can be set in the FM and AM bands.

#### Preparation

Press [TUNER/BAND] to select “FM” or “AM”.

### Automatic presetting

Press and hold [PROGRAM] to start presetting.

### Manual presetting

- 1 Press [PLAY MODE] to select “MANUAL”.
- 2 Press [√/REW/◀◀] or [√/FF/▶▶] to tune to the required station.
- 3 Press [PROGRAM].
- 4 Press numeric buttons to select a channel.
  - The station occupying a channel is erased if another station is preset in that channel.
- 5 Repeat steps 2 to 4 to preset more stations.

### Selecting a preset station

Press numeric buttons to select the channel.

- For channels 10 to 15 press [≥10], then the two digits.

OR

- 1 Press [PLAY MODE] to select “PRESET”.
- 2 Press [√/REW/◀◀] or [√/FF/▶▶] to select the channel.

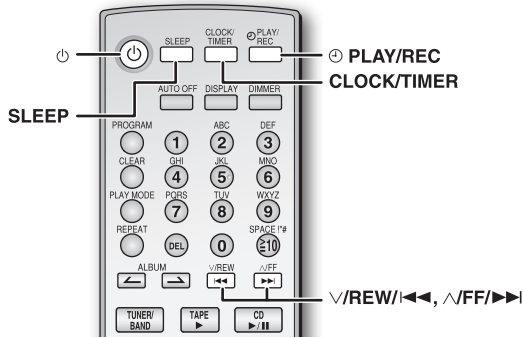
### FM allocation setting

- This system can also receive FM broadcasts allocated in 0.1 MHz steps.

#### To change the step to 0.1 MHz

- 1 Press [TUNER/BAND] to select “AM”.
- 2 Press and hold [TUNER/BAND].
  - After a few seconds the display changes to a flashing display of the current minimum frequency.
- 3 Continue to hold down [TUNER/BAND].
  - When the minimum frequency changes, release the button. To return to the original step, repeat the above steps.
  - After changing the setting, previously preset frequency will be cleared.

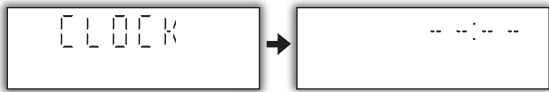
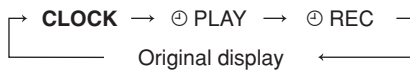
# Timer



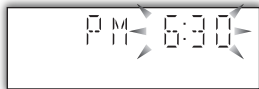
## Setting the clock

This is a 12-hour clock.

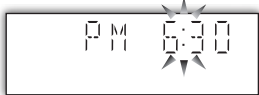
- 1 Press **[CLOCK/TIMER]** to select "CLOCK".  
Each time you press the button:



- 2 Within 5 seconds, press **[V/REW/◀◀]** or **[V/FF/▶▶]** to set the time.



- 3 Press **[CLOCK/TIMER]** again to confirm.



### Displaying the clock

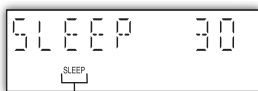
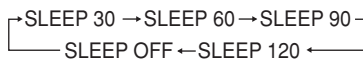
Press **[CLOCK/TIMER]** to display the clock for few seconds.

- The clock may lose or gain some time over a period. Readjust if necessary.

## Using the sleep timer

This function enables you to turn off the unit automatically after the set time.

Press **[SLEEP]** to select your desired time.



Sleep timer indicator

### To cancel

Press **[SLEEP]** to select "SLEEP OFF".

### Changing the remaining time

Press **[SLEEP]** to show the time and press **[SLEEP]** again to select your desired time.

- The play and sleep timer or the record and sleep timer can be used together.
- The sleep timer always has priority. Be sure not to overlap timer settings.

## Using the play or record timer

You can set the timer to come on at a certain time to wake you up (play timer) or to record from the radio (record timer).

### Preparation

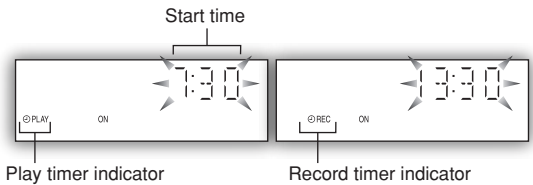
Turn the unit on and set the clock.

Timer	Action
Play timer	Prepare the music source you want to listen to; cassette, CD or radio, and set the volume.
Record timer	Check the cassette's erasure prevention tabs (refer page 10), insert the tape and tune to the radio station (refer page 11).

