# SONY

# Mini HI-FI Component System

Operating Instructions

MHC-EC98Pi/EC78Pi/
EC68Pi

COMPACT DISC
DIGITAL AUDIO

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This symbol 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.

This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

## Owner's Record

The model and serial numbers are located on the rear of the unit. Record the serial number in the space provided below. Refer to them whenever you call upon your Sony dealer regarding this product.

Model No. _____
Serial No. _____

## CAUTION

The use of optical instruments with this product will increase eye hazard.

## WARNING

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

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

## CAUTION

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

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## WARNING

### To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

To prevent fire, do not cover the ventilation of the apparatus with news papers, table-cloths, curtains, etc. And don't place lighted candles on the apparatus.

To prevent fire or shock hazard, do not place objects filled with liquids, such as vases, on the apparatus.

Install this system so that the power cord can be unplugged from the wall socket immediately in the event of trouble.

Do not install the appliance in a confined space, such as a bookcase or built-in cabinet.

Batteries or batteries installed apparatus shall not be exposed to excessive heat such as sunshine, fire or the like.

## Except for customers in the U.S.A. and Canada

This appliance is classified as a CLASS 1 LASER product. This marking is located on the rear exterior.

CLASS 1 LASER PRODUCT
LUOKAN 1 LASERLAITE
KLASS 1 LASERAPPARAT

## NOTICE FOR THE CUSTOMERS IN THE U.S.A.

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

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

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## Note on DualDiscs

A DualDisc is a two sided disc product which mates DVD recorded material on one side with digital audio material on the other side. However, since the audio material side does not conform to the Compact Disc (CD) standard, playback on this product is not guaranteed.

## Music discs encoded with copyright protection technologies

This product is designed to playback discs that conform to the Compact Disc (CD) standard. Recently, various music discs encoded with copyright protection technologies are marketed by some record companies. Please be aware that among those discs, there are some that do not conform to the CD standard and may not be playable by this product.

MPEG Layer-3 audio coding technology and patents licensed from Fraunhofer IIS and Thomson.

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# Hooking up the system securely

## When carrying this system

1 Remove a disc to protect the CD mechanism.
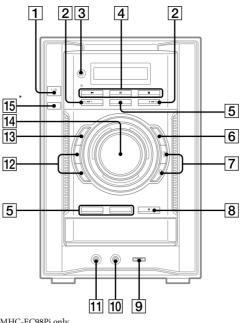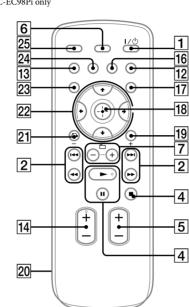2 Press I/☉ 1 on the unit to turn off the system and confirm that "STANDBY" stops flashing.
3 Unplug the power cord.

### Antennas

Find a location and an orientation that provide good reception, and then set up the antenna. Keep the antennas away from the speaker cords and the power cord to avoid picking up noise.

FM lead antenna
(Extend it horizontally.)

AM loop antenna

### Subwoofer (MHC-EC98Pi only)

Connect the subwoofer to the SUBWOOFER jack with the subwoofer cable.

### Power

Connect the power cord to a wall socket. If the plug does not fit the wall socket, detach the supplied plug adaptor (only for models equipped with an adaptor).

Wall socket

Right speaker (High freq.)
Right speaker (Low freq.)

### MHC-EC68Pi only

### Subwoofer (MHC-EC98Pi only)

Place the subwoofer vertically to obtain a better bass reproduction. Also, position the subwoofer:
—on a solid floor where resonance is unlikely to occur.
—at least a few centimeters away from the wall.
—away from the center of the room or place a bookshelf against a wall, to avoid generating a standing wave.

### Speaker pads

Attach the supplied speaker pads to the bottom of the front speakers and subwoofer to prevent slipping.

Front speakers:
4 pads for each speaker

Subwoofer:
4 pads (MHC-EC98Pi only)

### Speakers

Insert only the stripped portion of the cord.

Solid (Blue/⊕)
Solid (Gray/⊖) → Left speaker (High freq.)
Solid (Red/⊕)
Solid (Black/⊖) → Left speaker (Low freq.)
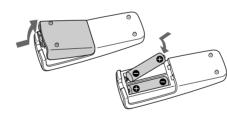
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# Basic Operations



* MHC-EC98Pi only

This manual mainly explains operations using the remote, but the same operations can also be performed using the buttons on the unit having the same or similar names.

