

Mini Hi-Fi Component System

Operating Instructions

f

MHC-W55

WARNING**To prevent fire or shock hazard, do not expose the unit to rain or moisture.**

To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.

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

Caution

Do not, under any circumstances, place the CD player/Tape deck on top of the Amplifier/Tuner.

Laser component in this product is capable of emitting radiation exceeding the limit for Class 1.

CLASS 1 LASER PRODUCT
LUOKAN 1 LASERLAITE
KLASS 1 LASERAPPARAT

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

CAUTION	;	INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM.
ADVARSEL	;	USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSÆTTELSE FOR STRÅLING.
VARO!	;	AVATTAESSA JA SUOJALUKITUS OHITETTAESSA DLET ALTIINA LASERSÄTEILYLLE.
WARNING	;	LASERSTRÅLING NÅR DENNA DEL ÄR OPPNÅD OCH SPÄRREN ÄR URKOPPLAD.
ADVARSEL	;	USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES. UNNGÅ EKSPONERING FOR STRÅLEN.

This caution label is located inside the unit.

NOTICE FOR THE CUSTOMERS IN THE UNITED KINGDOM

A moulded plug complying with BS 1363 is fitted to this equipment for your safety and convenience.

Should the fuse in the plug supplied need to be replaced, a 5 AMP fuse approved by ASTA or BSI to BS 1362, (i.e. marked with  or  mark) must be used.

If the plug supplied with this equipment has a detachable fuse cover, be sure to attach the fuse cover after you change the fuse. Never use the plug without the fuse cover. If you should lose the fuse cover, please contact your nearest Sony service station.

IMPORTANT

If the plug supplied is not suitable for the socket outlets in your home, it should be cut off and an appropriate plug fitted in accordance with the following instructions.

The wires in this mains lead are coloured in accordance with the following code:

Blue: Neutral
Brown: Live

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black. The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red. Do not connect either wire to the earth terminal in the plug which is marked by the letter E or by the safety earth symbol Y or coloured green or green-and-yellow.

WARNING

To prevent shock hazard, do not insert the plug cut off from the mains lead into a socket outlet. This plug cannot be used and should be destroyed.

Welcome!

Thank you for purchasing the Sony Mini Hi-Fi Component System. This series is packed with fun features. Here are just a few:

- DBFB (Dynamic Bass Feedback) system that boosts low frequency range audio provide deep, powerful bass sound
- A preset feature, that lets you store and recall up to 40 (30 for customers in Germany and Italy) of your favourite radio stations
- An RDS tuner with PTY (Programme Type) search that lets you tune in preset stations according to the type of programme you want to hear.
- An amplifier that lets you adjust the audio quality to fit a variety of music types and environments
- A timer that lets you set the CD player, tape player or radio to turn on and off whenever you want
- A dual tape deck that lets you record from the radio, CD player or from the other tape deck and relay play from both decks
- A CD player that lets you play up to three CDs in a row and seamlessly advance (or reverse) through all the tracks on all the discs on the CD tray
- A music clip feature, that lets you create groups of favourite tracks from your CDs
- A remote that lets you control your system from your seat

The MHC-W55 consists of the following:

- Amplifier/Tuner : STR-W55
- CD Player/Stereo cassette deck : HCD-W55
- Speaker System : SS-EX55D
- Remote Control : RM-SW55

Table of Contents

Chapter 1: Setting Up

- Connecting the Stereo 4
- Inserting the Batteries 6
- Setting the Clock 6

Chapter 2: the CD Player

- Playing CDs (normal play) 7
- Playing Tracks in Random Order (shuffle play) 8
- Playing Tracks in the Desired Order (programme play) 9
- Playing Tracks Repeatedly (repeat play) 9
- Grouping Tracks (music clip) 10

Chapter 3: the Radio

- Listening to the Radio 11
- Presetting Radio Stations 12
- Playing Preset Radio Stations 12
- Tuning by Programme Type (PTY) 12

Chapter 4: the Tape Player

- Playing a Tape 14
- Recording a CD 15
- Recording a CD: Selecting Tape Length (tape select edit) 16
- Recording a CD: Specifying Tape Length (time edit) 16
- Recording a CD: Specifying Track Order (programme edit) 17
- Recording From the Radio 18
- Recording From Another Tape (dubbing) 18

Chapter 5: Sound Adjustment

- Adjusting the Sound 20
- Selecting the Audio Emphasis 20
- Adjusting the Audio Emphasis 21
- Making a Personal Audio Emphasis File (personal file) 21

Chapter 6: Additional Features

- Falling Asleep to Music 22
- Waking Up to Music 22
- Timer-Recording Radio Programmes 23
- Microphone Mixing 24
- Karaoke: Singing Along 24
- Connecting Optional Equipment 25

For Your Information

- Precautions 26
- Troubleshooting Guide 26
- Maintenance 27
- Specifications 28
- Index to Parts and Controls 28

Index 30

Chapter 1: Setting Up

Connecting the Stereo

Inserting the Batteries

Setting the Clock

Connecting the Stereo

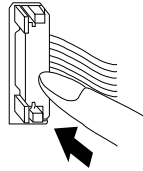
Use the illustrations below to connect your stereo.

If you want to connect any optional components to the stereo, see “Connecting Optional Equipment” in Chapter 6.

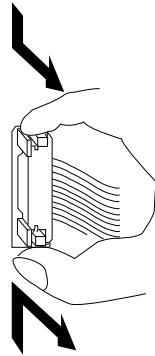
If you set up the stereo system vertically
Be sure to place the Amplifier/Tuner on top of the CD player/Tape Deck.

STEP 1 Connecting the Flat Cords

Connect the supplied flat cords to SYSTEM CONTROL connectors of the same color by pressing the centre of the flat cord connector until it clicks into place.



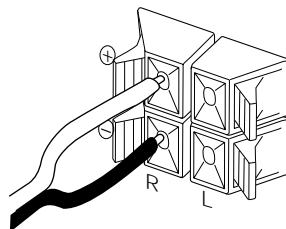
To disconnect the flat cords
Pull out the flat cord connector while pressing in on the sides. Do not pull the flat cord itself.



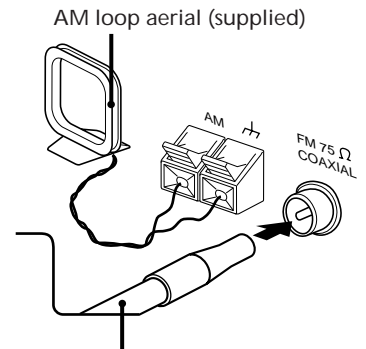
STEP 2 Connecting the Speakers

Connect the right speaker to the R connectors and the left speaker to the L connectors.

See the instruction manual provided with the speakers for details of connectors.



STEP 3 Connecting the Aerials

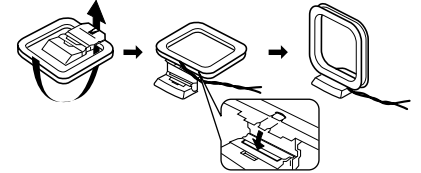


FM lead aerial* (supplied)

*Extend horizontally

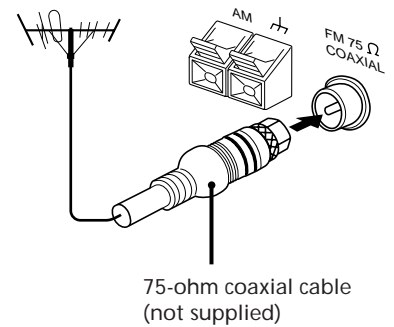
AM loop aerial connection

Connect the supplied loop aerial to the AM and the y terminal.

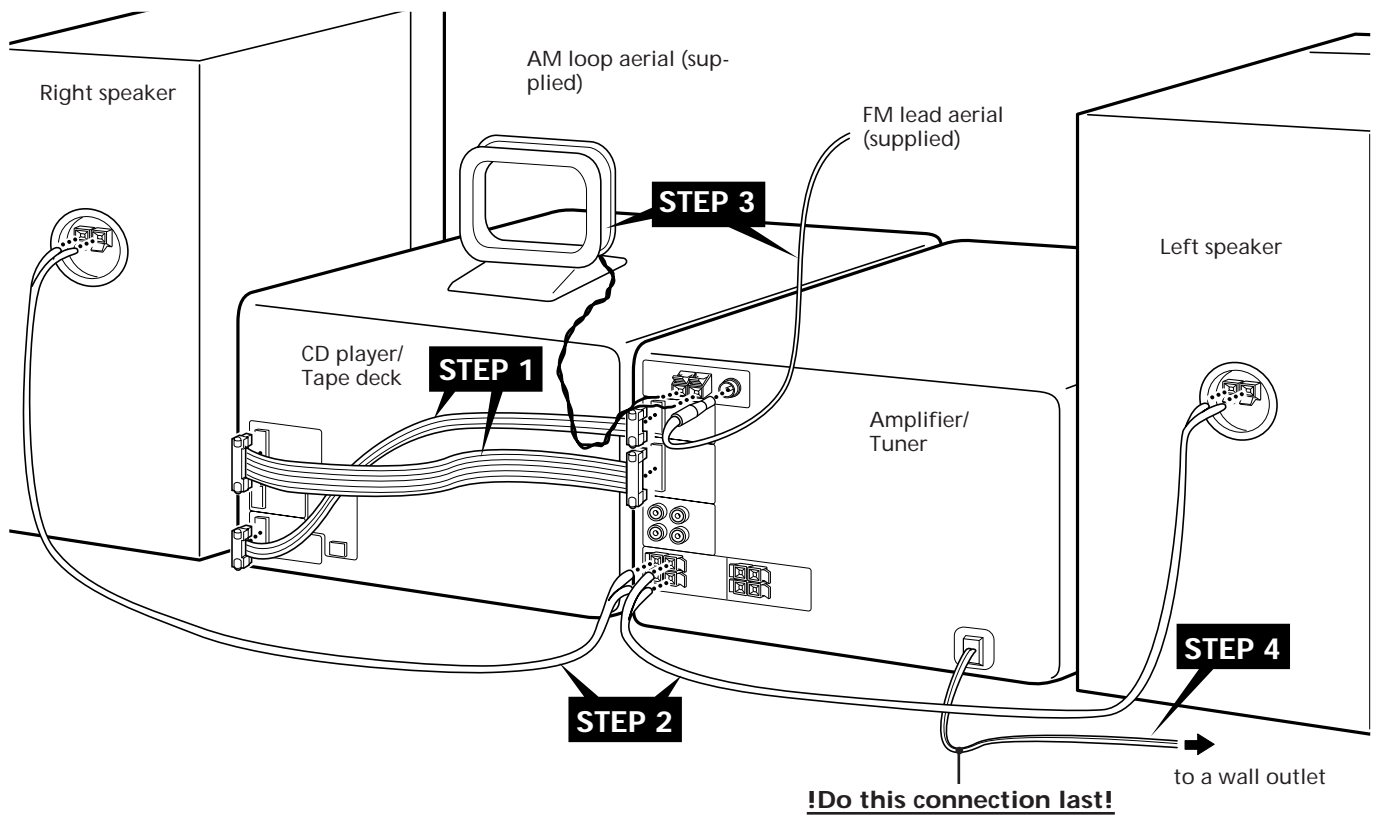


To improve the FM reception

Connect an outdoor FM aerial to the FM 75Ω terminal, using a 75-ohm coaxial cable and IEC standard socket connector.



75-ohm coaxial cable (not supplied)

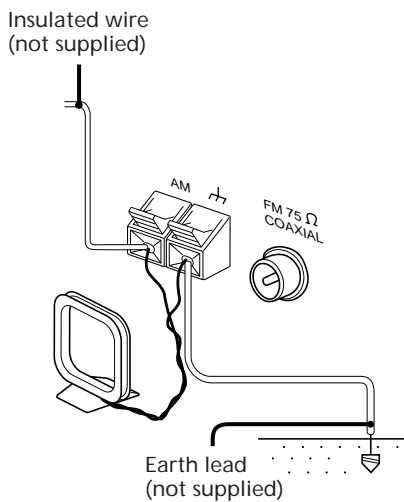


To improve the AM reception

After you connect the AM aerial, connect a 6- to 15-meter (20- to 50- foot) insulated wire to the AM terminal. Connect the y terminal to earth.

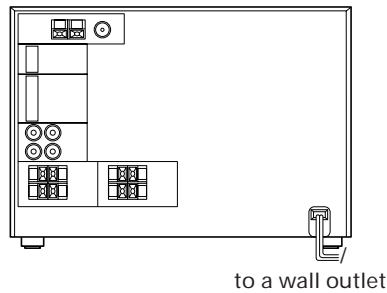
Important

Ground the external aerial against lightning from the y terminal. To prevent a gas explosion, do not connect the earth lead to a gas pipe.



STEP 4 Connecting the Power

Connect the mains lead to a wall outlet after you have made all the above connections.



Demo Mode

The demo mode appears in the display when you plug the mains lead into a wall outlet. The demo mode deactivates when you set the clock (see "Setting the Clock").

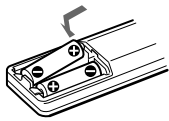
Inserting the Batteries

Install two R6 (size AA) batteries in the supplied remote for remote control.

- 1 Slide the lid to remove it.



- 2 Insert two R6 (size AA) batteries. Match the + and - to the diagram in the battery compartment.



- 3 Close the lid.

Battery life

You can expect the remote to operate for about six months (using Sony SUM-3 (NS) batteries) before the batteries run down. When the batteries no longer operate the remote, replace all the batteries with new ones.

