

XES

XES-Z50

Operating Instructions

Digital Reference Sound System

Operating Instructions

Before operating the unit, please read this manual thoroughly and retain it for future reference.

Owner's Record

The model and serial numbers are located at the rear of the CD changer and the bottom of the control unit. Record the serial number in the space provided below. Refer to these numbers whenever you call upon your Sony dealer regarding this product.

Model No. XES-Z50 Serial No. _____

For the customers in the USA

Warning

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.

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

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

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

CAUTION

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

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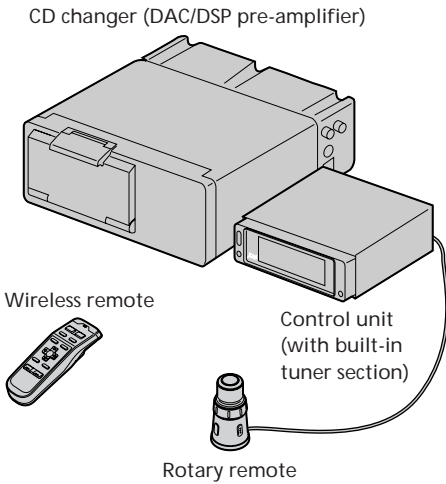
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Overview

Overview of the System

This system consists of the following sections.



Useful tips

For details on connecting the XES-M50 Power Amplifier, XES-F50 Full-range Speaker, XES-H50 Ribbon Tweeter, XES-L50 Subwoofer, and the optional CD changer and MD changer, refer to the Installation/Connection Manual supplied with this system.

What is a CD TEXT disc?

A CD TEXT disc is a music CD that also contains text data such as album title, track titles, and artist name. This text data is recorded in areas normally unused on conventional music CDs. Text data contained on the CD TEXT discs can be displayed in the XES-Z50.

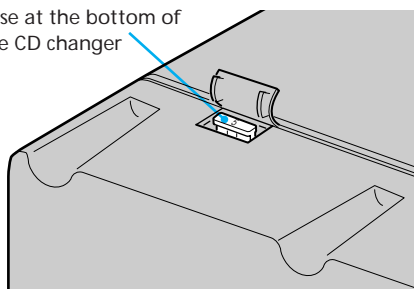
Precautions

Replacing fuses

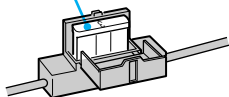
When replacing a fuse, be sure the new fuse has the same power rating (amperage) as the old one. If you replace a burnt-out fuse either with a higher-rated fuse or with a wire, the system may be damaged or a fire may break out.

Fuses are located at the bottom of the CD changer and in the power cord.

Fuse at the bottom of the CD changer



Fuse in the power cord



Adjusting the volume

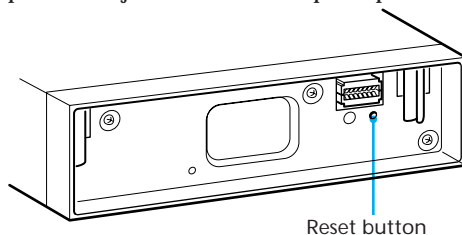
For your safety, set the volume low enough so that you can still hear the sounds in the street around you.

The display section

Under extremely hot or cold conditions, the display may become dim, but this is not a malfunction. The display will return to normal when the temperature becomes normal.

The reset button

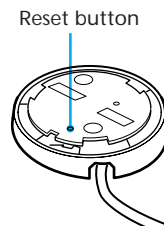
After replacing the car battery, press the reset button in the control unit with a pointed object such as a ball-point pen.



Reset button

Another reset button can be found on the rotary remote holder.

When you cannot detach the display section because the system does not turn on, press the reset button on the rotary remote holder.



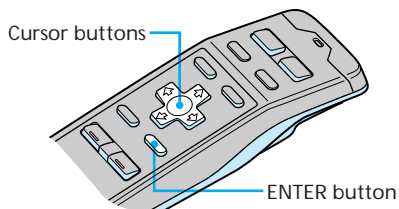
Reset button

Precautions

- If your car was parked in direct sunlight resulting in a considerable rise in temperature inside the car, allow the system to cool off before operating it.
- If no power is being supplied to the system, check the connections first. If everything is in order, check the fuse.
- Avoid installing the CD changer, wireless remote, and wired remote in places:
 - subject to temperatures exceeding 131°F.
 - subject to direct sunlight.
 - near heat sources (such as heaters).
 - exposed to rain or moisture.
 - exposed to excessive dust or dirt.
 - subject to excessive vibration.

Initial Settings

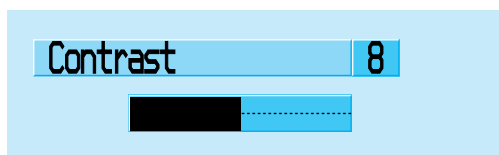
Do the following initial settings (1) before you operate the system for the first time, (2) after replacing the car battery, or (3) after resetting the system.



1 Press the reset button (see page 7).

The Contrast indication appears.

Press ← or →. The contrast is adjustable in 15 steps.



2 Press ENTER.

The ACC Position indication appears.

Press ← or →. Select "yes" if your car's ignition switch has an ACC position; select "no" if your car's ignition switch has no ACC position.



Note

You can specify the ACC position and cross-over network settings only in the initial setting procedure. To change these settings afterwards, press the reset button and repeat the procedure.