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# Before using the system

## To use the remote

Slide and remove the battery compartment lid 20, and insert the two R6 (size AA) batteries (supplied), ⊖ side first, matching the polarities shown below.

### Notes on using the remote
• With normal use, the batteries should last for about six months.
• Do not mix an old battery with a new one or mix different types of batteries.
• If you do not use the remote for a long period of time, remove the batteries to avoid damage from battery leakage and corrosion.
• Batteries installed devices shall not be exposed to excessive heat such as sunshine, fire or the like.

## To set the clock

1 Turn on the system.
   Press I/☉ (on/standby) 1 to turn on the system.
2 Select the clock set mode.
   Press TIMER MENU 17. The hour indication flashes. If "PLAY SET" flashes, press ↑/↓ 22 repeatedly to select "CLOCK," and then press ☉ (enter) 18.
3 Set the time.
   Press ↑/↓ 22 repeatedly to set the hour, then press ☉ (enter) 18. The minute indication flashes. Use the same procedure to set the minutes.

### Note
The clock settings are lost when you disconnect the power cord or if a power failure occurs.

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# Adjusting the sound

## To adjust the volume
Press VOLUME +/− (or turn the VOLUME control on the unit) 14.

## To add a sound effect

| To | Press |
|---|---|
| Generate a more dynamic sound (Dynamic Sound Generator X-tra) | DSGX 12 on the unit. |
| Set the sound effect | EQ 12. |

## To turn on the subwoofer (MHC-EC98Pi only)
Press SUBWOOFER ON/OFF 15 on the unit until "SUBWOOFER" appears. The volume of the subwoofer is linked to the front speakers.

# Playing a CD/MP3 disc

1 Select the CD function.
   Press FUNCTION +/− (or FUNCTION on the unit) 5 repeatedly.
2 Place a disc.
   Press ▲ (open/close) 8 on the unit, and place a disc with the label side up on the disc tray.
   To close the disc tray, press ▲ (open/close) 8 on the unit.
   Do not force the disc tray closed with your finger, as this may damage the unit.

3 Start playback.
   Press ► (play) 4.

| To | Press |
|---|---|
| Pause playback | ❙❙ (pause) 4. To resume play, press the button again. |
| Stop playback | ■ (stop) 4. |
| Select a folder on an MP3 disc | ☐ +/− (select folder) 7. |
| Select a track or file | ❙◄◄/►►❙ (go back/go forward) (or ❙◄◄/►►❙ on the unit) 2. |
| Find a point in a track or file | Hold down ◄◄/►► (rewind/fast forward) 2 during playback, and release the button at the desired point. |
| Select Repeat Play | REPEAT 24 repeatedly until "REP" or "REP1" appears. |

## To change the play mode
Press PLAY MODE 13 repeatedly while the player is stopped. You can select normal play (no display or "☐" for all MP3 files in the folder on the disc), shuffle play ("SHUF" or "☐ SHUF*" for folder shuffle), or program play ("PGM").
* When playing a CD-DA disc, ☐ (SHUF) Play performs the same operation as normal (SHUF) Play.

### Notes on Repeat Play
• All tracks or files on a disc are played repeatedly up to five times.
• "REP1" indicates that a single track or file is repeated until you stop it.

### Notes on playing MP3 discs
• Do not save other types of tracks or files or unnecessary folders on a disc that has MP3 files.
• Folders that have no MP3 files are skipped.
• MP3 files are played back in the order that they are recorded onto the disc.
• The system can only play MP3 files that have a file extension of ".MP3".
• If there are files on the disc that have the ".MP3" file extension, but that are not MP3 files, the unit may produce noise or may malfunction.
• The maximum number of:
  —folders is 150 (including the root folder).
  —MP3 files is 255.
  —MP3 files and folders that can be contained on a single disc is 300.
  —folder levels (the tree structure of files) is 8.
• Compatibility with all MP3 encoding/writing software, recording device, and recording media cannot be guaranteed. Incompatible MP3 discs may produce noise or interrupted audio or may not play at all.