To avoid battery leakage

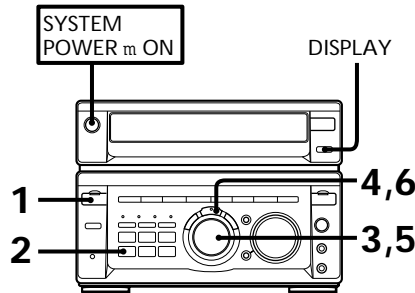
If you are not going to use the remote for a long time, remove the batteries to avoid damage caused by corrosion from battery leakage.

Setting the Clock

The built-in clock shows the time in the display even if the power is off. Use the buttons on the unit to do this operation.

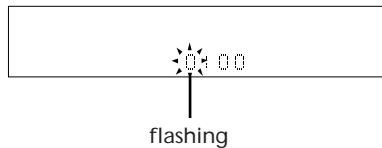
Note

Once you set the clock, the demo mode, that activates when the power is turned off, is cancelled automatically.

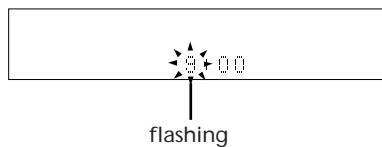


- 1 Press **TIMER**.
The stereo enters the clock/timer mode.

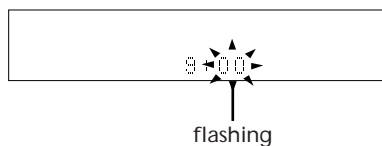
- 2 Press **CLOCK SET**.
The hour indication begins flashing.



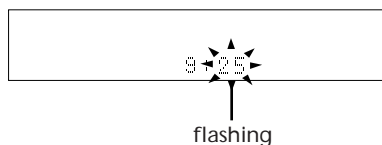
- 3 Set the current hour by turning the **JOG** dial until the correct hour appears.



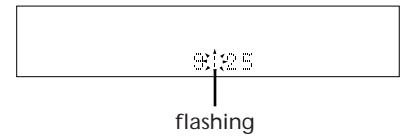
- 4 Press **ENTER/NEXT**.
The minutes indication begins flashing.



- 5 Set the current minute by turning the **JOG** dial until the correct minute appears.



- 6 Press **ENTER/NEXT**.
The clock starts running and the upper dot flashes. Use the time signal to set the clock accurately.
The upper dot flashes for the first half of a minute (0 to 29 seconds), and the lower dot flashes for the last half of a minute (30 to 59 seconds).



To check the time while power is on
Press **DISPLAY** a few times.
The current time is displayed for 8 seconds.

To correct the clock setting
Repeat steps 1 through 6.

Chapter 2: the CD Player

Playing CDs (normal play)

Playing Tracks in Random Order (shuffle play)

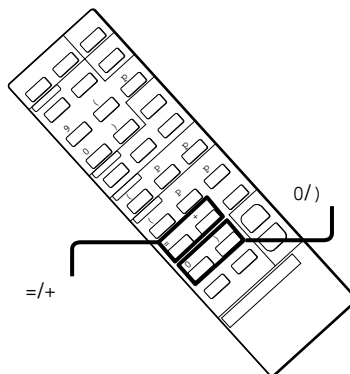
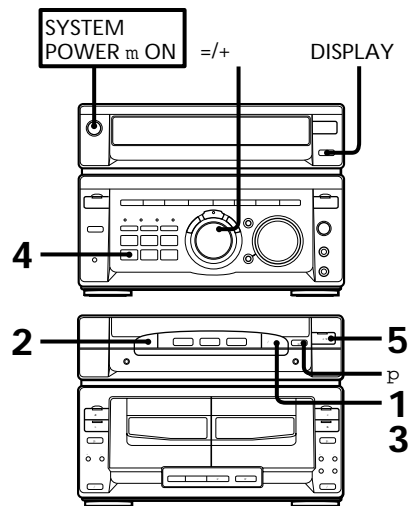
Playing Tracks in the Desired Order (programme play)

Playing Tracks Repeatedly (repeat play)

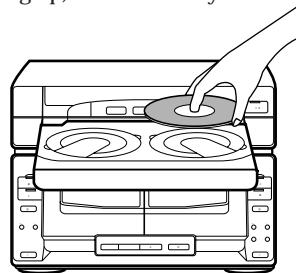
Grouping Tracks (music clip)

Playing CDs (normal play)

You can play all the tracks on up to three discs consecutively in their original order (normal play). Before you play the CD, decrease the sound level by turning the VOLUME control counter-clockwise, to prevent damage to the speakers.



- 1 Press § OPEN/CLOSE/EX-CHANGE and place up to two CDs (label side facing up) on the disc tray.

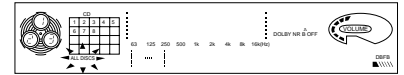


- 2 Press DISC SKIP to insert a third disc, if necessary. The disc tray rotates so you can insert another CD.

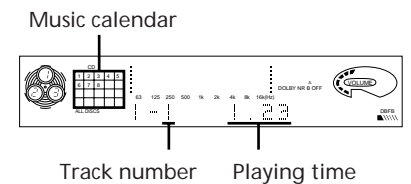
- 3 Press § OPEN/CLOSE/EX-CHANGE again to close the disc tray.

- 4 Press 1/ALL DISCS to choose "1 DISC" or "ALL DISCS".

Choose	To play
1 DISC	Only the CD you have selected.
ALL DISCS	All CDs consecutively in order of disc number. Empty disc trays are skipped.



- 5 Press ·P (or CD (on the remote). Play starts from the CD loaded on the tray whose button is lit green.



To	Press
Stop play	p
Pause	·P (P*1)
Resume play	·P ((*1 or P*1)
Go forward to another track	During play or pause, rotate the JOG dial clockwise. Release when you reach the track you desire.*2 Or use AMS*3 + on the remote.
Go back to a previous track	During play or pause, rotate the JOG dial counterclockwise. Release when you reach the track you desire.*2 Or use AMS*3 = on the remote.
Select a particular CD	Corresponding DISC 1 - 3 button*4 or press DISC SKIP repeatedly
Remove or exchange the CD *5	§ OPEN/CLOSE/EX-CHANGE

*1 Remote

*2 You can use the JOG dial to search quickly through tracks on different discs (seamless feature).

*3 Automatic Music Sensor

*4 If no disc is loaded at that number, the tray will emerge.

*5 You can also remove or exchange CDs while playing a CD.

continue to next page →

→ **continued**

To find a point in a track

You can find a particular point in a track while the track is playing or while it's in pause mode. Use the buttons on the remote to operate this feature.

To	Press
Go forward quickly in a track) on the remote and release it at the desired point.
Go backwards quickly in a track	0 on the remote and release it at the desired point.
Search quickly without listening	P, then press 0 or) on the remote. Press (or P again at the desired point.

To check the remaining time during playback

Press DISPLAY repeatedly. Each time you press the button, the display changes as follows:

- μ Playing time on current track
- μ Remaining time on current track
- μ Remaining time on current CD* or "Play" display**
- μ Clock display (for eight seconds)
- μ Effect (or P FILE) name

* 1 DISC mode
** ALL DISCS mode

To check the total playing time and the total number of tracks

Press DISPLAY in stop mode. When you press DISPLAY again, the display shows the clock display for four seconds and returns to the previous indication.

Notes

- You cannot check the total playing time during programme play.
- The disc number, total playing time and number of tracks also appear in the display when you press § OPEN/CLOSE/EX-CHANGE to close the disc tray.
- "---" appears in the display when the total playing time is 100 minutes or more.

One Touch Play feature

Press .P on the CD player when the power is off. When a CD is in the player, you will be able to start listening to the CD without pressing any other buttons.

The Music Calendar Display

This display lights according to the number of tracks on the CD. As each track is played, the corresponding number disappears. Tracks numbered in excess of 20 are not displayed.

What the green and orange DISC button indicators indicate

Indicators are provided on the DISC buttons for each of the respective disc trays (DISC 1-3).

- A green indicator shows that the tray is selected (either during playback or standby, or when the tray is open) no matter if there is a CD inside or not.
- An orange indicator shows that there is a CD in the tray but the tray is not selected.
- When the indicator is off, there is no CD in the tray and the tray is not selected.

Automatic Source Selection

If the CD player has been in the normal play mode, you can select the CD player just by pressing .P or the DISC 1 - 3 buttons.

If the CD player has been in the programme play or the shuffle play mode, only .P can be used for this function.

If there is no CD in the player

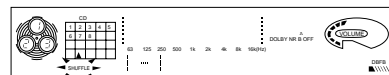
"NO DISC" appears in the display. Press .P (or CD (on the remote) while the indication is on, then the CD tray will open automatically.

1 Press FUNCTION repeatedly until "CD" appears in the display.

2 Place the CD(s) on the disc tray.

3 Press 1/ALL DISCS to choose "1 DISC" or "ALL DISCS".

4 Press PLAY MODE repeatedly until "SHUFFLE" appears in the display.



5 Press .P. "J" appears and then all the tracks play in random order.

To stop shuffle play

Press p.

To cancel shuffle play

Press PLAY MODE repeatedly until "SHUFFLE" or "PROGRAM" disappears from the display. The tracks continue playing in their original order.

To select a desired CD

Press DISC 1 - 3 during shuffle play.

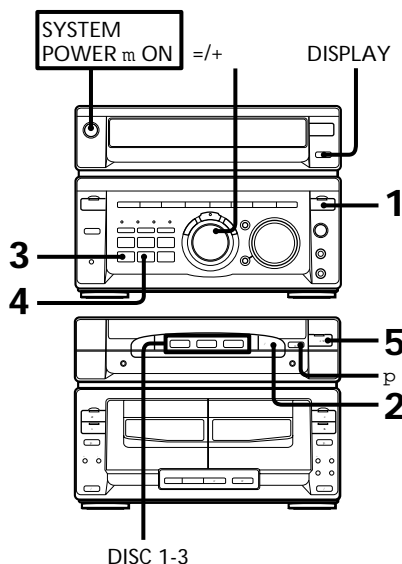
To skip an undesired track

Turn the JOG dial clockwise (or press + on the remote).

Playing Tracks in Random Order (shuffle play)

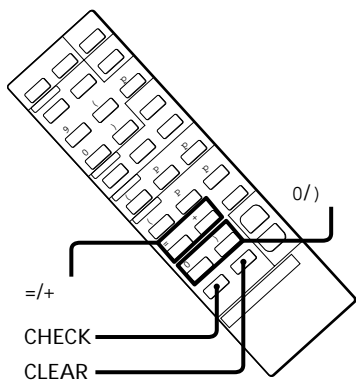
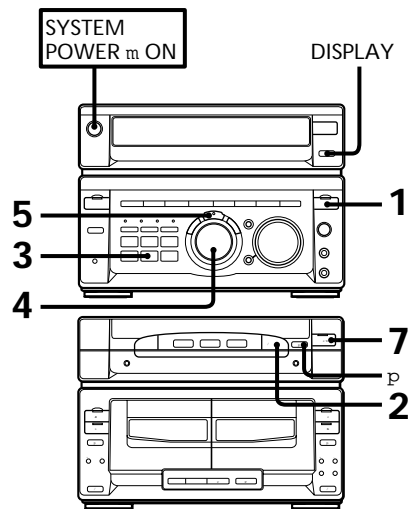
You can play all the tracks on one CD or all CDs in random order.

Use the buttons on the unit to do this operation.

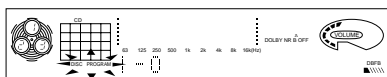


Playing Tracks in the Desired Order (programme play)

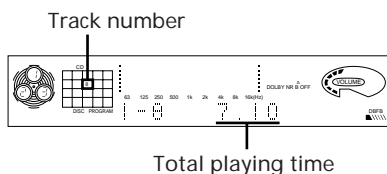
You can make a programme of up to 32 tracks from all the CDs in the order you want them to be played.



- 1 Press FUNCTION repeatedly until "CD" appears in the display.
- 2 Place the CD(s) on the disc tray.
- 3 Press PLAY MODE repeatedly until "PROGRAM" and "DISC" appear in the display.



- 4 Turn the JOG dial to choose a track. The track number and the total playing time appear.



- 5 Press ENTER/NEXT. The chosen track number lights up in the music calendar. If the track number disappears before you press ENTER/NEXT, go back to step 4.

- 6 To programme additional tracks, repeat steps 4 and 5.

- 7 Press .P. All the tracks play in the order you choose.

To	Press
Check the programme	CHECK repeatedly*1
Programme a pause	P*2
Stop play	p
Cancel programme play	PLAY MODE*3 repeatedly until "PROGRAM" or "SHUFFLE" disappear.
Erase a track from the end	CLEAR on the remote in stop mode
Erase a specific track	CHECK on the remote repeatedly so that the number of the track lights up, and press CLEAR on the remote
Erase the entire programme	p once in stop mode or twice while playing

- *1 After the last track appeared "CHECK END" appears in the display.
 *2 "P" appears and the total playing time is reset to 0.00.
 *3 The programme is erased.

To change the order of programmed tracks

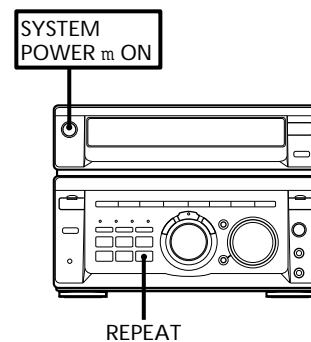
Erase the entire programme and create a new one.

Notes

- The programme you made remains in the CD player even after it has been played back. Press .P to play the same programme again.
- If "--" appears instead of the total playing time during programming, this means
 - you have programmed a track number which exceeds 20,
 - the total playing time has exceeded 100 minutes.

Playing Tracks Repeatedly (repeat play)

The repeat play function repeats a single CD or all CDs in normal play, shuffle play and programme play. Use the buttons on the unit to do this operation.