Note

If you have a 3-way speaker system, selecting "F/R/SUB-W" may cause damage to your tweeter.

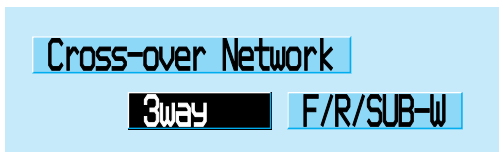
Useful tips

To change any of the initial settings at this time, press the cursor buttons to select the item you want to change.

3 Press ENTER.

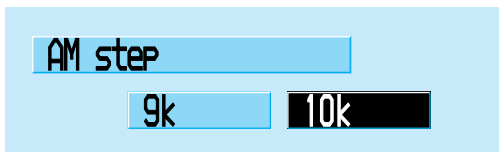
The Cross-over Network (output mode) indication appears.

Press ← or → to select "3way" or "F (front)/R (rear)/SUB-W (sub-woofer)" depending on your speaker system.

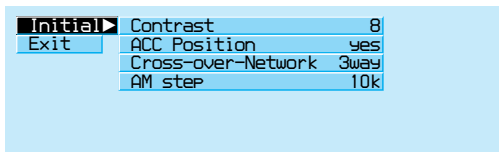
**4 Press ENTER.**

AM step indication appears.

Press ← or →. Select "10k" if you're using your system in North or South America, the Hawaiian Islands, or Guam; select "9k" for all other countries.

**5 Press ENTER.**

The Initial indication appears.

**6 To complete the initial settings, press ↓ to select "Exit," then press ENTER.**

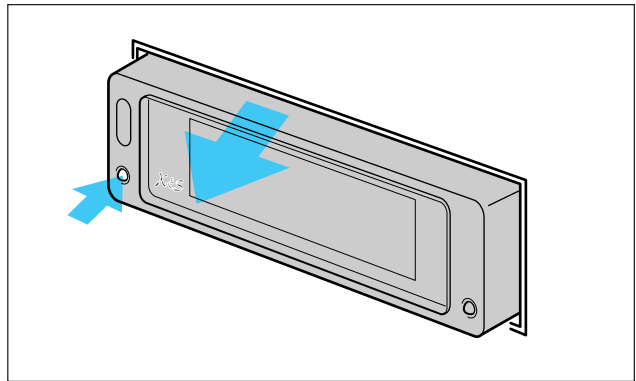
Attaching/Detaching the Electrically Operated Display Section

The display section can be detached from the control unit as a safety measure against theft.

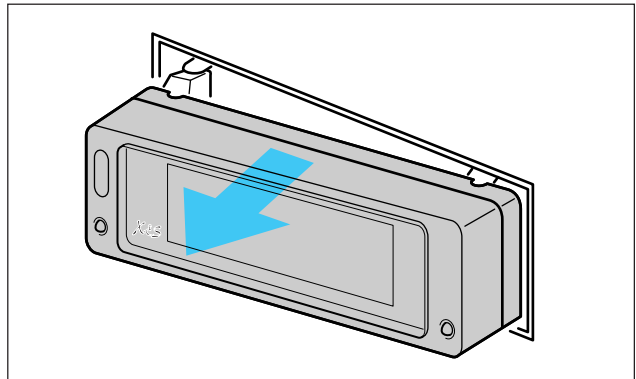
Detaching the Display Section

- 1 Press **RELEASE** at the bottom left of the display section.

The system turns off and the left side of the display section pops out.



- 2 Grasp the left side of the display section and pull it out.



Note

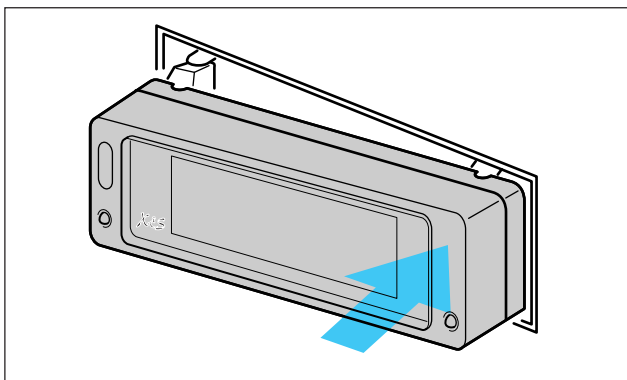
Do not touch the connector at the rear of the display section. After you have detached the display section, keep it in a supplied case.

If you do not remove the display section at this time, the display section will automatically return to its original position so that it doesn't fall off.

Do not press the RELEASE button at this time. If you do, the display section will fall off.

Attaching the Display Section

- 1 Align the right side of the display section with the control unit.



- 2 Press the left side against the display section and push in lightly.

An automatic, electrically operated mechanism in the control unit catches the display section.

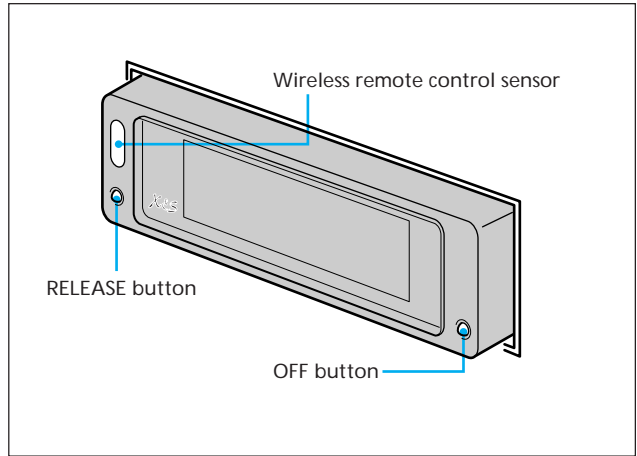
Procedure when the control panel is installed on the dashboard, etc.