### Notes on playing multisession discs
• If the disc begins with a CD-DA (or MP3) session, it is recognized as a CD-DA (or MP3) disc, and playback continues until another session is encountered.
• A disc with a mixed CD format is recognized as a CD-DA (audio) disc.

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# Listening to the radio

1 Select "TUNER FM" or "TUNER AM."
   Press FUNCTION +/− (or FUNCTION on the unit) 5 repeatedly.
2 Select the tuning mode.
   Press TUNING MODE 13 repeatedly until "AUTO" appears.
3 Tune in the desired station.
   Press +/− (or TUNING +/− on the unit) 2.
   Scanning stops automatically when a station is tuned in, and then "TUNED" and "ST" (for stereo programs) appear.

TUNED ST  FM  87.50

## To stop automatic scanning
Press ■ (stop) 4.

## To tune in a station with a weak signal
If "TUNED" does not appear and the scanning does not stop, press TUNING MODE 13 repeatedly until "MANUAL" appears, and then press +/− (or TUNING +/− on the unit) 2 repeatedly to tune in the desired station.

## To reduce static noise on a weak FM stereo station
Press FM MODE 24 repeatedly until "MONO" appears to turn off stereo reception.

# Changing the display

| To | Press |
|---|---|
| Change information on the display* | DISPLAY 6 repeatedly when the system is turned on. |
| Change Display mode (See below.) | DISPLAY 6 repeatedly when the system is turned off. |

* For example, you can view CD/MP3 disc information, such as;
  —track or file number during normal play.
  —track or file name ("♪") during normal play.
  —artist name ("●") during normal play.
  —album or folder name ("☐") during normal play.
  —total playing time while the player is stopped.

The system offers the following display modes.

| Display mode | When the system is off, |
|---|---|
| Power Saving Mode[1] | The display is turned off to conserve power. The timer and clock continue to operate. |
| Clock[2] | The clock is displayed. |

[1] You cannot set the clock in Power Saving Mode.
[2] The clock display automatically turns to Power Saving Mode after eight seconds.

### Notes on the display information
• Characters that cannot be displayed appear as "_".
• The following are not displayed;
  —total playing time for an MP3 disc.
  —remaining playing time for an MP3 file.
• The following are not displayed correctly;
  —elapsed playing time of an MP3 file encoded using VBR (variable bit rate).
  —folder and file names that do not follow either ISO9660 Level 1, Level 2 or Joliet in the expansion format.
• The following are displayed;
  —total playing time for a CD-DA disc during normal play.
  —remaining playing time for a track.
  —ID3 tag information for MP3 files when ID3 version 1 and version 2 tags are used (ID3 version 2 tag information display has priority when both ID3 version 1 and version 2 tags are used for a single MP3 file).
  —up to 15 characters of ID3 tag information using uppercase letters (A to Z), numbers (0 to 9), and symbols ('< > * + , − / @ [ \ ] _).

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# Using optional audio components

## To connect an optional headphones
Connect headphones to the PHONES jack 11 on the unit.

## To connect an optional component
Connect additional audio source components to the AUDIO IN jack 10 on the unit using an analog audio cord (not supplied). Turn down the volume on the system, and then select the AUDIO IN function.

## To connect a DIGITAL MEDIA PORT adaptor
Connect the DIGITAL MEDIA PORT adaptor to the DMPORT 9 on the unit. You need to connect the DIGITAL MEDIA PORT adaptor to an optional audio device (portable audio player, etc.).

### Notes on DIGITAL MEDIA PORT adaptor
• Available DIGITAL MEDIA PORT adaptors vary in each area.
• Do not connect an adaptor other than the DIGITAL MEDIA PORT adaptor.
• Do not connect or disconnect the DIGITAL MEDIA PORT adaptor to/from the DMPORT 9 while the system is on.
• When using a DIGITAL MEDIA PORT adaptor that has video output function, connect the adaptor directly to the TV.
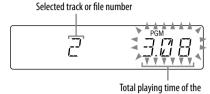• For details about the DIGITAL MEDIA PORT adaptor, refer to the operating instructions supplied with your DIGITAL MEDIA PORT adaptor.

# Other Operations

## Creating your own CD program (Program Play)

Use buttons on the remote to create your own program.