Repeating all the tracks

- 1 Press REPEAT a few times until "REPEAT" appears in the display.
- 2 Press .P.

To	Press
Repeat all the tracks on the current CD	1/ALL DISCS repeatedly until "1 DISC" appears in the display.
Repeat all the tracks on all CDs	1/ALL DISCS repeatedly until "ALL DISCS" appears in the display.
Repeat only one track	REPEAT repeatedly until "REPEAT 1" appears in the display while playing the track you want to repeat.

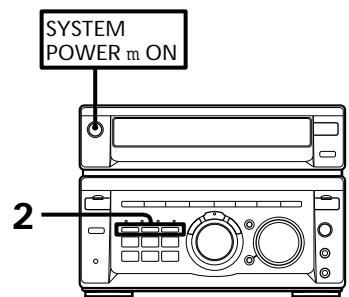
To cancel repeat play

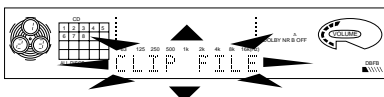
Press REPEAT so that "REPEAT" or "REPEAT 1" disappears from the display.

Grouping Tracks (music clip)

The music clip function is an easy way to create up to 3 arbitrary groups of tracks from your CDs. For example, you could store tracks for the morning in CLIP A, tracks to play for your friends in CLIP B, and tracks for relaxing in CLIP C. Once you store one or more tracks in a music clip(s), the player recalls those tracks whenever you play the respective disc.

Storing tracks in a clip

- 
- 1 Play the track you want to store, or (in stop mode) use the JOG dial to select the track you want.
 - 2 Press a CLIP button (A, B, or C). "CLIP FILE" appears and the selected CLIP indicator (A, B, or C) appears in the display. Normal playback continues.



- 3 Repeat steps 1 and 2 to store other tracks into the same, or a different, clip.

If the memory becomes full

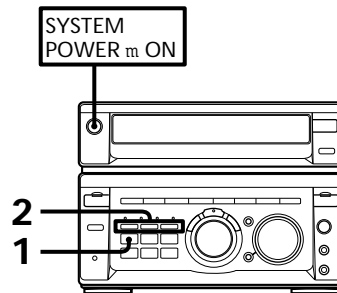
The clip data for the oldest clip is erased to make room for a new clip.

Notes

- Only tracks numbered 1 - 20 can be stored in music clips.
- In stop mode, you cannot store tracks in a music clip if "PROGRAM" is displayed.

Playing tracks in a clip (CLIP PLAY)

CLIP indicator(s) light in the display to let you know when clips are stored for a disc.



- 1 Press CLIP PLAY.
- 2 Press a CLIP button (A, B, or C). "CLIP PLAY" appears in the display and the selected CLIP indicator lights. The player starts playing tracks from the selected clip.

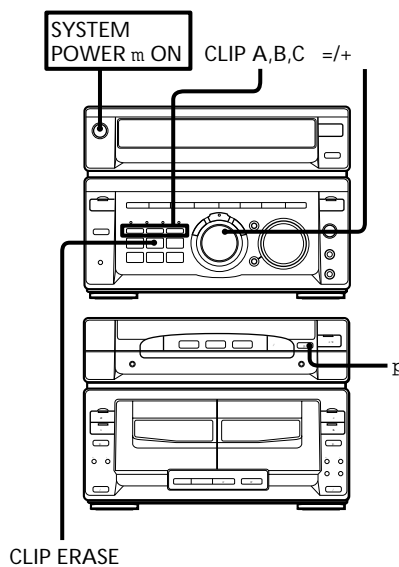
To cancel clip play

Press p.

Notes

- In 1 DISC mode, the tracks stored for the selected disc are played back once, then clip play is released.
- In ALL DISCS mode, all the tracks stored for the currently loaded discs are played back once, then clip play is released.

Erasing tracks from a clip



Erasing 1 track

- 1 Press CLIP PLAY.
- 2 Press the CLIP button (A, B, or C) for the clip containing the track you want to erase.

- 3 Use the JOG dial to select the track you want to erase.
- 4 Press CLIP ERASE. "ERASE A - C" and "TRACK" appear alternately in the display.
- 5 Press the CLIP button (A, B, or C) you pressed in step 2 to erase the track.

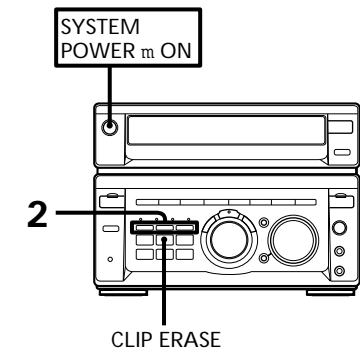
Erasing all the tracks

All tracks stored in a CLIP will be erased.

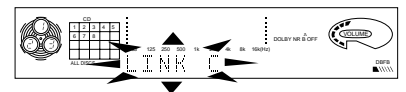
- 1 In stop mode, press CLIP ERASE. "ERASE A - C" and "ALL" appear alternately in the display.
- 2 Press a CLIP button (A, B, or C) to specify the clip you want to erase.

Storing effects in a clip

You can store one equalizer effect in each music clip. When you play the clip, the effect activates automatically, even if EFFECT ON/OFF is set to OFF.



- 1 Use the graphic equalizer and surround sound to adjust the sound as you desire (see "Sound Adjustment").
- 2 Press and hold down a CLIP button (A, B, or C) to store the current equalizer and surround levels in the respective clip. "LINK (A, B, or C)" appears in the display and the effect is stored in the clip.



To change the effect

Store a new effect. The previous effect is replaced by the new one.

To cancel the effect

- 1 Press and hold CLIP ERASE. "SELECT A - C" and "LINK OFF" appear alternately in the display.
- 2 Press the CLIP button (A, B, or C) for the clip containing the effect you want to turn off. "LINK (A, B, or C) OFF" appears in the display and the effect is erased from the clip.

Chapter 3: the Radio

Listening to the Radio

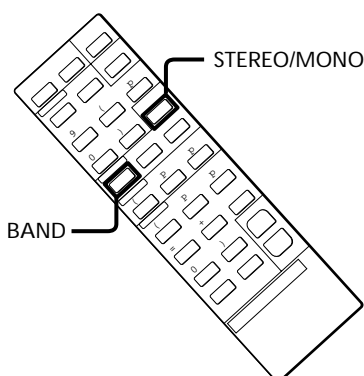
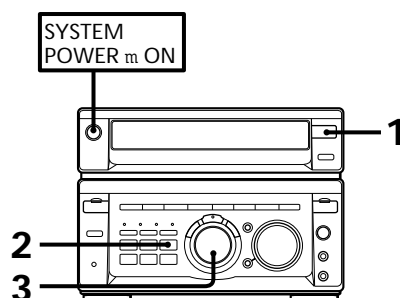
Presetting Radio Stations

Playing Preset Radio Stations

Tuning by Programme Type (PTY)

Listening to the Radio

When you want to play a radio programme, you can have the tuner automatically scan the radio frequencies and tune in the stations with clear signals. This feature saves you time in searching for stations with clear signals. However, stations with weak signals may be skipped by automatic tuning. Manually tune in the ones skipped by automatic tuning.



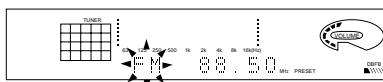
- 1 Press TUNER/BAND (or BAND on the remote) repeatedly until the band you want appears in the display. As you press this button, the band changes as follows:

German and Italian models

FM ~ AM

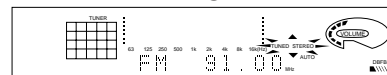
Other models

FM n MW n LW



- 2 Press TUNING MODE repeatedly until "AUTO" appears in the display.
- 3 Turn the JOG dial clockwise to scan a higher frequency station. To tune in a lower frequency station, turn the JOG dial counter-clockwise.

The tuner starts scanning radio frequencies, and stops automatically when it finds a clear station. "TUNED" appears in the display. "STEREO" also appears if the tuned FM station is broadcasting in stereo.



- 4 If you do not want to listen to the station selected, turn the JOG dial again to restart the scan.

If the tuner finds an RDS station

The frequency display changes to the station name.

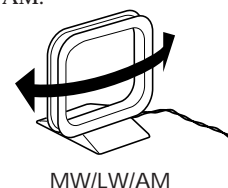
When the desired station is not tuned in

Automatic tuning may skip stations with a weak signals. Tune in the station manually.

- 1 Press TUNING MODE repeatedly until "MANUAL" appears in the display.
- 2 Keep turning the JOG dial until the desired station is tuned in.

To improve MW/LW/AM broadcast reception

Reorient the supplied AM loop aerial for MW/LW/AM.



When an FM programme is not clear to receive

Press STEREO/MONO on the remote so that "MONO" appears in the display. There will be no stereo effect, but the reception will improve. Press STEREO/MONO again to restore the stereo effect.

One Touch Play feature

Press TUNER/BAND when the power is off. You will be able to start listening to the last received station without pressing any other buttons.

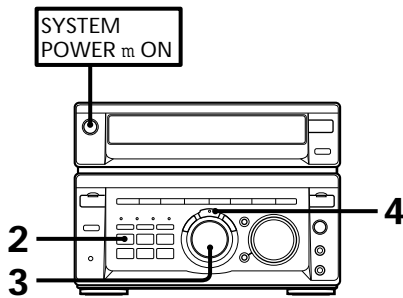
Note

- When you listen to the sound source other than tuner, you can select the tuner by pressing TUNER/BAND (Automatic Source Selection).

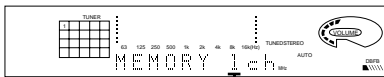
Presetting Radio Stations

You can store radio frequencies in the tuner's memory to tune in your favourite stations quickly. You can preset up to 20 FM stations, 10 MW stations and 10 LW stations in any order. For German and Italian models, you can preset up to 20 FM and 10 AM stations.

Use the buttons on the unit for presetting stations.



- 1 Tune in a station you want to store in the preset memory.
- 2 Press TUNER MEMORY. "MEMORY" and the preset channel number appear in the display.



Preset channel number

- 3 Turn the JOG dial to select a preset channel number.
- 4 Press ENTER/NEXT. The station is stored at the preset number you selected.
- 5 Repeat steps 1 to 4 for each station you want to store.

To erase a stored station

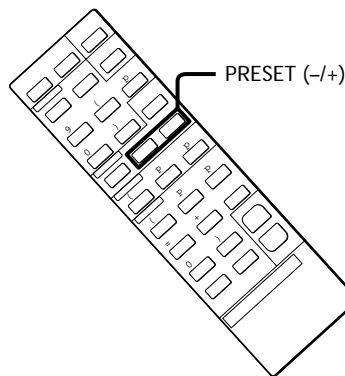
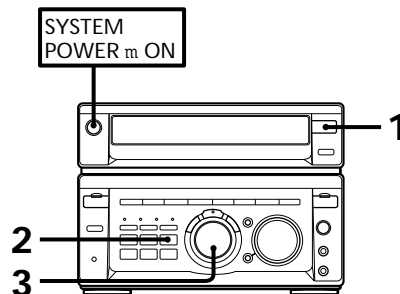
Store a new station at a previously used preset channel number. It will erase the old station and replace it with the new station.

If you have trouble storing a station or if you made a mistake

Repeat steps 1 to 5.

Playing Preset Radio Stations

Once you have preset the stations, use the JOG dial to quickly tune in your favourite stations.



- 1 Press TUNER/BAND repeatedly to select the band you want.

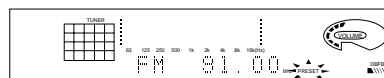
German and Italian models

FM ~ AM

Other models

FM n MW n LW

- 2 Press TUNING MODE so that "PRESET" appears in the display.



- 3 Turn the JOG dial (or press PRESET (-/+)) to tune in a preset station. The station frequency appears and the system begins receiving the stations.

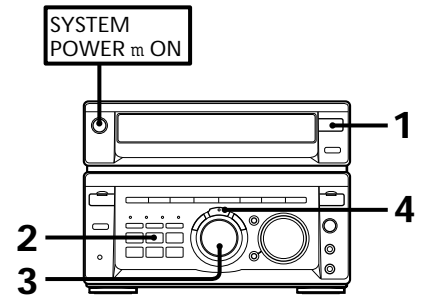
If the station is an RDS station

The station name appears instead of the frequency display.

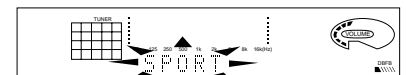
Tuning by Programme Type (PTY)

You can use this tuner's programme type (PTY) function to tune preset stations according to the type of programme you want to hear.

Be sure to preset radio stations beforehand.



- 1 Press TUNER/BAND to select the FM band.
- 2 Press PTY. "SELECT" appears in the display.
- 3 Use the JOG dial to select the programme type (PTY) you desire. (See the following page for descriptions of the available program types.)



Programme type (PTY) name

- 4 Press ENTER/NEXT. The tuner searches the preset stations for the selected programme type.

When the tuner locates a preset station

A preset station number flashes in the display, and the tuner changes to that station's frequency.

If more than one preset station number flashes in the display

There is more than one preset station broadcasting the selected PTY. Use the jog dial to select the preset station you desire and press ENTER/NEXT while the preset station number flashes in the display.

To check the RDS information

Each time you press DISPLAY, the display changes as follows:

```
m Station name
  μ
Frequency
  μ
Programme type
  μ
Clock display
  μ
Effect name
```

Note

“NO PTY” appears in the display and the tuner returns to the original station if no preset stations are currently broadcasting that PTY.