Use the same procedures; i.e., detach it by pressing the RELEASE button and attach it by pressing it into the display holder until it clicks and is caught by the display holder.

Note

The front part of the display section is made of glass. Do not drop or press down the display section with excessive force.

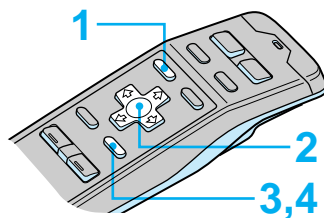
Name of parts



Setting the Clock

Set the clock with the wireless remote.

Turn the system on before setting the clock.



1 Press MENU.

The menu display appears.

Set up	▶ Contrast	8
AUX	Time Set	
Exit	Beep	off
	Rotary Remote	norm

2 Press ↓ to select "Set up" and press → to move to the sub menu to select "Time Set."

Set up	▶ Contrast	
AUX	Time Set	
Exit	Beep	off
	Rotary Remote	norm

3 Press ENTER.

The Time Set indication appears.

Time Set

1:33 AM

Press ↑ or ↓ to set the hour.

Then press → to move to minutes and press ↑ or ↓ to set the minutes.

Pressing ↓ lowers the number and ↑ raises the number.

Useful tips

You can press the MENU button or BACK button instead of the ENTER button to set a value.

4 After setting the time, press ENTER.

The time is stored and the menu display reappears.

To return to the normal display

Press the MENU button.

To display the current time during operation

The current time can be set to appear in the upper-right corner of the display (except when a menu is displayed). For details, see "Set up Menu" on page 47.

Inserting CDs

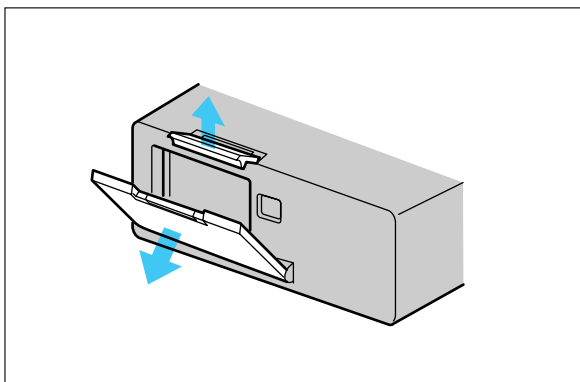
The disc magazine inside the CD changer can hold up to 10 discs.

Note

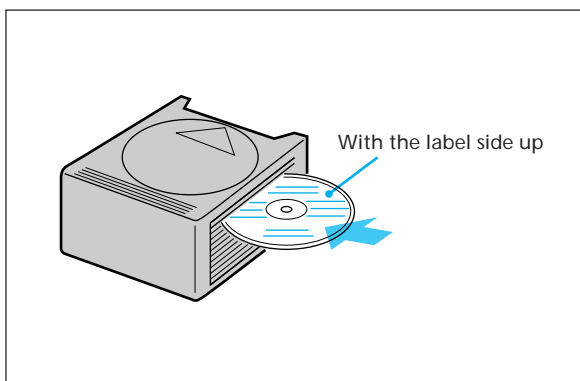
To play an 8-cm CD (single CD), use the optional CSA-8 Sony Single CD Adaptor.

When using the single-CD adaptor, attach the three claws to the CD securely. Note that if you use an adaptor made by another company, the CD changer may not operate properly. If you play a single CD without the adaptor, the CD changer may be damaged.

- 1 Lift up the lock lever and open the door of the CD changer.

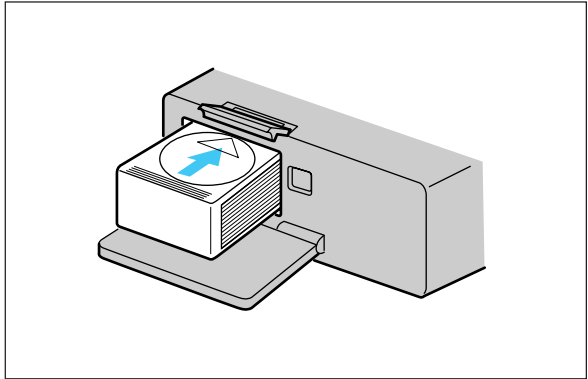


- 2 Insert a CD in each slot of the disc magazine.

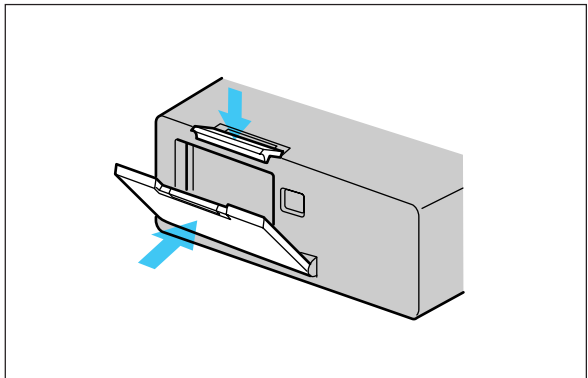


- 3** Insert the disc magazine into the CD changer in the direction of the arrow until it clicks in.