- 1 Press **[CLOCK/TIMER]** to select your desired timer.  
Each time you press the button:

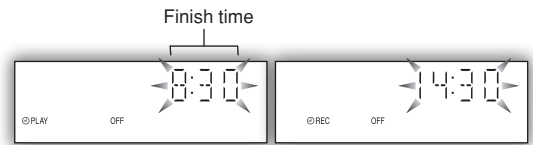


- 2 Within 5 seconds, press **[V/REW/◀◀]** or **[V/FF/▶▶]** to set the starting time.



- 3 Press **[CLOCK/TIMER]** to confirm.

- 4 Repeat steps 2 to 3 to set the finishing time.



### To activate the timer

- 5 Press **[◉PLAY/REC]** to turn on your desired timer.



- 6 Press **[⏻]** to turn off the unit.

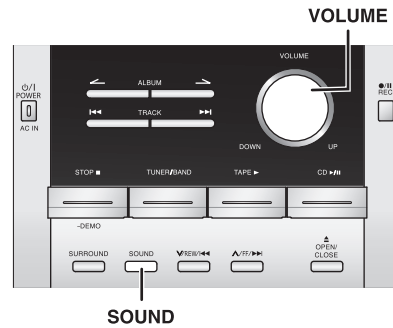
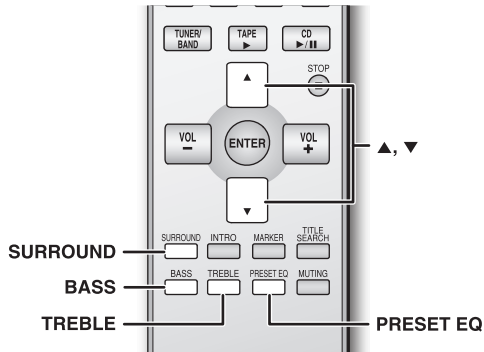
The unit must be off for the timers to operate.

## Other basic operations

To	Action
change the settings	Repeat steps 1 to 4 and 6 above.
change the source or volume	① Press <b>[◉PLAY/REC]</b> to clear the timer indicator from the display. ② Make changes to the source or volume. ③ Do steps 5 to 6 as above.
check the settings (when the unit is on or in standby mode)	Press <b>[CLOCK/TIMER]</b> repeatedly to select <b>[◉PLAY]</b> or <b>[◉REC]</b> .
cancel	Press <b>[◉PLAY/REC]</b> to clear the timer indicators from the display.

- Play timer and record timer cannot be used together.
- The play timer will start at the preset time and volume level you preset.
- The timer comes on at the set time everyday if the timer is on.
- The unit must be in the standby mode for the timer to function.
- If you turn the unit off and on again while a timer is functioning, the finish time setting will not be activated.

# Sound Adjustment



## Selecting sound effects

You can change the sound effect by selecting Preset EQ or adjusting the bass or treble effect.

### Preset EQ

Press [PRESET EQ] repeatedly to select your desired setting.

HEAVY → CLEAR → SOFT → VOCAL → EQ-OFF

OR

To select Preset EQ using the main unit:

- 1 Press and hold [SOUND] to select "PRESET EQ".  
Each time you press and hold the button:

PRESET EQ ↔ MANUAL EQ

- 2 Press [SOUND] repeatedly to select your desired setting.

Setting	Effect
HEAVY	Adds punch to rock
CLEAR	Clarifies higher frequencies
SOFT	For background music
VOCAL	Adds gloss to vocal
EQ-OFF	No effect

## Bass or treble

Enable you to enjoy the lower or higher pitch sound.

- 1 Press [BASS] or [TREBLE] to select your desired setting.

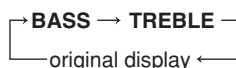
Setting	Effect
BASS	For lower pitch sound
TREBLE	For higher pitch sound

- 2 Press [▼] or [▲] to adjust the level.

OR

To select bass or treble using the main unit:

- 1 Press and hold [SOUND] to select "MANUAL EQ".
- 2 Press [SOUND] to select bass or treble.  
Each time you press the button:



- 3 Turn the [VOLUME] up or down to adjust the bass or treble level.

• The tone level can be varied within -5 to +5.

## Enjoying surround sound

Enable you to add natural width and depth to the stereo sound.

To activate

Press [SURROUND] to display "■ ■ ■ ■ ■ ■ ■ ■" indicator.

To cancel

Press [SURROUND] again to clear "■ ■ ■ ■ ■ ■ ■ ■" indicator.

- Surround sound is less discernible when listening through headphones.
- If interference in FM stereo reception increases, cancel the surround sound effect.

## Troubleshooting guide

Before requesting service, make the following checks. If you are in doubt about some of the check points, or if the remedies indicated in the chart do not solve the problem, refer to the “Product information” on page 3.