You can choose from the following programme types:

Programme type	What you hear
NEWS	News programmes
AFFAIRS	Topical programmes that expand on current news
INFO	Programmes about consumer affairs, medical advice, and weather
SPORT	Sports programmes
EDUCATE	Educational programmes, such as a “how-to” programmes and advice
DRAMA	Radio plays and serials
CULTURE	Programmes about national or regional culture, such as religion, language, and societal concerns
SCIENCE	Programmes about the natural sciences and technology
VARIED	Other types of programmes such as, celebrity interviews, panel games, and comedy
POP M	Popular music programmes
ROCK M	Rock music programmes
M-O-R M	Easy Listening (middle of the road music)
LIGHT M	Classical music, such as instrumental, vocal, and choral works
CLASSICS	Performances of major orchestras, chamber music, opera, etc.
OTHER M	Music that does not fit into any of the above categories, such as jazz and rhythm and blues
ALARM	Emergency broadcasts
NONE	Any programmes not defined above

Chapter 4: the Tape Player

Playing a Tape

Recording a CD

Recording a CD: Selecting Tape Length (tape select edit)

Recording a CD: Specifying Tape Length (time edit)

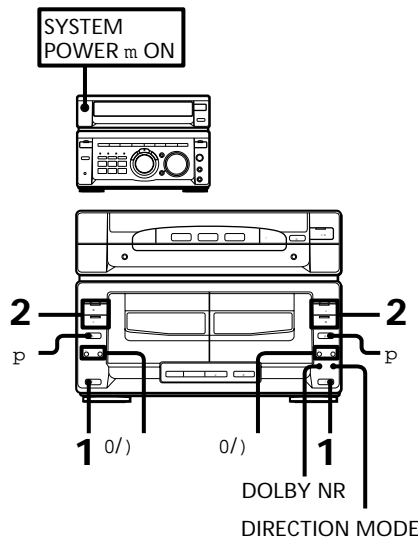
Recording a CD: Specifying Track Order (programme edit)

Recording From the Radio

Recording From Another Tape (dubbing)

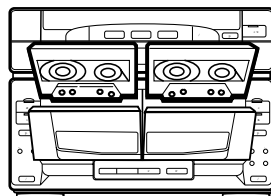
Playing a Tape

You can use TYPE I (normal), TYPE II (CrO₂) and TYPE IV (metal) tapes. When you insert a tape, the deck detects the tape type automatically.



- 1 Press § EJECT to open tape compartment.

Insert a recorded tape in deck A or B with the tape side facing down and the side you want to play facing forward. Push to close the compartment.



- 2 Press · (to play the front side) or ^a (to play the reverse side). The tape starts playing.

To play	Press DIRECTION MODE to select
One side of the tape	A
Both sides*	β
Both decks in succession**	RELAY

* The deck stops automatically after repeating the sequence five times.

** See "To play both decks in succession (relay play)".

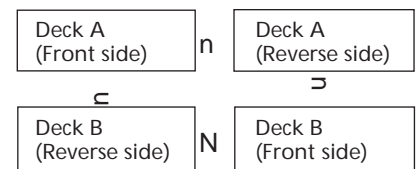
To	Press
Stop play	p
Pause	P PAUSE
Resume play after pause	P PAUSE or ^a or ·
Fast forward) for front side 0 for reverse side
Rewind	0 for front side) for reverse side
Remove the cassette	§ EJECT

Using the remote

- 1 Press A-DECK or B-DECK to choose the deck you want to control (a corresponding message appears in the display).
- 2 Press the desired operation button.

To play both decks in succession (relay play)

Relay play always follows the following sequence. When the reverse side of the tape in deck B finishes playing, the following sequence continues four more times.



- 1 Press § EJECT and insert recorded tapes in both decks.
- 2 Press DIRECTION MODE repeatedly until "RELAY" appears in the display.
- 3 Press ^a or · on either deck. To stop relay play, press p.

To cancel relay play

Press DIRECTION MODE repeatedly until "A" or "B" appears in the display.

When listening to a tape recorded with the

Dolby* B-type noise reduction system

Press DOLBY NR button so that "DOLBY NR B" appears in the display.

The setting affects both decks. Dolby noise reduction system reduces tape hiss noise in low-level high-frequency signals.

* Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation. "DOLBY" and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.

One Touch Play feature

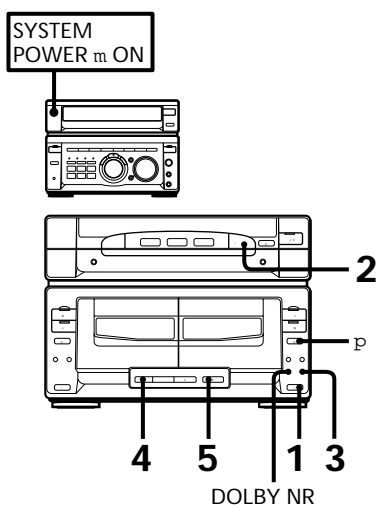
Press · or ^a when the power is off. When a tape is in the player, you will immediately be able to listen to the tape without pressing any other buttons. If no tape is inserted, the system will just turn on.

Recording a CD

You can record from a CD to a tape. Use TYPE I (normal) or TYPE II (CrO₂) tapes. Do not use TYPE IV (metal) tapes for recording. You cannot listen to other sources while recording.

Recording a CD Automatically

By using the CD SYNCHRO button, you can record from a CD to a tape easily. Use the buttons on the unit for this operation.



- 1 Press § EJECT and insert a blank tape into deck B with the side you want to record on facing forward. Recording starts from the front side of the tape, unless you change the playing direction before recording. Make sure the tabs on the cassette have not been removed.
- 2 Press § OPEN/CLOSE/EX-CHANGE and place a CD. Then, press § OPEN/CLOSE/EX-CHANGE again to close the CD tray. If the indicator for the disc tray containing the CD you want to record is not lit green, press DISC SKIP repeatedly so that it lights green.
- 3 Select dual or single-sided recording.

To record	Press DIRECTION MODE to select
One side of the tape	A
Both sides*	β or RELAY

* Recording always stops at the end of the reverse side. Be sure to start from the front side.

- 4 Press CD SYNCHRO. Deck B stands by for recording.
- 5 Press P PAUSE to release recording pause. Recording starts. After about 10 seconds, the CD starts playing.

To stop recording

Press p on the tape player or the CD player.

To activate DOLBY NR

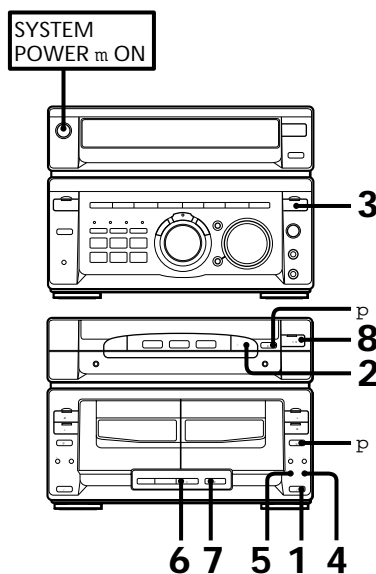
When you want to reduce the hiss noise in low-level high-frequency signals, press DOLBY NR so that "DOLBY NR B" appears in the display after step 3.

To record with the surround effect

Press SURROUND so that "SUR [surround icon]" appears in the display.

Recording a CD Manually

You can record a CD as you like, for instance, record just the songs you want or record from the middle of the tape.



- 1 Press § EJECT and insert a blank tape into deck B with the side you want to record on facing forward. Recording starts from the front side of the tape, unless you change the playing direction before recording. Make sure the tabs on the cassette have not been removed.
- 2 Press § OPEN/CLOSE/EX-CHANGE and place a CD. Then, press § OPEN/CLOSE/EX-CHANGE again to close the CD tray. If the button for the disc tray containing the CD you want to record is not lit green, press DISC SKIP repeatedly so that it lights green.

- 3 Press FUNCTION to select the CD player.

- 4 Select dual or single-sided recording.

To record	Press DIRECTION MODE to select
One side of the tape	A
Both sides*	β or RELAY

* Recording always stops at the end of the reverse side. Be sure to start from the front side.

- 5 When you want to reduce the hiss noise in low-level high-frequency signals, press DOLBY NR so that "DOLBY NR B" appears in the display.

- 6 Press r REC. Deck B stands by for recording.

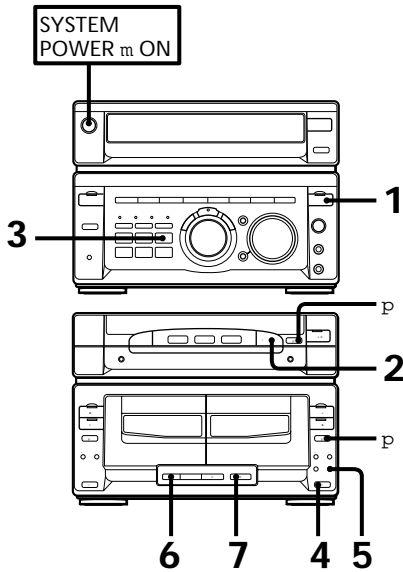
- 7 Press P PAUSE to release recording pause. Recording starts.

- 8 Press ·P on the CD player. The CD starts playing.

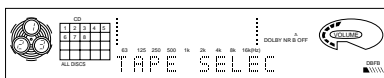
To	Press
Stop recording	p on the tape player
Pause recording	P PAUSE
Stop CD play	p on the CD player
Pause CD play	·P on the CD player

Recording a CD: Selecting Tape Length (tape select edit)

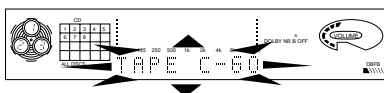
You can have the stereo system select and indicate the most suitable tape length for recording each disc automatically. You cannot use Tape Select Edit for discs which contain 21 tracks or more.



- 1 Press FUNCTION repeatedly until "CD" appears in the display.
- 2 Press § OPEN/CLOSE/EX-CHANGE and place a CD. Then, press § OPEN/CLOSE/EX-CHANGE again to close the CD tray.
If the button for the disc tray containing the CD you want to record is not lit green, press DISC SKIP repeatedly so that it lights green.
- 3 Press EDIT.
"TAPE SELECT" appears and the player divides the selections automatically. Then the display changes as follows:



Tape length required



- 4 Insert a blank tape of the indicated length (or longer) into deck B.

- 5 Select dual or single-sided recording.

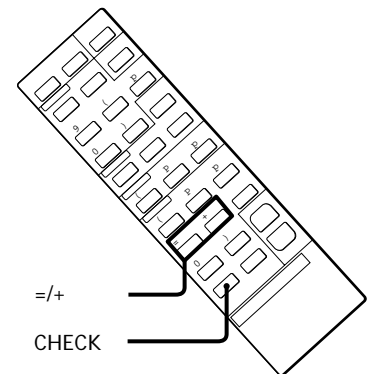
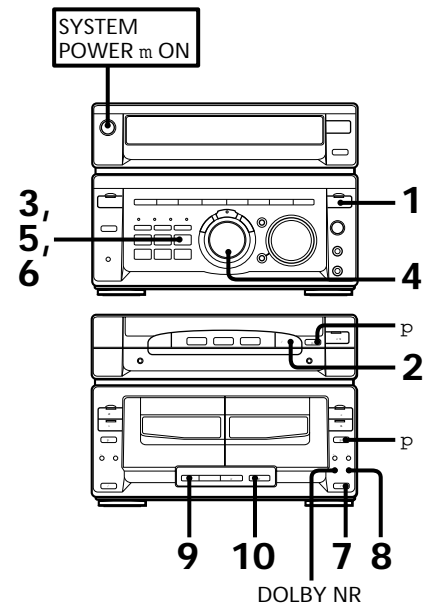
To record	Press DIRECTION MODE to select
One side of the tape	A
Both sides*	β or RELAY

* Recording always stops at the end of the reverse side. Be sure to start from the front side.

- 6 Press CD SYNCHRO.
Deck B stands by for recording.
- 7 Press P PAUSE to release recording pause.
Recording starts. After about 10 seconds, the CD starts playing.

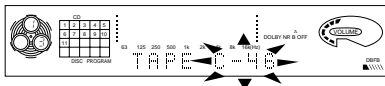
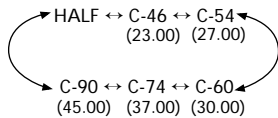
Recording a CD: Specifying Tape Length (time edit)

You can have the stereo system create programmes that will fit the tape length. For example, if you use a 40-minute tape to record a 46-minute CD, the CD player will automatically choose tracks that will fit within the 40-minutes, filling as much of the tape as possible. The player will not programme those tracks beyond track number 20. Use the buttons on both the unit and the remote to do this operation.



- 1 Press FUNCTION repeatedly until "CD" appears in the display.
- 2 Press § OPEN/CLOSE/EX-CHANGE and place a CD.
Then, press § OPEN/CLOSE/EX-CHANGE again to close the CD tray.
If the button for the disc tray containing the CD you want to record is not lit green, press DISC SKIP repeatedly so that it lights green.

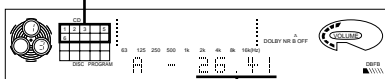
- 3 Press EDIT twice.
"TAPE SELECT" then "TIME EDIT" appear in the display.
- 4 Turn the JOG dial (or press = or + on the remote) to choose the indication that corresponds to the length (in minutes) of your tape.
The indications change as follows:



Choose "HALF" if you want the CD player to half of the total playing time of the CD. You cannot select "HALF" when recording CDs with more than 20 tracks.

- 5 Press EDIT.
The CD player determines the tracks to be recorded on side A automatically.

Tracks to be recorded on side A



Total playing time on side A

- 6 To record on both sides, press EDIT again. The CD player determines the tracks to be recorded on side B.
If you only want to record on side A, press p on the CD player to stop the flashing in the display.
- 7 Press § EJECT and insert a blank tape into deck B with the side you want to record on facing forward.
Recording starts from the front side of the tape, unless you change the playing direction before recording.
Make sure the tabs on the cassette have not been removed.