1 Press FUNCTION +/− 5 repeatedly to select the CD function.

2 Press PLAY MODE 13 repeatedly until "PGM" appears while the player is stopped.

3 Press |◄◄ /►►| 2 repeatedly until the desired track number appears.

When programming MP3 files, press ☐ +/− 7 repeatedly to select the desired folder, and then select the desired file.

Selected track or file number

Total playing time of the selected track

4 Press ⊙ 18 to add the track or file to the program.

5 Repeat steps 3 through 5 to program additional tracks or files, up to a total of 25 tracks or files.

6 To play your program of tracks or files, press ► 4.

The program remains available until you open the disc tray. To play the same program again, select the CD function, and then press ► 4.

### To cancel Program Play
Press PLAY MODE 13 repeatedly until "PGM" disappears while the player is stopped.

### To delete the last track or file of the program
Press CLEAR 16 while the player is stopped.

### To view program information, such as total track number of the program
Press DISPLAY 6 repeatedly.

## Presetting radio stations

You can preset your favorite radio stations and tune them in instantly by selecting the corresponding preset number.

1 Tune in the desired station (See "Listening to the radio").

2 Press TUNER MEMORY 23.

Preset number

3 Press +/− (or TUNING +/− on the unit) 2 repeatedly to select your desired preset number.

If another station is already assigned to the selected preset number, the station is replaced by the new stations.

4 Press ⊙ 18.

5 Repeat steps 1 through 4 to store other stations.

You can preset up to 20 FM and 10 AM stations. The preset stations are retained for about half a day even if you disconnect the power cord or if a power failure occurs.

6 To call up a preset radio station, press TUNING MODE 13 repeatedly until "PRESET" appears, and then press +/− (or TUNING +/− on the unit) 2 repeatedly to select the desired preset number.

## Using the timers

The system offers two timer functions. If you use both timers, the Sleep Timer has priority.

Use buttons on the remote to use the timer functions.

### Sleep Timer:
You can fall asleep to music. This function works even if the clock is not set.
Press SLEEP 25 repeatedly. If you select "AUTO," the system automatically turns off after the current disc stops or in 100 minutes.

### Play Timer:
You can wake up to CD or tuner at a preset time.
Make sure you have set the clock.

1 Prepare the sound source.
Press VOLUME +/− 14 to adjust the volume.
To start from a specific CD track or MP3 file, create your own CD program.

2 Press TIMER MENU 17.

3 Press ♦/♦ 22 repeatedly to select "PLAY SET," then press ⊙ 18.
"ON TIME" appears, and the hour indication flashes.

4 Set the time to start playback.
Press ♦/♦ 22 repeatedly to set the hour, then press ⊙ 18.
The minute indication flashes. Use the procedure above to set the minutes.

5 Use the same procedure as in step 4 to set the time to stop playback.

6 Select the sound source.
Press ♦/♦ 22 repeatedly until the sound source you want appears, and then press ⊙ 18. The display shows the timer settings.

7 Press I/ ⏻ 1 to turn off the system.
If the system is on at the preset time, the Play Timer will not play.

### To activate or check the timer again

1 Press TIMER MENU 17.
"SELECT" flashes in the display.

2 Press ⊙ 18.

3 Press ♦/♦ 22 repeatedly to select "PLAY SEL," then press ⊙ 18.

### To cancel the timer
Repeat the same procedure as above until "OFF" appears in step 3, and then press ⊙ 18.

### To change the setting
Start over from step 1.

**Tip**
The Play Timer setting remains as long as the setting is not canceled manually.

## Troubleshooting

1 Make sure the power cord and speaker cords are correctly and firmly connected.

2 Find your problem in the checklist below, and take the indicated corrective action.
If the issue persists, contact your nearest Sony dealer.

### If "PROTECT" appears on the display
Immediately unplug the power cord, and check the following items after "PROTECT" disappears.
• Are the + and − speaker cords short-circuited?
• Is anything blocking the ventilation holes on the top or back of the system?
After you have checked these above items and found to be all right, reconnect the power cord, and turn on the system. If the issue persists, contact your nearest Sony dealer.

### General

**The system does not turn on.**
• Is the power cord plugged in?

**There is no sound.**
• Are the + and − speaker cords short-circuited?
• Are you using only the supplied speakers?
• Is anything blocking the ventilation holes on the top or back of the system?