### Common problems

No sound.	Turn the volume up. The speaker cords may be shorted. Turn the unit off, check and correct the connections and turn the unit on (refer page 4).
Sound is unfixd, reversed or comes from one speaker only.	Check the speaker connections (refer page 4).
Humming heard during play.	An AC power supply cord or fluorescent light is near the cables. Keep other appliances and cords away from this unit's cables.
“ERROR” is displayed.	Incorrect operation performed. Read the instructions and try again.
“- -: - -” appears on the display.	You plugged the AC power supply cord in for the first time or there was a power failure recently. Set the time (refer page 12).
“F76” is displayed.	Check and correct the speaker cord connections (refer page 4). If this does not fix the problem, there is a power supply problem. Consult the dealer.

### Listening to the radio

Noise is heard. The stereo indicator flickers or doesn't light. Sound is distorted.	Use an outdoor antenna (refer page 4).
A beat sound is heard.	Turn the TV off or separate it from the unit.
A low hum is heard during AM broadcast.	Separate the antenna from other cables and cords.

### When there is a television set nearby

The picture on the TV disappears or stripes appear on the screen.	The location and orientation of the antenna are incorrect. If you are using an indoor antenna, change to an outdoor antenna (refer page 4). The TV antenna wire is too close to the unit. Separate the antenna wire of the TV set from the unit.
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### Using the cassette deck

Recording is not possible.	If the erasure prevention tabs have been removed, cover the holes with adhesive tape (refer page 10).
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### Playing discs

The display is wrong or play won't start.	The disc may be upside down (refer page 7). Wipe the disc. Replace the disc if it is scratched, warped, or non-standard. Condensation may have formed inside the unit due to a sudden change in temperature. Wait about an hour for it to clear and try again.
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### The remote control

Remote control doesn't work.	Check that the batteries are inserted correctly (refer page 5). Replace the batteries if they are worn.
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## Specifications

### AMPLIFIER SECTION

<b>FTC Output Power both channel driven</b>	
<b>10% Total harmonic distortion</b>	
<b>20 Hz–3.5 kHz</b>	
(Low channel)	15 W per channel (6 Ω)
<b>3.5 kHz–20 kHz</b>	
(High channel)	5 W per channel (6 Ω)
<b>RMS Output Power both channel driven</b>	
<b>10% total harmonic distortion</b>	
<b>1 kHz</b>	
(Low channel)	15 W per channel (6 Ω)
<b>8 kHz</b>	
(High channel)	5 W per channel (6 Ω)
<b>Total Bi-Amp power</b>	20 W per channel
<b>Output Impedance</b>	
<b>Headphone</b>	16 Ω – 32 Ω

### FM TUNER SECTION

<b>Frequency range</b>	
	87.5 MHz – 108.0 MHz (100 kHz steps)
	87.9 MHz – 107.9 MHz (200 kHz steps)
<b>Sensitivity</b>	1.5 μV (IHF)
<b>S/N 26 dB</b>	1.25 μV
<b>Antenna terminal(s)</b>	75 Ω (unbalanced)

### AM TUNER SECTION

<b>Frequency range</b>	
	520 kHz – 1710 kHz (10 kHz steps)
<b>Sensitivity</b>	
<b>S/N 20 dB (at 1000 kHz)</b>	500 μV/m

### CASSETTE DECK SECTION

<b>Track system</b>	4 track, 2 channel
<b>Heads</b>	
<b>Record/playback</b>	Solid permalloy head
<b>Erasure</b>	AC erase head
<b>Motor</b>	DC servo motor
<b>Recording system</b>	AC bias 100 kHz
<b>Erasing system</b>	AC erase 100 kHz
<b>Tape speed</b>	4.8 cm/s
<b>Overall frequency response</b>	
<b>(+3 dB, –6 dB at DECK OUT)</b>	
<b>NORMAL</b>	35 Hz – 14 kHz
<b>S/N RATIO</b>	50 dB (A weighted)
<b>Wow and flutter</b>	0.08% (WRMS)
<b>Fast forward and rewind time</b>	
	Approx. 120 seconds with C-60 cassette tape

### CD SECTION

<b>Disc</b>	
<b>CD, CD-R, CD-RW, MP3</b>	8 cm/12 cm ( $3\frac{3}{20}$ "/ $4\frac{73}{100}$ "
<b>Sampling frequency</b>	44.1 kHz
<b>Decoding</b>	16 bit linear
<b>Beam source/wavelength</b>	Semiconductor laser/780 nm
<b>Number of channels</b>	Stereo
<b>Frequency response</b>	20 Hz–20 kHz (+1 dB, –2 dB)
<b>Wow and flutter</b>	Below measurable limit
<b>Digital filter</b>	8 fs
<b>D/A converter</b>	MASH (1 bit DAC)
<b>MP3</b>	
<b>Bit rate</b>	32 kbps – 320 kbps
<b>Sampling frequency</b>	32 kHz, 44.1 kHz, 48 kHz