- 8 Select dual or single-sided recording.

To record	Press DIRECTION MODE to select
One side of the tape	A
Both sides*	β or RELAY

* Recording always stops at the end of the reverse side. Be sure to start from the front side.

- 9 Press CD SYNCHRO.
Deck B stands by for recording.

- 10 Press P PAUSE to release recording pause.
Recording starts.
After about 10 seconds, the CD starts playing.

To stop recording
Press p on the tape player or the CD player.

To check the order
Press CHECK on the remote repeatedly. Each time you press CHECK, the number of the programmed tracks appear in the display.

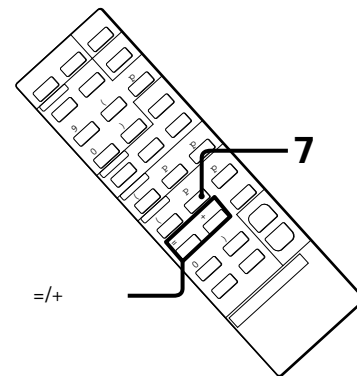
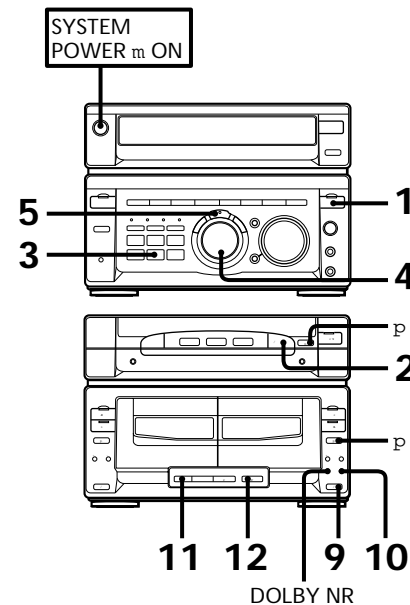
To cancel time edit
Press p on the CD player, then press PLAY MODE.

To select the desired tracks beforehand
You can record certain tracks (up to 20) first by selecting them before time editing. See "Playing Tracks in the Desired Order (programme play)".

To activate DOLBY NR
When you want to reduce the hiss noise in low-level high-frequency signals, press DOLBY NR so that "DOLBY NR B" appears in the display after step 8.

Recording a CD: Specifying Track Order (programme edit)

You can adjust the total recording time to the tape length while making a programme.



- 1 Press FUNCTION repeatedly until "CD" appears in the display.
- 2 Press § OPEN/CLOSE/EX-CHANGE and place a CD.
Then, press § OPEN/CLOSE/EX-CHANGE again to close the CD tray.
If the button for the disc tray containing the CD you want to record is not lit green, press DISC SKIP repeatedly so that it lights green.
- 3 Press PLAY MODE repeatedly until "PROGRAM" appears in the display.
- 4 Turn the JOG dial (or press = or + on the remote) to choose a track.

continue to next page →

→ **continued**

- 5** Press ENTER/NEXT.
The chosen track number lights up in the music calendar and is memorized. If the track number disappears before you press ENTER/NEXT, go back to step 4.
- 6** Repeat steps 4 and 5 to programme the remaining tracks you want to record on side A in the order you want them to be recorded.
- 7** Press P on the remote to pause recording at the end of side A. "P" appears in the display. The total playing time "0.00" is displayed.
- 8** Repeat steps 4 and 5 to programme the remaining tracks you want to record on side B in the order you want them to be recorded.
- 9** Press § EJECT and insert a blank tape into deck B with the side you want to record on facing forward. Recording starts from the front side of the tape, unless you change the playing direction before recording. Make sure the tabs on the cassette have not been removed.
- 10** Select dual or single-sided recording.

To record	Press DIRECTION MODE to select
One side of the tape	A
Both sides*	β or RELAY

* Recording always stops at the end of the reverse side. Be sure to start from the front side.

- 11** Press CD SYNCHRO.
Deck B stands by for recording.
- 12** Press P PAUSE to release recording pause. Recording starts. After about 10 seconds, the CD starts playing.

To stop recording
Press p on the tape player or the CD player.

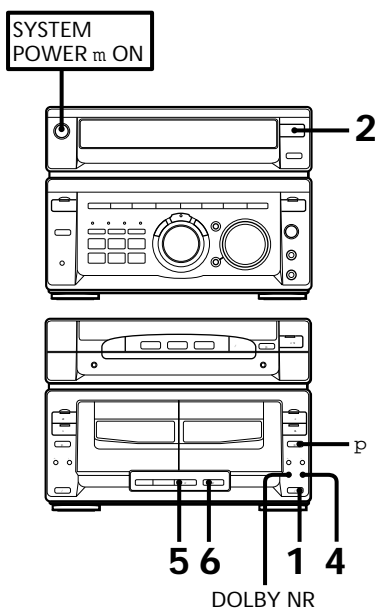
To check the order
Press CHECK repeatedly. Each time you press CHECK, the number of the programmed tracks appear in the display.

To cancel programme edit
Press PLAY MODE repeatedly until "PROGRAM" or "SHUFFLE" disappears from the display.

To activate DOLBY NR
When you want to reduce the hiss noise in low-level high-frequency signals, press DOLBY NR so that "DOLBY NR B" appears in the display after step 10.

Recording From the Radio

You can record from the tuner onto a tape. Use TYPE I (normal) or TYPE II (CrO₂) tape.



- 1** Press § EJECT and insert a blank tape into deck B with the side you want to record on facing forward. Recording starts from the front side of the tape, unless you change the playing direction before recording. Make sure the tabs on the cassette have not been removed.
- 2** Press TUNER/BAND several times until the desired radio band appears.
- 3** Tune in the radio station you want to record. (See "Listening to the Radio", or "Playing Preset Radio Stations" for details.)
- 4** Select dual or single-sided recording.

To record	Press DIRECTION MODE to select
One side of the tape	A
Both sides*	β or RELAY

* Recording always stops at the end of the reverse side. Be sure to start from the front side.

- 5** Press r REC.
Deck B stands by for recording.
- 6** Press P PAUSE to release recording pause. Recording starts.

To stop recording
Press p on the tape player.

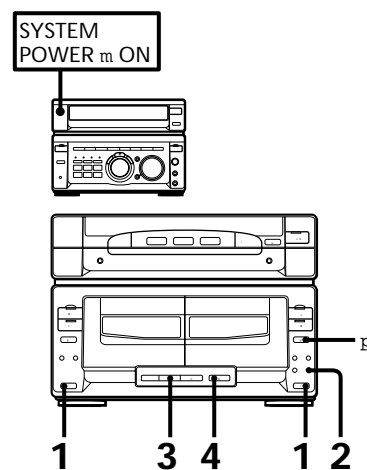
To reduce noise during AM recording
If a whistling noise is heard while recording, reorient the AM loop aerial for optimum reception.

To activate DOLBY NR
When you want to reduce the hiss noise in low-level high-frequency signals, press DOLBY NR so that "DOLBY NR B" appears in the display after step 4.

Recording From Another Tape (dubbing)

Dubbing Another Tape Automatically

You can record the whole tape onto another automatically by using high speed dubbing. Use the buttons on the unit to do this operation and TYPE I (normal) or TYPE II (CrO₂) tape for dubbing.



- 1** Press § EJECT and insert a recorded tape in deck A with the side you want to play facing forward. Also, insert a blank tape in deck B with the side you want to record on facing forward.

Recording and playback start from the front side of the tape, unless you change the playing direction before recording. Make sure the tabs on the cassette have not been removed.

- Choose how you want the tape to record and press DIRECTION MODE repeatedly until the desired mode appears.

Indication	Operation
A	Dubbing stops at the end of one side.
β	When the tape in one deck comes to the end of the front side, it reverses immediately regardless of the tape position in the other deck.
RELAY	When the tape in one deck reaches its end of the front side, it stops until the other tape come to its end, and then both tapes reverse together.

- Press HIGH SPEED DUBBING. Deck B stands by for recording.

- Press P PAUSE. The tape starts dubbing. If you set DIRECTION MODE to β or RELAY, recording always stops at the end of the reverse side.

To stop dubbing

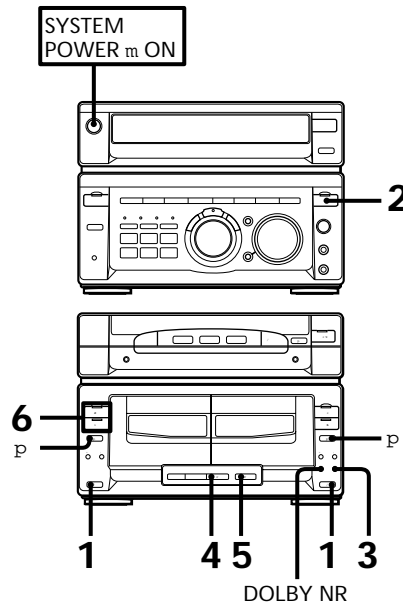
Press p.

You do not have to press DOLBY NR with high speed dubbing

The tape in deck B is automatically recorded in the same state as the tape in deck A.

Dubbing Another Tape Manually

When you want to dub only part of the tape, dub manually at normal speed. Use TYPE I (normal) or TYPE II (CrO₂) tape for recording.



- Press § EJECT and insert a recorded tape in deck A with the side you want to play facing forward.

Also, insert a blank tape in deck B with the side you want to record on facing forward.

Recording and playback start from the front side of the tape, unless you change the playing direction before recording. Make sure the tabs on the cassette have not been removed.

- Press FUNCTION repeatedly until "TAPE" appears in the display.

- Select dual or single-sided recording.

To record	Press DIRECTION MODE to select
One side of the tape	A
Both sides*	β or RELAY

* Recording always stops at the end of the reverse side. Be sure to start from the front side.

- Press r REC. Deck B stands by for recording.

- Press P PAUSE to release recording pause. Recording starts.

- Press · or ^a on deck A to start playback.

To stop recording

Press p on deck A and B.

Notes

- When dubbing tapes originally recorded with Dolby NR B, the dubbed tape is automatically recorded with Dolby NR B.
- When you want to record a tape recorded without Dolby NR B onto another tape using Dolby NR B, press DOLBY NR so that "DOLBY NR B" appears in the display before recording.

Chapter 5: Sound Adjustment

Adjusting the Sound

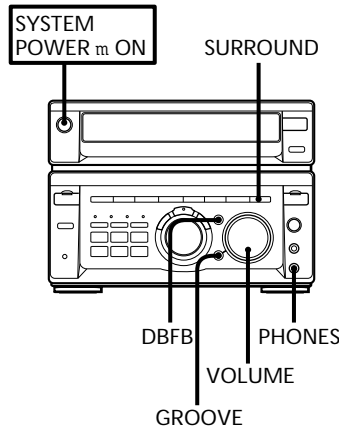
Selecting the Audio Emphasis

Adjusting the Audio Emphasis

Making a Personal Audio Emphasis File (personal file)

Adjusting the Sound

To fully enjoy the sound coming from your stereo system, make the following audio adjustments. See the following sections for additional sound adjustments.



To adjust the volume

Turn VOLUME on the unit or press VOL (+/-) on the remote.

To reinforce the bass

Press DBFB* to choose either DBFB or DBFB . The display changes as follows:

display off n DBFB n DBFB

“DBFB ” is more effective than “DBFB ”.

* DBFB = Dynamic Bass Feedback

If you use the Dynamic Bass Feedback System with the graphic equalizer

If the bass is too strong, the music will sound distorted. Adjust the bass slowly while listening to music so that you can monitor the effect of the adjustment.

To get a powerful sound (GROOVE)

Press GROOVE. The volume switches to power mode, DBFB is automatically set to full strength, the equalizer curve changes, and the “GROOVE” button lights up. Press GROOVE again to return to the previous volume.

Note

- Cancelling GROOVE does not cancel the DBFB level or equalizer curve. To cancel the DBFB level, press DBFB repeatedly until “DBFB ” or “DBFB ” disappears from the display. Adjust the equalization to obtain the effect you desire.

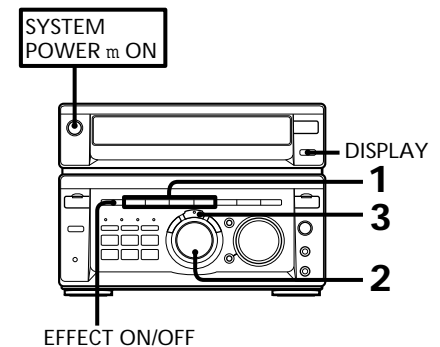
To listen through the headphones

Connect the headphones to PHONES jack. No sound will come from the speakers.

Selecting The Audio Emphasis

Your stereo system is provided with 20 different preset effects (music menu) created from different graphic equalizer and surround effect settings.

With the press of a single button, you can choose between a variety of effects according to musical genre or use. The personal file function (see “Making a Personal Audio Emphasis File (personal file)”) lets you store your own effects.



1 Press one of the MENU buttons.

See the chart “Music menu Options” on the following page. The last effect chosen from that menu appears in the display.

2 Use the JOG dial to select the preset you desire.

The preset name appears in the display.

3 Press ENTER/NEXT.

To cancel the effect

Press EFFECT ON/OFF so that “EFFECT OFF” appears in the display.

Music menu options

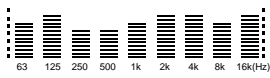
“SUR ” appears if you select an effect with surround effects.

MENU button	Effect	For
MENU 1	ROCK POPS JAZZ CLASSIC DANCE	standard music sources
MENU 2	SALSA REGGAE BALLADE OLDIES SOUL	
MENU 3	MORNING DAY EVENING NIGHT RELAX	listening situations
MENU 4	GAME COCKTAIL PARTY CHEEK MOVIE	special listening situations

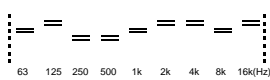
To change the equalizer display

Each time you hold down DISPLAY for a few seconds, the equalizer display changes to show one of the following displays.