**Sound comes from one channel, or the left and right volumes are unbalanced.**
• Place the speakers as symmetrically as possible.
• Connect only the supplied speakers.

**Severe hum or noise.**
• Move the system away from sources of noise.
• Connect the system to a different wall socket.
• Install a noise filter (available separately) to the power cord.

**The remote does not function.**
• Remove any obstacles between the remote and the remote sensor 3 on the unit, and position the unit away from fluorescent lights.
• Point the remote at the system's sensor.
• Move the remote closer to the system.

### CD/MP3 player

**The sound skips, or the disc will not play.**
• Wipe the disc clean, and replace it.
• Move the system to a location away from vibration (for example, on top of a stable stand).
• Move the speakers away from the system, or place them on separate stands. At high volume, speaker vibration may cause the sound to skip.

**Play does not start from the first track.**
• Return to Normal Play by pressing PLAY MODE 13 repeatedly until both "PGM" and "SHUF" disappear.

**Starting playback takes more time than usual.**
• The following discs take a longer time to start playback.
−a disc recorded with a complicated tree structure.
−a disc recorded in multisession mode.
−a disc that has not been finalized (a disc to which data can be added).
−a disc that has many folders.

**The disc tray does not open and "LOCKED" appears.**
• Contact your Sony dealer or local authorized Sony service facility.

### Tuner

**Severe hum or noise, or stations cannot be received. ("TUNED" or "ST" flashes on the display.)**
• Connect the antenna properly.
• Find a location and an orientation that provide good reception, and then set up the antenna again.
• Keep the antennas away from the speaker cords and the power cord to avoid picking up noise.
• Turn off nearby electrical equipment.

## To change the AM tuning interval
The AM tuning interval is factory-preset to 9 kHz or 10 kHz.
Use buttons on the unit to change the AM tuning interval.

1 Tune in any AM station, and then turn off the system.

2 Press DISPLAY 6 to display the clock.

3 While holding down TUNING + 2, press I/⏻ 1.
All the AM preset stations are erased. To reset the interval to the factory preset, repeat the procedure.

## To improve tuner reception
Turn off CD player power by using the CD power management function. By default, CD power is turned on.

1 Press FUNCTION +/− (or FUNCTION on the unit) 5 repeatedly to select the CD function.

2 Press I/⏻ 1 to turn off the system.

3 After "STANDBY" stops flashing, press DISPLAY 6 to display the clock, and then press I/⏻ 1 while holding down ■ 4.
"CD POWER OFF" appears. With CD player power turned off, disc access time is increased. To turn on CD player power, repeat the procedure until "CD POWER ON" appears.

## To reset the system to factory settings
If the system still does not operate properly, reset the system to factory settings.
Use buttons on the unit to reset the unit to its factory default settings.

1 Disconnect and reconnect the power cord, and then turn on the system.

2 Press ■ 4, FUNCTION 5, and I/⏻ 1 at the same time.
All user-configured settings, such as preset radio stations, timer, and the clock, are deleted.

## Messages

**CANNOT LOCK :** The system cannot be locked after you have done the procedure of "When carrying this system."
**COMPLETE :** The preset operation ended normally.
**FULL :** You tried to program more than 25 tracks or files (steps).
**LOCKED :** The disc tray does not open. Contact your nearest Sony dealer.
**NO DISC :** There is no disc in the player, or you have loaded a disc that cannot be played.
**NO STEP :** All of the programmed tracks have been erased.
**OVER :** You have reached the end of the disc while pressing ►► 2 during playback or pause.
**PUSH STOP :** You pressed PLAY MODE 13 during playback.
**PROTECT :** The following causes can be considered:
−Speaker cords may be short-circuited.
−The ventilation holes may be blocked.
See "If "PROTECT" appears on the display" to check what to do if this message appears.
**READING :** The system is reading information from the disc. Some buttons are not available.
**TIME NG :** The Play Timer start and end times are set to the same time.