The CD changer begins verifying the CDs.



- 4** Close the door and lock the CD changer securely.



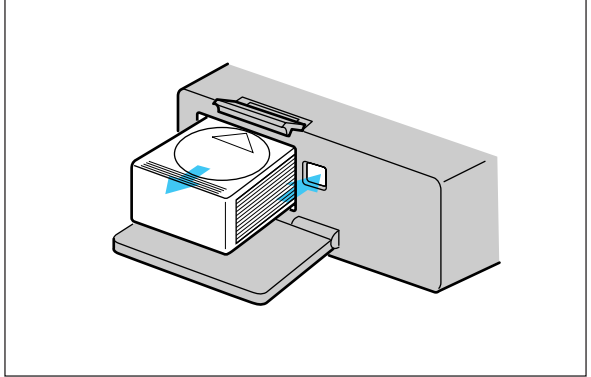
Useful tips

The CD changer verifies all the CDs one after another whenever the disc magazine is inserted. Playing a CD during this verifying operation is possible. Note, however, that disc titles are not displayed until they have been verified by the CD changer.

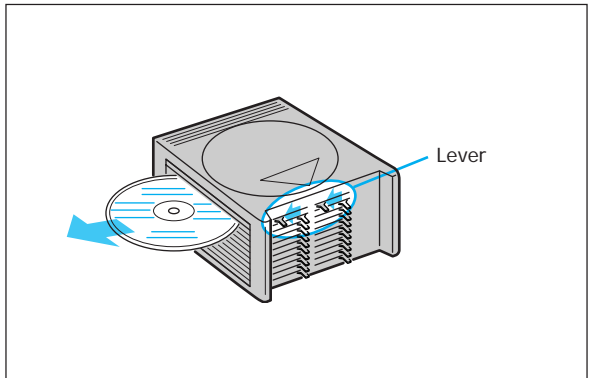
Removing CDs

1 Press .

The disc magazine comes out.



2 Slide the lever of the disc magazine.

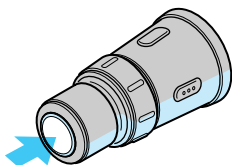


Using the Rotary Remote

You can use the rotary remote for all operations except menu operations.

Basic Operations

SOURCE button

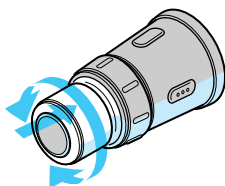


Press the button.

The system turns on. Each time you press the button, the program source switches as follows: CD → MD (only when an MD changer is connected) → AUX (only when AUX settings have been done: see page 49) → FM1 → FM2 → AM → CD. When an external component is selected, it will be indicated as an auxiliary (AUX) component.

To turn off the system, press the OFF button on the side of the rotary remote (see page 19).

VOL/DISC/PRESET control



Rotate the control.

You can adjust the volume.

Push in and rotate the control.

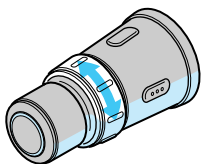
You can change the disc inside of the changer when CD or MD is selected.

You can change the preset station in the tuner when FM1, FM2, or AM is selected.

Push in and release the control.

The display section shows the list of discs or preset stations for a few seconds, then reverts to the previous display.

AMS/SEEK control



Rotate and release the control.

You can locate the beginning of tracks when CD or MD is selected.

When FM1, FM2, or AM is selected, the tuner begins searching for a station, then stops when it detects one.

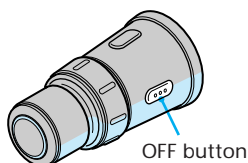
Keep the control rotated.

You can locate a specific point on a track when CD or MD is selected. Playback at normal speed resumes when you release the control.

When FM1, FM2, or AM is selected, manual tuning becomes possible.

Other Operations

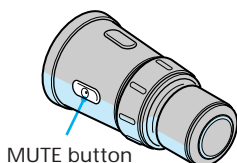
OFF button



Press this button to turn off the system.

To turn on the system again, press the SOURCE button.

MUTE button

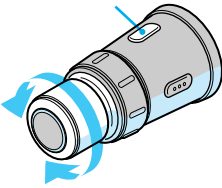


Press the button to mute the sound.

To cancel the mute, press the button again.

SOUND button

SOUND button



Press the button to select sound characteristics.

Each press of the button changes the display as follows: PEQ (Parametric Equalizer) indication → CNW (Cross-over NetWork) indication → previous display.

While the PEQ or CNW indication appears, rotate the VOL/DISC/PRESET control to select 1 of 10 preset patterns.

The previous display reappears when no operation has been done for several seconds.

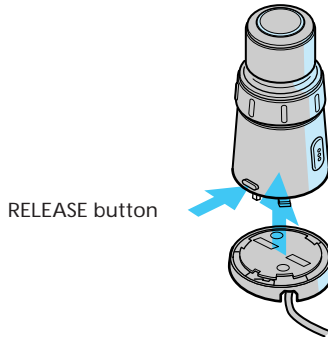
To switch the direction of rotation for rotary remote

See "Set up Menu" on page 47.

To detach the rotary remote

You can detach the rotary remote as a safety measure against theft.

Turn the remote clockwise while pressing down the RELEASE button.



Using the Wireless Remote

Use the wireless remote to make the various menu settings. For your safety, system operations with the wireless remote should be done by a passenger. If you (the driver) want to use the wireless remote, park your car in a safe location first before performing any operations.