### SPEAKER SECTION

<b>Type</b>	2 way, 2 speaker system
<b>Speaker(s)</b>	
<b>Woofer</b>	10 cm (4") cone type
<b>Tweeter</b>	6 cm ( $2\frac{3}{8}$ " ) cone type
<b>Impedance</b>	6 Ω
<b>Input power</b>	
<b>HIGH</b>	40 W (Max)
<b>LOW</b>	40 W (Max)
<b>Output sound pressure level</b>	
	82 dB/W (1.0 m)
<b>Frequency range</b>	
	50 Hz–30 kHz (–16 dB)
	55 Hz–25 kHz (–10 dB)
<b>Dimensions (WxHxD)</b>	
	140 mm x 225 mm x 218 mm
	( $5\frac{1}{2}$ " x $9\frac{1}{8}$ " x $8\frac{9}{16}$ " )
<b>Mass</b>	1.95 kg (4.30 lbs.)

### GENERAL

<b>Power supply</b>	AC 120 V, 60 Hz
<b>Power consumption</b>	57 W
<b>Dimensions (WxHxD)</b>	
	165 mm x 228 mm x 315.6 mm
	( $6\frac{1}{2}$ " x 9" x $12\frac{1}{16}$ " )
<b>Mass</b>	3.6 kg (7.94 lbs.)

**Power consumption in standby mode 0.5 W**

### Notes:

- Specifications are subject to change without notice. Mass and dimensions are approximate.
- Total harmonic distortion is measured by the digital spectrum analyzer. Maintenance

## Maintenance

### If the surfaces are dirty

To clean this unit, wipe with a soft, dry cloth.

- Never use alcohol, paint thinner or benzine to clean this unit.
- Before using chemically treated cloth, read the instructions that came with the cloth carefully.

### For a cleaner crisper sound

Clean the heads regularly to assure good quality playback and recording.

Use a cleaning tape (not included).

## Panasonic Canada Inc.

5770 Ambler Drive, Mississauga, Ontario L4W 2T3

### PANASONIC/TECHNICS PRODUCT – LIMITED WARRANTY

Panasonic Canada Inc. warrants this product to be free from defects in material and workmanship and agrees to remedy any such defect, or at its option, replace the product for a period as stated below from the date of original purchase.

**Technics Audio Product**

**One (1) year, parts and labour**

**Panasonic Audio & DVD Product**

**One (1) year, parts and labour**

**Accessories including rechargeable batteries**

**Ninety (90) days**

#### LIMITATIONS AND EXCLUSIONS

This warranty does not apply to products purchased outside Canada or to any product which has been improperly installed, subjected to usage for which the product was not designed, misused or abused, damaged during shipping, or which has been altered or repaired in any way that affects the reliability of detracts from the performance, nor does it cover any product which is used commercially. Dry cell batteries are also excluded from coverage under this warranty.

This warranty is extended to the original end user purchaser only. A purchase receipt or other proof of date of original purchase is required before warranty service is performed.

**THIS EXPRESS, LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, EXCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.**

**IN NO EVENT WILL PANASONIC CANADA INC. BE LIABLE FOR ANY SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES.**

In certain instances, some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, or the exclusion of implied warranties, so the above limitations and exclusions may not be applicable.

#### WARRANTY SERVICE

**For product operation and information assistance**, please contact your Dealer or our Customer Care Centre at: Telephone #: (905) 624-5505 Fax #: (905) 238-2360 Web: [www.panasonic.ca](http://www.panasonic.ca)

**For product repairs**, please contact one of the following:

- Your Dealer who will inform you of an authorized Servicentre nearest you.
- Our Customer Care Centre at (905) 624-5505 or [www.panasonic.ca](http://www.panasonic.ca)
- A Panasonic Factory Servicentre listed below:

#### Richmond,

#### Calgary, Alberta

#### Mississauga, Ontario

#### Lachine, Québec

#### British Columbia

Panasonic Canada Inc.  
12111 Riverside Way  
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Fax: (604) 278-5627

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Fax: (403) 274-5493

Panasonic Canada Inc.  
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Tel: (905) 624-8447  
Fax: (905) 238-2418

Panasonic Canada Inc.  
3075, rue Louis A. Amos  
Lachine, QC  
H8T 1C4  
Tel: (514) 633-8684  
Fax: (514) 633-8020

#### **IF YOU SHIP THE PRODUCT TO A SERVICENTRE**

Carefully pack and send prepaid, adequately insured and preferably in the original carton. Include details of the defect claimed, and proof of date of original purchase.

RQA0225 F1204MO

**Panasonic Canada Inc.**

5770 Ambler Drive Mississauga, Ontario, L4W 2T3

***www.panasonic.ca***

(En)