## Precautions

### Discs that this system CAN play
• Audio CD
• CD-R/CD-RW (audio data/MP3 files)

### Discs that this system CANNOT play
• CD-ROM
• CD-R/CD-RW other than those recorded in music CD format or MP3 format conforming to ISO9660 Level 1/Level 2, Joliet
• CD-R/CD-RW recorded in multisession that have not ended by "closing the session"
• CD-R/CD-RW of poor recording quality, CD-R/CD-RW that have scratches or are dirty, or CD-R/CD-RW recorded with an incompatible recording device
• CD-R/CD-RW which is finalized incorrectly
• Discs containing files other than MPEG 1 Audio Layer-3 (MP3) files
• Discs of non-standard shape (for example, heart, square, star)
• Discs that have adhesive tape, paper, or sticker attached to them
• Rental or used discs with attached seals where the glue extends beyond the seal
• Discs that have labels printed using ink that feels tacky when touched

### Notes on discs
• Before playing, wipe the disc with a cleaning cloth from the center out to the edge.
• Do not clean discs with solvents, such as benzine thinner, or commercially available cleaners or anti-static spray intended for vinyl LPs.
• Do not expose discs to direct sunlight or heat sources such as hot air ducts, nor leave it in a car parked in direct sunlight.

### On safety
• The unit is not disconnected from the AC power source (mains) as long as it is connected to the wall outlet, even if the unit itself has been turned off.
• Completely disconnect the power cord (mains lead) from the wall socket (mains) if it is not going to be used for an extended period of time. When unplugging the unit, always grip the plug. Never pull the cord itself.
• Should any solid object or liquid get into the system, unplug the system, and have it checked by qualified personnel before operating it again.
• AC power cord must be changed only at a qualified service shop.

### On placement
• Do not place the system in an inclined position or in locations that are extremely hot, cold, dusty, dirty, or humid or lacking adequate ventilation, or subject to vibration, direct sunlight or a bright light.
• Be careful when placing the unit or speakers on surfaces that have been specially treated (for example, with wax, oil, polish) as staining or discoloration of the surface may result.
• If the system is brought directly from a cold to a warm location or is placed in a very damp room, moisture may condense on the lens inside the CD player, and cause the system to malfunction. In this situation, remove the disc, and leave the system turned on for about an hour until the moisture evaporates.

### On heat buildup
• Heat buildup on the unit during operation is normal and is not cause for alarm.
• Do not touch the cabinet if it has been used continuously at a high volume because the cabinet may have become hot.
• Do not obstruct the ventilation holes.

### On the speaker system
This speaker system is not magnetically shielded, and the picture on nearby TV sets may become magnetically distorted. In this situation, turn off the TV, wait 15 to 30 minutes, and turn it back on.
If there is no improvement, move the speakers far away from the TV.

### Cleaning the cabinet
Clean this system with a soft cloth slightly moistened with a mild detergent solution. Do not use any type of abrasive pad, scouring powder, or solvent, such as thinner, benzine, or alcohol.

## Specifications

**Main unit**
AUDIO POWER SPECIFICATIONS
POWER OUTPUT AND TOTAL HARMONIC DISTORTION:
(MHC-EC98Pi, MHC-EC78Pi The United States model only)
Low channel
With 8 ohm loads, both channels driven, from 120 – 10,000 Hz; 60 watts per channel minimum RMS power, with no more than 0.7% total harmonic distortion from 250 milliwatts to rated output.
High channel
With 8 ohm loads, both channels driven, from 2,000 – 13,000 Hz; 60 watts per channel minimum RMS power, with no more than 0.7% total harmonic distortion from 250 milliwatts to rated output.
AUDIO POWER SPECIFICATIONS
POWER OUTPUT AND TOTAL HARMONIC DISTORTION:
(MHC-EC68Pi The United States model only)
With 6 ohm loads, both channels driven, from 120 – 10,000 Hz; 40 watts per channel minimum RMS power, with no more than 0.7% total harmonic distortion from 250 milliwatts to rated output.