OFF button

Press to turn off the system.

SCRL button

Press to scroll the track or disc title when playing a CD TEXT disc or an MD.

LIGHT button

Press to light up the button indications on the wireless remote. The indications go off after a few seconds.

MENU button

Press to switch to a menu display. The menu which appears depends on the current program source. To return to the previous display, press the button again.

Cursor buttons

During the menu display appears, press to move the cursor in a menu display. When CD or MD is selected, press **↑** or **↓** to change the disc and **←** and **→** to locate a track. When FM1, FM2, or AM is selected, press **↑** or **↓** to select a preset station, or **←** and **→** to perform automatic tuning.

BACK button

Press to return to the normal display during a menu operation.

SOURCE button

Press repeatedly to switch to: CD → MD (only when an MD changer is connected) → AUX (only when AUX settings have been done) → FM1 → FM2 → AM → CD.

DSPL (display)/button

When playing a CD or MD, press to display the disc title or track title. When the current disc or track has no title, "No Disc (or Track) Name" appears in the display.

LIST button

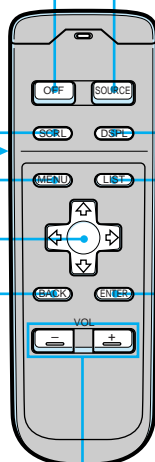
When CD or MD is selected, press to display DISC NAME LIST. While the list appears in the display, press again to display TRACK NAME LIST of the current disc (see page 34). When FM1, FM2, or AM is selected, press to display PRESET NAME LIST. To change the current selection, use the cursor buttons to select another disc (track) or station, then press the ENTER button.

ENTER button

Press to carry out the selected function.

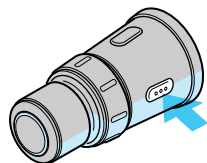
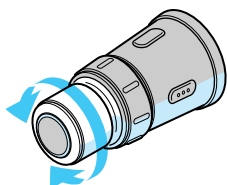
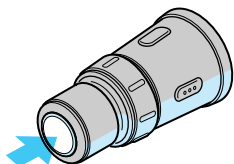
VOL buttons

Press + or - to adjust the volume.

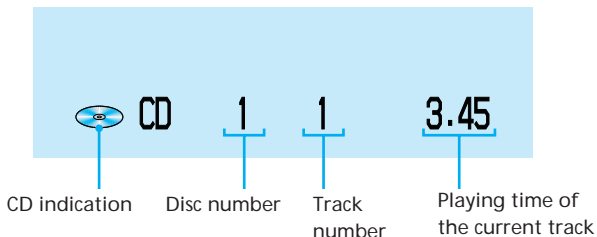


Listening to a CD

Before listening to a CD, insert one or more CDs into the disc magazine, then load the disc magazine into the CD changer (see page 15).

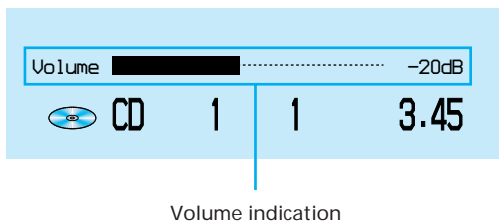


1 Press SOURCE repeatedly to select "CD."

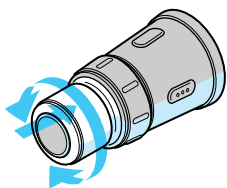


2 Rotate VOL/DISC/PRESET to adjust the volume.

Turn the control clockwise to increase the volume; turn it counterclockwise to decrease the volume.



3 Press OFF to turn off the system.



To Select the Disc to Be Played

Push in and rotate VOL/DISC/PRESET.

The system changes to the next or previous disc. If you keep the control rotated, the discs will continue to change.

Push in and release the control to display DISC NAME LIST.

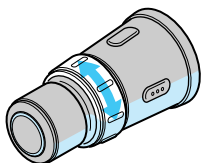
For details on naming a disc, see “Labeling a CD” on page 30.

DISC NAME LIST	CD	1	6	1.30
1. MY BEST	6. EURO BEAT			
2. FUSION	7. DRIVING			
3. POPS HIT	8. LIVE HIT			
4. JAZZ	9. SUNSET.M			
5. GREAT HIT	10. HIGHWAY*			

To Locate a Track

Rotate, then release AMS/SEEK.

The system locates the next or previous track.



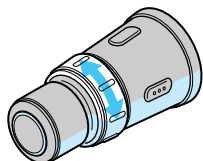
DISC NAME	MY	BEST		
	CD	1	1	3.45

Track number

To Locate a Specific Point on a Track

Keep AMS/SEEK rotated.

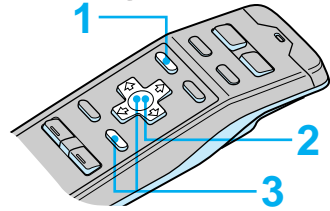
The system plays the track at high speed. When you reach the point you want, release the control.



Playing Tracks Repeatedly

(Repeat Play)

The Repeat Play function allows you to play back a track, a disc, or all the discs in the CD changer repeatedly.

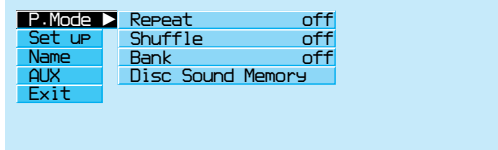


Useful tips

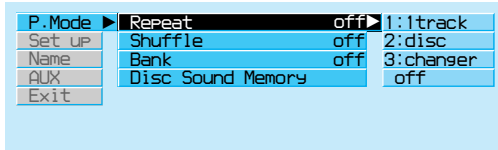
To return to previous steps (one at a time) Press the ← button.