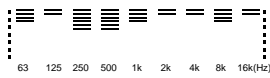
Spectrum analyzer 1



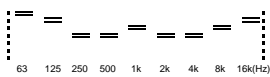
Spectrum analyzer 2



Spectrum analyzer 3



Graphic equalizer curve



Adjusting the Audio Emphasis

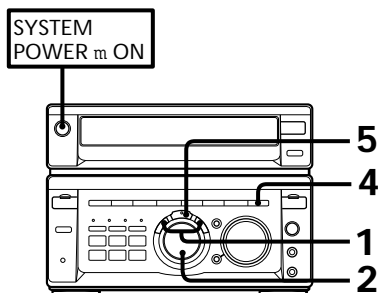
You can adjust the audio emphasis using the following two functions:

- Graphic Equalizer
- Surround Effect

Adjusting the Sound (graphic equalizer)

You can adjust the sound by raising or lowering the levels of specific frequency ranges.

Before operation, first select the audio emphasis you want for your basic sound.



- 1 Press FREQUENCY + or - to select a frequency band.
- 2 Turn the JOG dial to adjust level.
- 3 Repeat steps 1 and 2.
- 4 Press SURROUND if you want to add the surround effect. "SUR [|||||]" appears in the display. Press again to cancel.
- 5 Press ENTER/NEXT when finished. The equalizer disappears from the display but you can hear the effect of the adjustments.

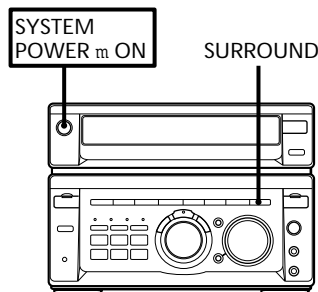
Note

- If you choose another menu audio emphasis (other than "EFFECT OFF") the adjusted sound effect is lost. To retain the adjusted sound effect for future use, store it in a personal file. (See "Making a Personal Audio Emphasis (personal file)".)

Activating the Sound Field (surround effect)

You can use the surround effect without connecting surround speakers.

Before operation, first select the audio emphasis you want for your basic sound.



To turn on the surround effect

Press SURROUND. "SUR [|||||]" appears in the display.

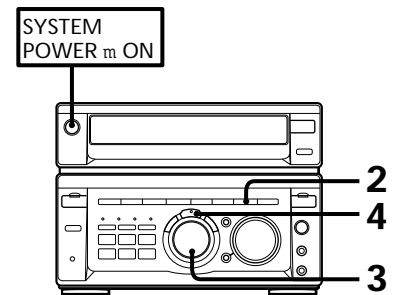
To turn off the surround effect

Press SURROUND again. "SUR [|||||]" disappears from the display.

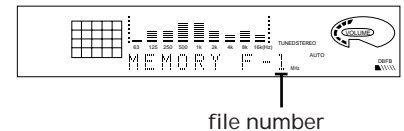
Making a Personal Audio Emphasis File (personal file)

You can create a personal file of audio patterns and store them in the memory of the graphic equalizer. Later call up an audio pattern to play a favourite tape, CD, or radio programme. Create up to five audio files.

Before operation, first select the audio emphasis you want for your basic sound.



- 1 Obtain the sound effect you want by using the graphic equalizer and surround effect.
- 2 Press MEMORY while the equalizer curve is flashing. The personal file number appears in the display.



- 3 Use the JOG dial to select the file number (P FILE) where you want to store the sound effect.
- 4 Press ENTER/NEXT. The adjusted sound effects are stored under the selected file number. The settings previously stored at this memory location are erased and replaced by the new settings.

To call up the personal file

- 1 Press P FILE. The last selected personal file appears in the display.
- 2 Use the JOG dial to select the personal file you desire.
- 3 Press ENTER/NEXT.

Chapter 6:

Additional Features

Falling Asleep to Music

Waking Up to Music

Timer-Recording Radio Programmes

Microphone Mixing

Karaoke: Singing Along

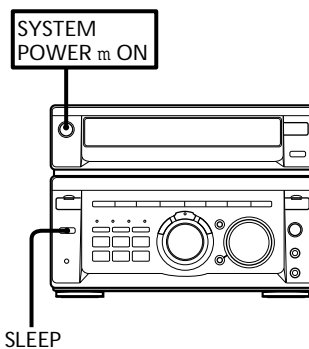
Connecting Optional Equipment

Falling Asleep to Music

You can set the stereo system to turn off automatically so you can go to sleep to music (sleep timer).

Before setting the sleep timer, make sure the clock has been set correctly.

This stereo system allows combined use of the sleep and wakeup timers.



- 1 Play your favourite sound source (a tape, the tuner or a CD).
- 2 Press SLEEP repeatedly to choose how long you want the music to play. The sleep time indication appears in the display.

AUTO n 90 n 80 ... 10 n OFF

The minute indication sets the timer to turn the power off after 90 to 10 minutes in ten minute intervals.

When you choose AUTO

The power turns off when the current CD or tape (side 1) finishes playback (for up to 100 minutes). The power will also turn off, even if you fast forward or rewind the tape.

To cancel the sleep timer

Press SLEEP repeatedly until "OFF" appears in the display.

To check the remaining time before the sleep timer turns off the system

Press SLEEP once.

The remaining time (in minutes) is displayed for several seconds.

To change the remaining time while the sleep timer is on

Press SLEEP repeatedly to select the remaining time you desire.

To turn off the system before the sleep timer turns off the system

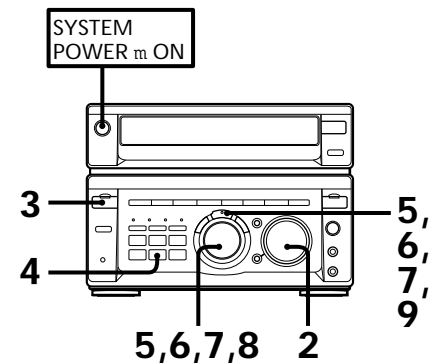
Press SYSTEM POWER.

Note

While the sleep timer is activated, the daily and recording functions do not work.

Waking Up to Music

You can wake up to music at a preset time. You only need to set the timer once. When you select the CD player as the sound source, you can play a CD in any mode (normal, shuffle, or programme). Before setting the timer, make sure the clock has been set correctly.



- 1 Prepare the sound source.

To wake up to the radio

Tune in the preset station you want.

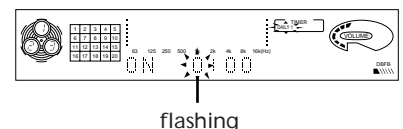
To wake up to a CD

Insert a CD. If you want it to play from a specific track, do the necessary procedures for programmed CD play (see "Playing Tracks in the Desired Order (programme play)").

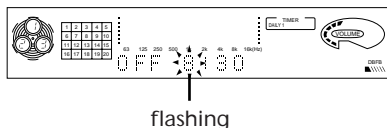
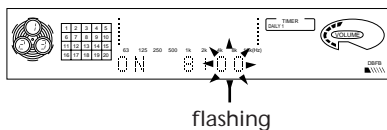
To wake up to a tape

Insert the tape with the side you want to play facing forward. If you insert the tapes in both decks, you hear the sound from deck A.

- 2 Turn VOLUME to adjust the volume.
- 3 Press TIMER.
- 4 Press TIMER SET.
- 5 Use the JOG dial to select either DAILY 1 or 2 and press ENTER/NEXT. "ON" appears and the hour digits flash in the display.

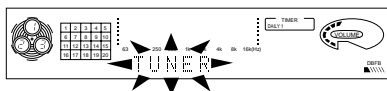


- 6** Use the JOG dial to set the hour you want the system to turn on and press ENTER/NEXT.
Set the minutes in the same way. "OFF" appears and the hour digits flash in the display.



- 7** Use the JOG dial to set the hour you want the system to turn off and press ENTER/NEXT.
Set the minutes in the same way.
- 8** Use the JOG dial to select a sound source.
The display changes as follows:

TUNER ~ TAPE PLAY N
CD PLAY ~ MD PLAY N



- 9** Press ENTER/NEXT.
The preset items appear in the display sequentially.
- 10** Press SYSTEM POWER to turn off the system.
At the preset time, the power will go on at the preset time and the music will play. At the turn-off time, the power will go off again.

To change the preset timer settings
Start over from step 1.

To check the preset timer settings

- 1 Press TIMER.
- 2 Press TIMER SELECT and use the JOG dial to choose the mode you want to check.
- 3 Press ENTER/NEXT.
The preset items appear in the display sequentially, then the original display returns.

To change the timer

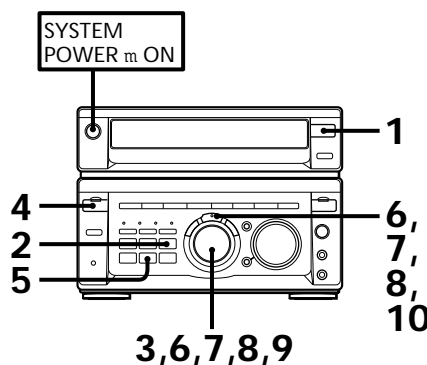
Select the timer display you desire in step 2 of "To check the preset timer settings".

To cancel the timer

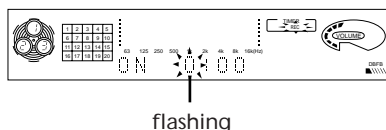
- 1 Press TIMER.
- 2 Press TIMER SELECT and use the JOG dial to choose "TIMER OFF."
- 3 Press ENTER/NEXT.
The next time you want to use the timer, select the timer display you used in step 2 (DAILY 1 or DAILY 2) and press ENTER/NEXT.

Timer-Recording Radio Programmes

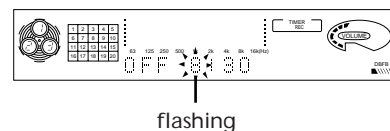
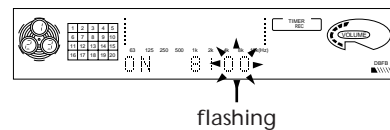
You can set the timer to record from the radio at a certain time. This timer works only once for each setting. The volume level is automatically set to MIN.
You can record with a Sony MD recorder with AU BUS.
Be sure to connect the MD recorder to the AU BUS jack.
Make sure the clock has been set correctly.



- 1 Press TUNER/BAND repeatedly until the band you want appears in the display.
- 2 Press TUNING MODE repeatedly until the PRESET indicator lights up.
- 3 Use the JOG dial to tune in a preset station.
- 4 Press TIMER.
- 5 Press TIMER SET.
- 6 Use the JOG dial to select REC and press ENTER/NEXT.
"ON" appears and the hour digits flash in the display.

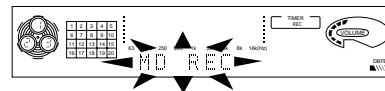


- 7** Use the JOG dial to set the hour you want the system to turn on and press ENTER/NEXT.
Set the minutes in the same way. "OFF" appears and the hour digits flash in the display.



- 8** Use the JOG dial to set the hour you want the system to turn off and press ENTER/NEXT.
Set the minutes in the same way.
- 9** Use the JOG dial to select the recording equipment.
The display changes as follows:

TAPE REC ~ MD REC



- 10** Press ENTER/NEXT.
The preset items appear in the display sequentially.
- 11** Prepare the recording equipment.

To record on a tape
Insert a tape into deck B.
If necessary, select the direction mode and Dolby NR.

To record on a mini disc
Insert a mini disc into the MD recorder.

- 12** Press SYSTEM POWER to turn off the system.
The power comes on 15 seconds before the preset time and the volume is automatically set to MIN.

Note

- The timer operation actually starts 15 seconds before the timer ON time. If you perform another operation at during period, the timer operation may not be performed correctly.

continue to next page →

→ **continued**

To check the preset times settings

- 1 Press **TIMER**.
- 2 Press **TIMER SELECT** and use the **JOG** dial to select "REC".
- 3 Press **ENTER/NEXT**.
The preset items appear in the display sequentially, then the original display returns.

To change the preset timer settings

Start over from step 1.

To cancel the timer

- 1 Press **TIMER**.
- 2 Press **TIMER SELECT** and use the **JOG** dial to choose "TIMER OFF."
- 3 Press **ENTER/NEXT**.
The timer indicators disappear from the display.

When a power interruption occurs for longer than half a day

The clock and timer settings are all erased, and "0:00" will flash in the display.

If the power is on at the preset time

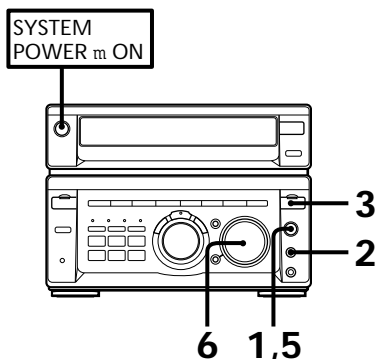
The sound source will automatically change to the tuner, but tuner recording will not start.

Note

- You cannot set the timer if the timer on and OFF times are the same.

Microphone Mixing

You can "mix" sounds by playing one of the components and singing or speaking into a microphone (not supplied). The mixed sounds can then be recorded on a tape.



- 1 Turn **MIC LEVEL** to **MIN** to turn down the microphone control level.
- 2 Connect a microphone at the **MIX MIC** jack.

- 3 Press **FUNCTION** several times to select a sound source and play it.

- 4 Sing or speak into the microphone.

- 5 Adjust the microphone volume level using **MIC LEVEL**.