**Amplifier section**
**MHC-EC98Pi**
Front Speaker
RMS output power (reference):
Low channel
95 W + 95 W (per channel at 8 Ω, 1 kHz, 10% THD)
High channel
95 W + 95 W (per channel at 8 Ω, 8 kHz, 10% THD)
Subwoofer
RMS output power (reference):
150 W (at 4 Ω, 80 Hz, 10% THD)
**MHC-EC78Pi**
RMS output power (reference):
Low channel
95 W + 95 W (per channel at 8 Ω, 1 kHz, 10% THD)
High channel
95 W + 95 W (per channel at 8 Ω, 8 kHz, 10% THD)
**MHC-EC68Pi**
RMS output power (reference):
70 W + 70 W (per channel at 6 Ω, 1 kHz, 10% THD)

**Inputs**
AUDIO IN (stereo mini jack): Sensitivity 800 mV, impedance 22 kilohms
**Outputs**
PHONES (stereo mini jack): Accepts headphones with an impedance of 8 Ω or more
SPEAKER: impedance
MHC-EC98Pi/EC78Pi: 8 Ω
MHC-EC68Pi: 6 Ω
SUBWOOFER OUT (MHC-EC98Pi only): impedance 4 Ω

**CD player section**
System: Compact disc and digital audio system
Laser: Semiconductor laser (λ=770 – 810 nm)
Emission duration: continuous
Frequency response: 20 Hz – 20 kHz
Signal-to-noise ratio: More than 90 dB
Dynamic range: More than 88 dB

**Tuner section**
FM stereo, FM/AM superheterodyne tuner
Antenna:
FM lead antenna
AM loop antenna
FM tuner section:
Tuning range
North American model: 87.5 – 108.0 MHz (100 kHz step)
Australian model: 87.5 – 108.0 MHz (50 kHz step)
Intermediate frequency: 10.7 MHz
AM tuner section:
Tuning range
North American model:
530 – 1,710 kHz (with 10 kHz tuning interval)
531 – 1,710 kHz (with 9 kHz tuning interval)
Australian model:
531 – 1,710 kHz (with 9 kHz tuning interval)
530 – 1,710 kHz (with 10 kHz tuning interval)
Intermediate frequency: 450 kHz

**Speaker**
**Front Speaker (SS-EC78) for MHC-EC98Pi/EC78Pi**
Speaker system: 3 way 3 Drivers speaker system, Bass reflex
Speaker unit
Subwoofer: 13 cm, cone type
Woofer: 13 cm, cone type
Tweeter: 4 cm, horn type
Rated impedance
High frequency: 8 ohms
Low frequency: 8 ohms
Dimensions (Approx.): 220 × 350 × 220 mm (w/h/d)
Mass (Approx.): 3.5 kg
**Front Speaker (SS-EC68/SS-EC68S) for MHC-EC68Pi**
Speaker system: 2 way 2 Drivers speaker system, Bass reflex
Speaker unit
Woofer: 16 cm, cone type
Tweeter: 4 cm, horn type
Rated impedance: 6 ohms
Dimensions (Approx.): 220 × 306 × 195 mm (w/h/d)
Mass (Approx.): 2.3 kg
**Subwoofer (SS-WG98) for MHC-EC98Pi only**
Speaker system: Subwoofer speaker system, Bass reflex
Speaker unit
Subwoofer: 20 cm, cone type
Rated impedance: 4 ohms
Dimensions (Approx.): 280 × 306 × 310 mm (w/h/d)
Mass (Approx.): 5.6 kg

**General**
**Power requirements:**
North American model: AC 120 V, 60 Hz
Australian model: AC 230 — 240 V, 50/60 Hz
**Power consumption:**
**MHC-EC98Pi**
USA model: 270 W
Canadian model: 350 VA
**MHC-EC78Pi**
USA model: 210 W
Canadian model: 270 VA
**MHC-EC68Pi**
110 W
**Dimensions (w/h/d) (excl. speakers):**
**MHC-EC98Pi**
Approx. 200 × 306 × 430 mm
**MHC-EC78Pi/EC68Pi**
Approx. 200 × 306 × 415 mm
**Mass (excl. speakers):**
**MHC-EC98Pi**
Approx. 6.9 kg
**MHC-EC78Pi**
Approx. 5.8 kg
**MHC-EC68Pi**
Approx. 4.7 kg
Supplied accessories: Remote Commander (1)/R6 (Size AA) batteries (2)/FM lead/AM loop antenna (1)/Speaker pads MHC-EC98Pi (8) and for SS-WG98 (Subwoofer) (4), MHC-EC78Pi/EC68Pi (8)/TDM-iP10 (M) (1)

Design and specifications are subject to change without notice.

• Standby power consumption: 0.5 W
• Halogenated flame retardants are not used in the certain printed wiring boards.
• Halogenated flame retardants are not used in cabinets. (Except for the United States and Canada models)