To return to the normal display Press the MENU button.

1 While playing a CD, press MENU.



2 Select "P.Mode" and press → to move to the sub menu, then select "Repeat" using ↑ or ↓.



3 Press → then ↑ or ↓ to select the repeat mode, then press ENTER.

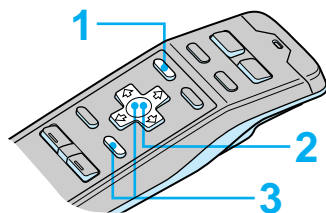
The selected repeat mode appears to the right of the "Repeat" in the display.

Indication	Operation
1:1track	Repeats the current track only
2:disc	Repeats all tracks on the current disc
3:changer	Repeats all the discs in the current CD changer (in case one or more optional CD changers are connected)
off	Normal playback

Playing Tracks in Random Order

(Shuffle Play)

Shuffle Play plays back all tracks on the current disc or all discs in the CD changer in random order.



Useful tips

To return to previous steps (one at a time)
Press the ← button.

To return to the normal display
Press the MENU button.

1 While playing a CD, press MENU.

P. Mode	Repeat	off
Set up	Shuffle	off
Name	Bank	off
AUX	Disc Sound Memory	
Exit		

2 Select "P.Mode" and press → to move to the sub menu, then select "Shuffle" using ↑ or ↓.

P. Mode	Repeat	off
Set up	Shuffle	off
Name	Bank	off
AUX	Disc Sound Memory	
Exit		
		1:disc
		2:changer
		3:all
		off

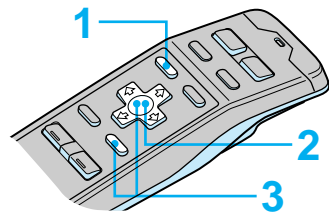
3 Press → then ↑ or ↓ to select the shuffle mode item, then press ENTER.

The selected item appears to the right of the "Shuffle" in the display.

Indication	Operation
1:disc	Plays all the tracks on the current disc in random order
2:changer	Plays all the discs in the current CD changer in random order
3:all	Plays all the discs in all the CD changers in random order (in case one or more optional CD changers are connected)
off	Normal playback

Selecting Specific Tracks for Playback (Bank)

If you have labeled the disc (see page 30), the Bank function allows you to skip certain tracks and play only the tracks you want.



Useful tips

To return to previous steps (one at a time)
Press the ← button.

To return to the normal display
Press the MENU button.

Note

You cannot use the Bank function for discs that have not been labeled using the Disc Memo function. Be sure to label the disc in advance.

1 While playing a CD, press MENU.

```
P.Mode ▶ Repeat off
Set up Shuffle off
Name Bank off
AUX Disc Sound Memory
Exit
```

2 Select "P.Mode" and press → to move to the sub menu, then select "Bank" using ↑ or ↓.

```
P.Mode ▶ Repeat off
Set up Shuffle off
Name Bank off ▶ on
AUX Disc Sound Memory inverse
Exit off
edit
```

3 Press → then ↑ or ↓ to select the bank mode, then press ENTER.

The selected bank mode appears to the right of the "Bank" in the display.

Indication	Operation
on	Plays all tracks set to "Play"
inverse	Plays all tracks set to "Skip"
off	Normal playback
edit	Sets tracks on the current disc to "Play" or "Skip."

To set tracks to "Play" or "Skip"

Select "edit" in Step 3 and press the **↑** or **↓** button to select "Play" or "Skip" for a track. To move to the next track, press the **➡** button.

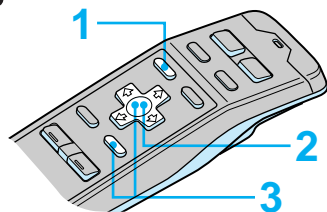
Note that only tracks 1 to 24 on a disc can be set.

To complete the setting procedure, press the ENTER or BACK button.

Setting Sound Effects for Each CD/MD

(Disc Sound Memory)

You can select and memorize particular sound effects for up to 110 discs (CDs or MDs).



Note

To use this function, select the sound effect in advance (see page 51).

Useful tips

To return to previous steps (one at a time) Press the ← button.

To return to the normal display Press the MENU button.

To see the current sound effect setting

Press the SOUND button on the rotary remote.

1 While playing a CD or MD, press MENU.

P.Mode ▶	Repeat	off
Set up	Shuffle	off
Name	Bank	off
AUX	Disc Sound Memory	
Exit		

2 Select "P.Mode" and press → to move to the sub menu, then select "Disc Sound Memory" using ↑ or ↓.

P.Mode ▶	Repeat	off
Set up	Shuffle	off
Name	Bank	off
AUX	Disc Sound Memory ▶	enter
Exit		delete

3 Press → then ↑ or ↓ to select "enter," then press ENTER.

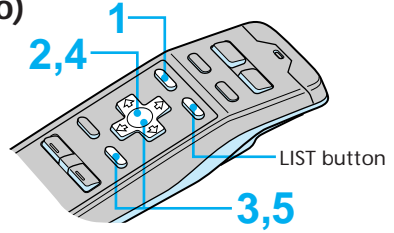
The sound effects currently specified by PEQ display are set.