- 6 Adjust **VOLUME**.
If you hear acoustic feedback, move the microphone away from the speakers or change the direction of the microphone.

- 7 If you want to record the mixed sound, insert a tape in deck B and start recording.

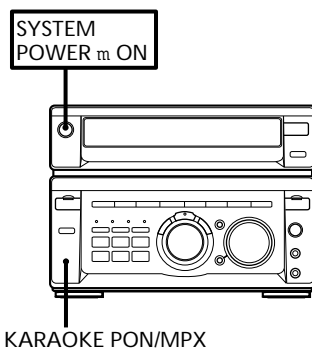
To record from the microphone only

- 1 Press **FUNCTION** repeatedly until "CD" appears in the display. If a CD is being played, press **p** on the CD player to stop playing.
- 2 Start recording.
- 3 Sing or speak into the microphone.

When you finish mixing

Turn the **MIC LEVEL** control to **MIN** and disconnect the microphone.

Karaoke: Singing Along



To Reduce the Vocals (Karaoke pon)

You can minimize the singer's voice, "vocal reduction," so you can sing along with any stereo CD or tape. When you want to record the sound of the CD or tape and your voice, operate steps below, then operate "Microphone Mixing".

To reduce the vocals

Press **KARAOKE PON/MPX** so that "h PON" appears in the display. The sound effects (**EQ** and **SURROUND**) turn off automatically and the vocals are reduced.

To cancel vocal reduction

Press **KARAOKE PON/MPX** repeatedly so that "h PON" disappears from the display. The vocals return and the sound effects (**EQ** and **SURROUND**) are re-activated.

If you press EFFECT ON/OFF or recall a sound effect with the MENU buttons
The karaoke mode is cancelled.

Notes on vocal reduction

The singer's voice may not be reduced completely for the following reasons:

- Monaural recorded source (Instruments may also be reduced.)
- Only a few instruments are playing in the stereo recorded source
- A duet is being played
- The source has strong echoes or chorus
- The singer's voice on the source deviates from the centre
- The voice on the source is singing in high soprano or tenor

To Sing Along with Multiplex CDs or Tapes

You can sing along using the microphone while playing a multiplex CD or tape.

Press **KARAOKE PON/MPX** repeatedly until "h MPX L" or "h MPX R" appears in the display (choose left (L) or right (R) according to the encoding on your MPX software).

Then, you can hear both your voice (through the microphone) and the instrumentation. The previous (graphic equalizer) sound effect remains active.

To hear both channels (the instruments and the recorded singer's voice)

Press **KARAOKE PON/MPX** so that "h MPX" disappears from the display.

If you press EFFECT ON/OFF or recall a different sound effect with the MENU buttons

The karaoke mode is cancelled.

Connecting Optional Equipment

For greater enjoyment of your stereo system, you can connect other components to the stereo. You can connect:

- an MD recorder
- a DAT deck
- a microphone
- headphones
- surround speakers
- a turntable

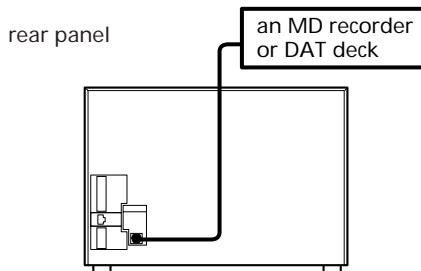
Connecting an MD recorder or a DAT deck

Select one of the following two connections, depending on the equipment to be connected and the method of recording.

- an MD recorder or DAT deck for digital recording
- an MD recorder or DAT deck for analog recording

To connect an MD recorder or a DAT deck for digital recording

You can record from the CD into the MD recorder or DAT deck digitally.

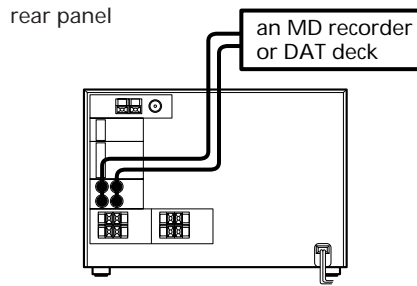


Connect	With
Digital IN jack of the MD recorder or DAT deck	CD OPTICAL DIGITAL OUT using an optical cable

To connect an MD recorder or a DAT deck for analog recording

You can record from the sound sources of the stereo into the MD recorder or DAT deck in analog sound.

You can also listen to the sound from the MD recorder or DAT deck by pressing the FUNCTION button repeatedly to select MD.

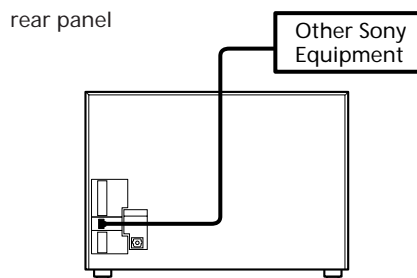


Connect	With
LINE IN jack of the MD recorder or DAT deck	MD OUT jacks
LINE OUT jack of the MD recorder or DAT deck	MD IN jacks

Use audio cords and make sure to connect the plugs to jacks of the same colour. Then press FUNCTION to select the sound sources.

To connect other equipment with an AU BUS connector

You can connect other Sony equipment with AU BUS.

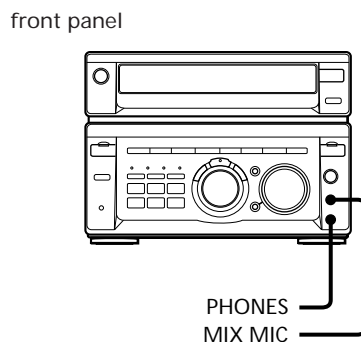


* You can use Automatic Source Selection, Synchronized Recording and Timer Recording with the connected equipment. However, these features may not be provided on some models.

Connecting a microphone or headphones

You can connect a microphone (phone jack) to the MIX MIC jack.

You can connect the headphones (stereo phone jack) to the PHONES jack.

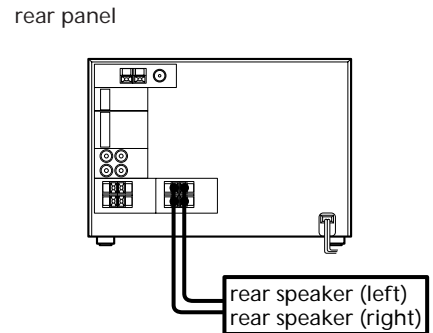


Connecting surround speakers

You can connect surround speakers to the SURROUND SPEAKER connectors.

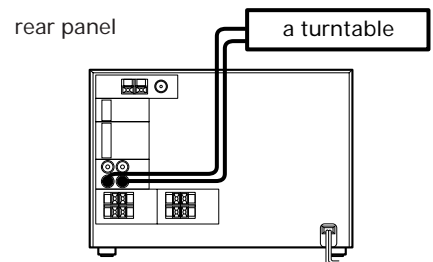
Press SURROUND so that "SUR [SURROUND icon]" appears in the display.

You can create the atmosphere of a movie theatre or concert hall.



Connecting a turntable

You can connect a turntable to MD IN jacks. Before you connect, check which type of turntable you have.



Is the turntable supplied with a phono equalizer?	Connect with
Yes	MD IN jacks
No	MD IN jacks using a MM cartridge equalizer and connecting cable (not supplied)

For Your Information

- Precautions
- Troubleshooting Guide
- Maintenance
- Specifications
- Index to Parts and Controls
- Index

Precautions

If you have any questions or problems concerning your stereo system, please consult your nearest Sony dealer.

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.
- Unplug the system from the mains if it is not to be used for an extended period of time. To disconnect the mains lead, pull it out by the plug. Never pull the cord itself.
- Should any solid object or liquid fall into the component, unplug the stereo system and have the component checked by qualified personnel before operating it any further.
- AC power cord must be changed only at the qualified service shop.

On installation

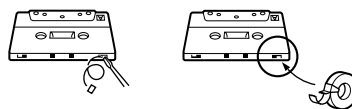
Place the stereo system in a location with adequate ventilation to prevent heat build-up in the stereo system.

On condensation in the CD player component

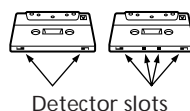
If the system is brought directly from a cold to a warm location, or is placed in a very damp room, moisture may condense on the lens inside the CD player. Should this occur, the CD player will not operate. Remove the CD and leave the system turned on for about an hour until the moisture evaporates.

To save a tape permanently

To prevent a tape from being accidentally recorded over, break off the cassette tab from side A or B as illustrated. If you later want to reuse the tape for recording, cover the broken tab with adhesive tape.



When you are using a TYPE II (CrO₂) or TYPE IV (metal) cassette, be careful not to cover the detector slots which allow the tape player to automatically detect the type of tape.



In case colour irregularity is observed on nearby TV screen

With the magnetically shielded type of speaker system, the speakers can be installed near a TV set. However, colour irregularity may still be observed on the TV screen depending on the type of your TV set.

If colour irregularity is observed...

Turn off the TV set once, then turn it on after 15 to 30 minutes.

If colour irregularity is observed again...

Place the speakers farther away from the TV set.

Troubleshooting Guide

If you run into any problem using the stereo system, use the following check list. And first check the following points:

- The mains lead is connected firmly.
- The speakers are connected correctly and firmly.

Should any problem persist after you have made the checks below, consult your nearest Sony dealer.

Tuner

"TUNED" flashes in the display.

- Adjust the aerial.

"STEREO" flashes in the display.

- Adjust the aerial.

Severe hum or noise.

- Adjust the aerial.
- The signal strength is too weak. Connect the external aerial.
- Connect the earth lead.

A stereo FM programme cannot be received in stereo.

- Press STEREO/MONO so that "STEREO" appears.

RDS station name does not appear on the display.

- Contact the radio station and find out whether they actually provide the RDS service. If so, it may be temporarily out of order.

Tape Player

The tape does not record.

- No tape in the cassette holder.
- The tab has been removed from the cassette.
- The tape has reeled to the end.

The tape does not record nor playback or there is a decrease in sound level.

- The heads are dirty. Clean them.*
- Magnetic deposits have built-up on the record/playback heads.*

There is excessive wow or flutter, or the sound drops out.

- The capstans or pinch rollers are contaminated.*

The tape does not erase completely.

- Magnetic deposits have built-up on the record/playback heads.*

Noise increases or the high frequencies are erased.

- Magnetic deposits have built-up on the record/playback heads.*

* See "Maintenance."

CD Player

The disc tray does not close.

- The CD is not placed correctly.

The CD will not play.

- The CD is dirty.
- The CD is inserted label side down.
- The player is in pause mode.
- Moisture condensation has built up.

Leave the system turned on for about an hour until the moisture evaporates.

"NO DISC" is displayed.

- There is no CD in the player.

Play does not start from the first track.

- The player is in programme or shuffle mode. Press PLAY MODE so that "PROGRAM" or "SHUFFLE" goes out.

General

There is no sound.

- Rotate VOLUME clockwise.
- The headphones are connected. Disconnect them.

Sound comes from one channel or unbalanced left and right volume.

- Check the speaker connections of the operative channel.

The left and right sound are reversed.

- Check the speaker connection and speaker placement.

Bass is lacking or the location of the musical instruments is apparently imprecise.

- Check the speaker connection for proper phasing.

There is severe hum or noise.

- A TV or VCR is too close to the stereo system. Move the stereo system away from the TV or VCR.

"0:00" or demo display flashes in the display.

- A power interruption occurred. Set the clock and timer settings again.

The remote does not function.

- The batteries have run down. Replace both batteries.
- There is an obstacle between the remote and the system. Remove the obstacle.

Restoring the factory settings

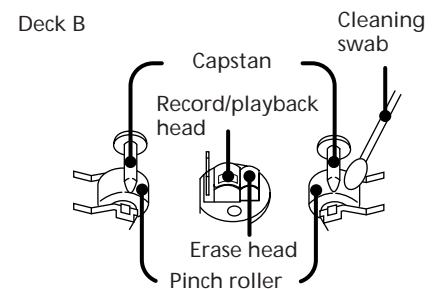
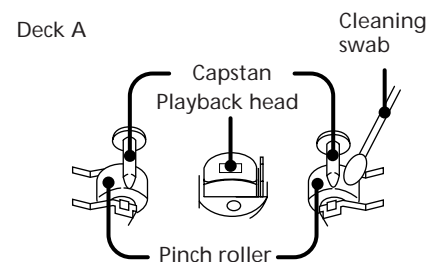
- 1 Turn SYSTEM POWER off.
- 2 Hold down both FUNCTION and ENTER/NEXT, then release.
- 3 Press MENU 3 within 2 seconds of releasing FUNCTION and ENTER/NEXT.

Maintenance

To clean the tape heads and tape path

Contaminated tape heads cause poor recording or sound drop-out in playback. We recommend cleaning after every 10 hours of operation.

Open the tape compartment and wipe the heads, the pinch rollers and the capstans with a cleaning swab slightly moistened with cleaning fluid or alcohol. Wipe the parts shown below:



Insert a tape when the areas cleaned are completely dry.

To demagnetize the tape heads

After 20 to 30 hours of use, enough residual magnetism will have built up on the heads to begin to cause loss of high frequencies and hiss. At this time, demagnetize the heads and all metal parts in the tape path with a commercially available tape head demagnetizer. Refer to the instructions of the demagnetizer.

To clean the cabinet

Use a soft cloth slightly moistened with mild detergent solution.

To clean the CD

When a CD is dirty, clean it with a cleaning cloth. Wipe the CD from the centre out.

Notes on CD

- Do not use solvents such as benzene, thinner, commercially available cleaners, or antistatic spray intended for vinyl LPs.
- If there is a scratch, dirt or fingerprints on the CD, it may cause a tracking error.

Specifications

CD player section

System	Compact disc digital audio system
Laser	Semiconductor laser ($\lambda=780$ nm) Emission duration: continuous
Laser output	Max 44.6 μ W* *This output is the value measured at a distance of 200 mm from the objective lens surface on the Optical Pick-up Block with 7 mm aperture.
Wavelength	780 - 790 nm
Frequency response	2 Hz - 20 kHz (± 0.5 dB)
Signal-to-noise ratio	More than 90 dB
Dynamic range	More than 90 dB
CD OPTICAL DIGITAL OUT (Square optical connector jack, rear panel)	
Wavelength	600 nm
Output Level	-18 dBm

Tuner section

FM stereo, FM/AM superheterodyne tuner

FM tuner section

Tuning range	87.5 - 108.0 MHz (50 kHz step)
Aerial	FM lead aerial
Aerial terminals	75 ohm unbalanced
Intermediate frequency	10.7 MHz

AM tuner section

Tuning range	
German and Italian models	
AM:	531 - 1,602 kHz (with the interval set at 9 kHz)
Other models	
MW:	531 - 1,602 kHz (with the interval set at 9 kHz)
LW:	153 - 279 kHz (with the interval set at 3 kHz)
Aerial	AM loop aerial, External aerial terminals
Intermediate frequency	450 kHz

Amplifier section

DIN power output	50 + 50 watts (6 ohms at 1 kHz, DIN)
Continuous RMS power output	60 + 60 watts (6 ohms at 1kHz, 10% THD)
Music power output	210 watts (6 ohms at 1kHz, 10% THD)

Inputs

MD IN (phono jacks):	voltage 450 mV, impedance 47 kilohms
MIX MIC (phone jacks):	sensitivity 1 mV, impedance 10 kilohms

Outputs

MD OUT (phono jacks):	voltage 250 mV impedance 1 kilohms
PHONES (stereo phone jack):	accepts headphones of 8 ohms or more.
FRONT SPEAKER:	accepts impedance of 6 to 16 ohms.
SURROUND SPEAKER:	accepts impedance of 16 ohms.

Tape player section

Recording system	4-track 2-channel stereo
Frequency response	(DOLBY NR OFF) 40 - 13,000 Hz (± 3 dB), using Sony TYPE I cassette 40 - 14,000 Hz (± 3 dB), using Sony TYPE II cassette 40 - 15,000 Hz (± 3 dB) using Sony TYPE IV cassette
Wow and flutter	0.1% WRMS $\pm 0.3\%$ (DIN)

Speaker

SS-EX55D	
Speaker system	3-way, bass-reflex type
Speaker units	
Woofer:	17 cm dia., cone type
Tweeter:	2.5 cm dia., dome type
Super Tweeter:	2 cm dia., dome type
Nominal impedance	6 ohms

Supplied accessories

AM loop aerial (1)
Remote RM-SW55 (1)
Sony SUM-3 (NS) batteries (2)
FM lead aerial (1)
Flat cords (2)
Speaker cords (2)
Plug adapter (1)

General

Power requirements	230 - 240 V AC, 50/60 Hz
Power consumption	160 watts

Dimensions

Amplifier/Tuner section:	Approx. 280 x 205 x 345 mm (11 x 8 ¹ / ₁₆ x 13 ⁹ / ₁₆ inches) (w/h/d) incl. projecting parts and controls
Tape/CD section:	Approx. 280 x 205 x 350 mm (11 x 8 ¹ / ₁₆ x 13 ³ / ₄ inches) (w/h/d) incl. projecting parts and controls

Mass

Amplifier/Tuner section:	Approx. 5.5 kg (12 lbs. 2 oz.)
Tape/CD section:	Approx. 4.4 kg (9 lbs. 11 oz.)

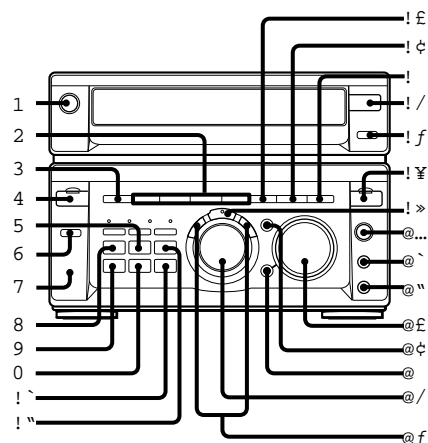
Design and specifications are subject to change without notice.

Index to Parts and Controls

Refer to the pages indicated in parentheses for details on how to use the controls. Controls with an asterisk have indicators on themselves.

Front Panel

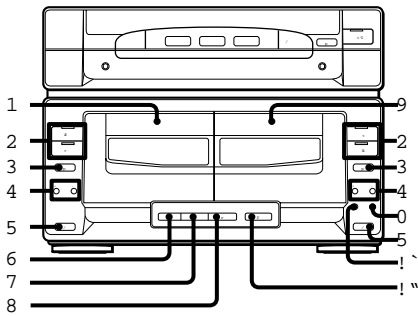
Amplifier/Tuner section



- 1 SYSTEM POWER button (7)
- 2 MENU 1-4 buttons (20)
- 3 EFFECT ON/OFF button (20)
- 4 TIMER button (6, 22, 23)
- 5 PTY button (12)
- 6 SLEEP button (22)
- 7 KARAOKE PON/MPX button (24)
- 8 TUNER MEMORY button* (12)
- 9 CLOCK SET button* (6)
- 0 TIMER SET button* (22, 23)
- !j TIMER SELECT button* (23)
- !™ TUNING MODE button* (11)
- !£ P FILE button (21)
- !¢ MEMORY button (21)
- ! SURROUND button (15, 21)
- !§ TUNER/BAND button (11)
- !¶ DISPLAY button (6, 8)
- !• FUNCTION button (8, 15)
- !ª ENTER/NEXT button* (6, 9, 12, 20, 22)
- @° MIC LEVEL control (24)
- @j MIX MIC jack (24, 25)
- @! PHONES jack (20, 25)
- @£ VOLUME control (20)
- @¢ DBFB button (20)
- @ GROOVE button (20)

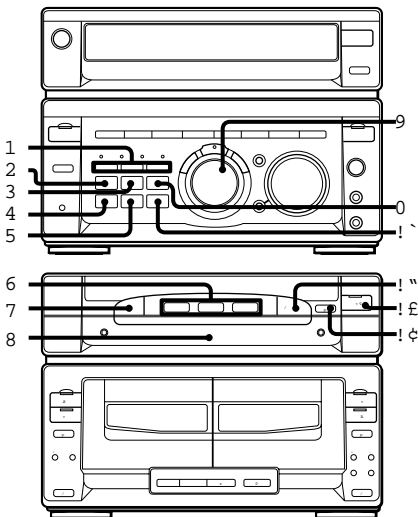
- Ⓢ JOG dial (6, 11, 17, 20, 22)
- Ⓢ FREQUENCY +/- buttons (21)

Tape player section



- 1 DECK A (14)
- 2 a/. (forward/reverse side play) buttons* (14)
- 3 p (stop) button (14)
- 4 0 /) (fast leftward/fast rightward) buttons (14)
- 5 § EJECT buttons (14)
- 6 CD SYNCHRO button (15)
- 7 HIGH SPEED DUBBING button (19)
- 8 r REC button* (15)
- 9 DECK B (14)
- 0 DIRECTION MODE button (14)
- ! j DOLBY NR button (14)
- !™ P PAUSE button* (14)

CD player section

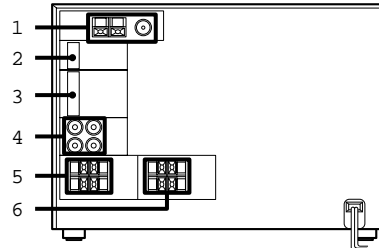


- 1 CLIP A-C buttons (10)
- 2 CLIP PLAY button (10)
- 3 CLIP ERASE button (10)
- 4 1/ALL DISCS button (7)
- 5 PLAY MODE button (8)
- 6 DISC 1-3 buttons (7, 8)
- 7 DISC SKIP button (7)
- 8 Disc tray (7)
- 9 =/+ (search forward/search backward) JOG dial (7)
- 0 EDIT button (16)
- ! j REPEAT button (9)

- !™ § OPEN/CLOSE/EX-CHANGE button (7)
- ! £·P (play/pause) button* (7)
- ! ç p (stop) button (7)

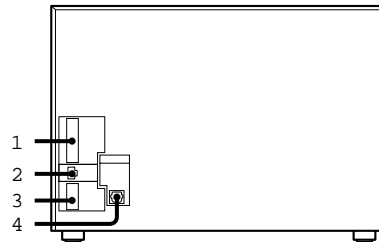
Rear panel

Amplifier/Tuner section



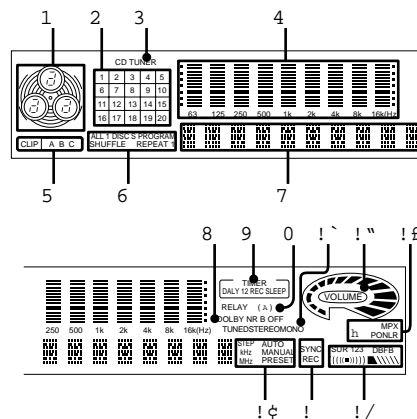
- 1 ANTENNA terminals (4)
- 2 SYSTEM CONTROL 2 terminal (4)
- 3 SYSTEM CONTROL 1 terminal (4)
- 4 MD IN/OUT jacks (25)
- 5 FRONT SPEAKER connectors (4)
- 6 SURROUND SPEAKER connectors (25)

Tape/CD section



- 1 SYSTEM CONTROL 1 terminal (4)
- 2 AU BUS connector (25)
- 3 SYSTEM CONTROL 2 terminal (4)
- 4 CD OPTICAL DIGITAL OUT terminal (25)

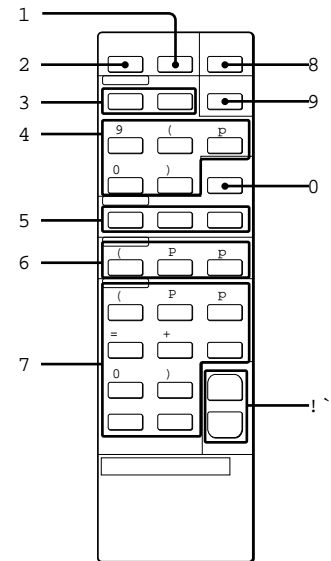
Display Window



- 1 Disc tray indicator (7)
- 2 Music calendar (7, 12)
- 3 CD/TUNER indicator (7, 11)
- 4 Graphic Equalizer indication (21)

- 5 CLIP indicators (10)
- 6 CD playback indicators (7)
- 7 Multi-display (7, 11, 16, 21, 22)
- 8 DOLBY NR indicator (14)
- 9 Timer indicators (23)
- 0 Direction mode indicators (14)
- ! j Tuning indicators (11)
- !™ VOLUME indicators
- ! £ Karaoke PON/MPX indicators (24)
- ! ç Tuner indicators (11)
- ! SYNC REC indicator
- ! § DBFB/SUR indicators (15, 20, 21)

Remote



- 1 SLEEP button (22)
- 2 FUNCTION button (8, 15)
- 3 TAPE DECK SELECT A/B buttons (14)
- 4 Tape operating buttons
 - 9 (reverse side play) (14)
 - ((front side play) (14)
 - p (stop) (14)
 - 0/) (fast leftward/fast rightward) (14)
- 5 Tuner operating buttons
 - BAND button (11)
 - PRESET (-/+) button (12)
- 6 MD operating buttons
 - ((play)
 - P (pause)
 - p (stop)
- 7 CD operating buttons
 - ((play) (7)
 - P (pause) (7)
 - p (stop) (7)
 - = / + (AMS) (7)
 - 0/) (fast backward/fast forward) (8)
- DISC SKIP button (7)
- CHECK button (9)
- CLEAR button (9)
- 8 SYSTEM POWER switch
- 9 DISPLAY button (6, 8)
- 0 STEREO/MONO button (11)
- ! j VOL (+/-) buttons (20)

Index

- Adjusting
 - the sound 20
 - the volume 20
 - the audio emphasis 20
- AMS 7
- Aerials 4
- Batteries 6
- CD player 7
- CD synchro recording 15
- CLIP play 10
- Clock setting 6
- Connecting
 - optional equipment 25
 - the aerials 4
 - the power 5
 - the speakers 4
 - the stereo 4
- Dolby NR (noise reduction) 14
- Dubbing
 - another tape automatically 18
 - another tape manually 19
- Graphic equalizer 21
- Karaoke 24
- Maintenance 27
- Microphone mixing 24
- Multiplex 24
- Music calendar 7, 8, 12
- Normal play 7
- One touch play 8, 11, 14
- Parts identification 28
- Playing
 - a tape 14
 - CDs (clip play) 10
 - CDs (normal play) 7
 - preset radio stations 12
 - tracks in random order
 - (shuffle play) 8
 - tracks in the desired order
 - (programme play) 9
 - tracks repeatedly (repeat play) 9
- Precautions 26
- Programme play 9
- PTY 12
- Radio stations
 - presetting 12
 - tuning in 11
- Recording
 - a CD (programme edit) 17
 - a CD (tape select edit) 16
 - a CD (time edit) 16
 - a CD automatically 15
 - a CD manually 15
 - a radio 18
 - another tape (dubbing) 18
 - timer recording 23
- Relay play 14
- Repeat play 9
- Restoring the factory settings 27
- Saving a recording 26
- Shuffle play 8
- Sound adjusting 20
- Speakers 4
- Specifications 27
- Supplied accessories 28
- Tape player 14
- Timer
 - falling asleep to music 22
 - timer recording 23
 - waking up to music 22
- Troubleshooting guide 26
- Tuner 11