To clear all sound effects on the disc

Select "delete" in Step 3 above and press the ENTER button.

Labeling a CD (Disc Memo)

You can record a title of up to 8 characters for each disc. The disc title appears in the display whenever you insert the disc and play it. Up to 110 disc titles can be stored in memory.



Useful tips

Hold down the LIST button for 2 seconds or more to display the Disc Memo Write indication directly.

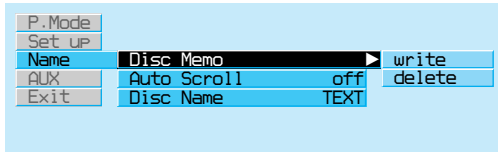
Useful tips

To return to previous steps (one at a time) Press the ← button.

To return to the normal display Press the MENU button.

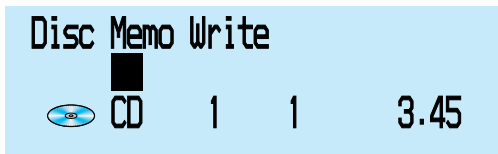
1 While playing a CD, press MENU.

2 Select "Name" and press → to move to the sub menu, then select "Disc Memo" using ↑ or ↓.



3 Press → then ↑ or ↓ to select "write," then press ENTER.

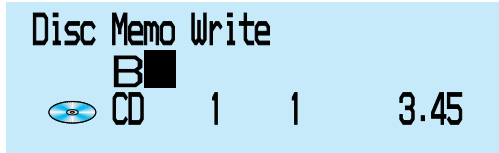
Disc Memo Write indication appears.



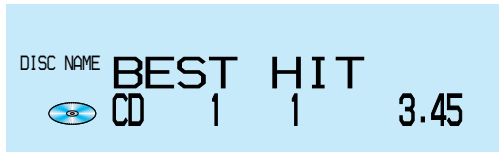
- 4** Press **↑** or **↓** until the character you want to enter appears, then press **→**.

Each press of the **↑** button selects the next character in the order shown below. (Press the **↓** button to move backwards.)

A → B → C → ...Z → 0 → 1 → 2 → ...9 → + → - →
* → / → \ → > → < → . → (space)



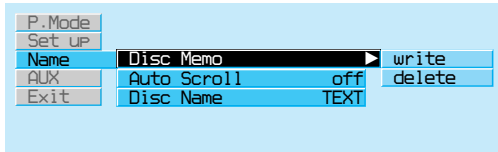
- 5** Repeat Step 4 until you have entered the entire title, then press **ENTER**.



Erasing a Disc Title

1 While playing a CD, press MENU.

2 Select "Name" and press → to move to the sub menu, then select "Disc Memo" using ↑ or ↓.



3 Press →, then ↑ or ↓ to select "delete", then press ENTER.

The Disc Memo Delete indication appears.

4 Press ↑ or ↓ to select the disc title you want to erase.

5 Hold down ENTER for 2 seconds or more.

The selected disc title is erased.

To quit the Disc Memo Delete function.

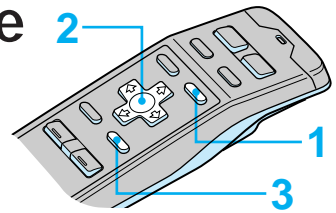
Press the BACK button.

Note

In Step 4, all the disc titles stored in the CD changer's memory appear in the order they were entered. The last title entered will therefore appear at the end.

Locating a Disc by Title

Use this function to locate a disc by its title. To add titles to discs, see page 30.



1 Press LIST.

DISC NAME LIST appears.


DISC NAME LIST		CD	1	6	1.30
1. MY BEST	6. EURO BEAT				
2. FUSION	7. DRIVING				
3. POPS HIT	8. LIVE HIT				
4. JAZZ	9. SUNSET.M				
5. GREAT HIT	10. HIGHWAY*				

2 Press **↑**, **↓**, **→**, or **←** to select the disc.

DISC NAME LIST		CD	1	6	1.30
1. MY BEST	6. EURO BEAT				
2. FUSION	7. DRIVING				
3. POPS HIT	8. LIVE HIT				
4. JAZZ	9. SUNSET.M				
5. GREAT HIT	10. HIGHWAY*				

3 Press ENTER.

Playback starts from the first track of the disc.

DISC NAME	POPS	HIT	
	CD	3	1
			3.45

CD indication Disc number Track number Playing time of the current track

Useful tips

To cancel the selection Press the LIST button twice or the BACK button once.

Note

The following indications appear in DISC NAME LIST.

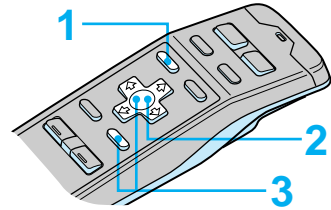
- “No Disc” : There is no disc in given disc magazine slot.
- “*****” : The disc is not labeled.
- “?” : The system has not verified the disc information.

On TRACK NAME LIST

If you press the LIST button again in Step 1, TRACK NAME LIST appears. This list displays track names contained on CD TEXT discs and MDs with labeled tracks. Since this system does not support track labeling, when playing non-CD TEXT discs or MDs with unlabeled tracks, "*****" appears instead of the track title in the TRACK NAME LIST.

Viewing CD TEXT Information

You can view text information contained on a CD TEXT disc during playback.



What is a CD TEXT disc?

A CD TEXT disc is a music CD that also contains text data such as album title, track titles, and artist name. This text data is recorded in areas normally unused on conventional music CDs. Text data contained on the CD TEXT discs can be displayed in the XES-Z50.

When playing a CD TEXT disc

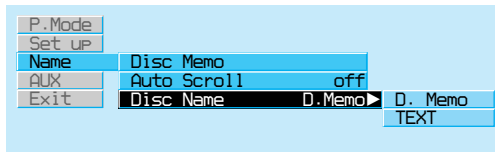
Each time you press the DSPL button, the displayed information changes as follows: disc title/artist name* → track name

* The artist name appears automatically after the disc name.

Selecting the Disc Title Display

When playing CD TEXT discs that have been labeled using the Disc Memo function (see page 30), you can specify that disc titles be displayed whenever you press the DSPL or LIST button.

- 1 While playing a CD, press MENU.
- 2 Select "Name," press → to move to the sub menu, then select "Disc Name" using ↑ or ↓.



- 3 Press →, then ↑ or ↓ to select "D.Memo" or "TEXT," then ENTER.

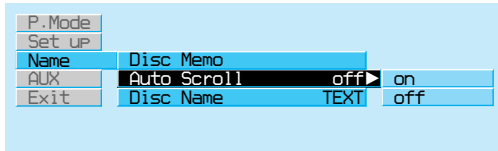
Indication	Operation
D.Memo	Displays disc titles entered by the Disc Memo function
TEXT	Displays CD TEXT information

Scrolling Titles Automatically

When playing CD TEXT discs or MDs using an optional MD changer, the track or disc title appear automatically whenever a new disc or track is played. Follow the procedure below to specify the automatic scrolling of titles of more than 10 characters.

1 While playing a CD, press MENU.

2 Select "Name," press → to move to the sub menu, then select "Auto Scroll" using ↑ or ↓.



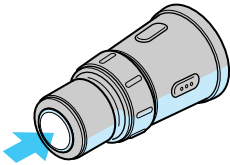
3 Press →, then ↑ or ↓ to select "on," then ENTER.

To cancel the scrolling of titles

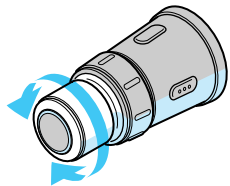
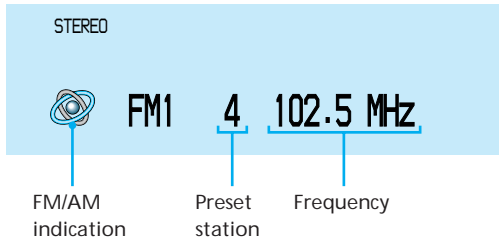
Select "off" in Step 3 and press the ENTER button.

Listening to Radio

Before using the radio, you can store your favorite radio stations in the system's memory for instant tuning at a later time (see "Presetting Radio Stations" on page 38).

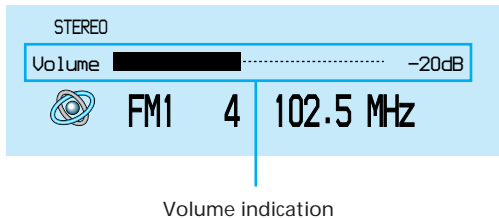


- 1 Press SOURCE repeatedly to select FM1, FM2, or AM.

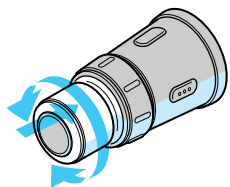


- 2 Rotate VOL/DISC/PRESET to adjust the volume.

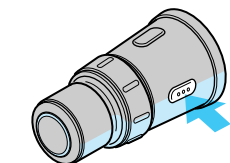
Turn the control clockwise to increase the volume; turn it counterclockwise to decrease the volume.



- 3 To change the preset station, push in and rotate VOL/DISC/PRESET.



- 4 Press OFF to turn off the system.

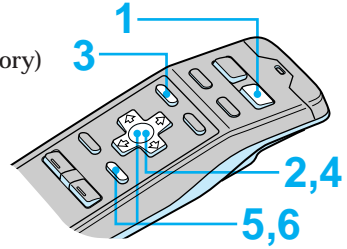


Presetting Radio Stations

There are two ways to preset radio stations:

- Selecting the station frequency (Manual Preset Memory)
- Selecting Stations with the Strongest Signal (BTM*)

* Best Tuning Memory



Useful tips

To return to previous steps (one at a time) Press the **←** button.

To return to the normal display Press the MENU button.

Useful tips

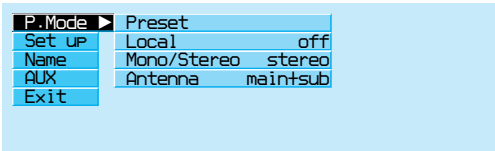
Keep the AMS/SEEK control rotated on the rotary remote to continue searching, then release the control when the frequency you want appears.

Note

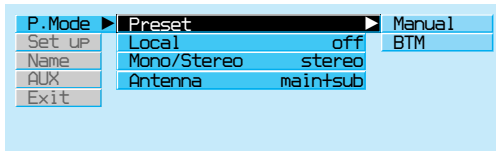
If you selected AM in Step 1, “Mono/Stereo” and “Antenna” sub menu will not appear in the display.

Specifying the Station Frequency (Manual Preset Memory)

- 1 Press SOURCE repeatedly to select FM1, FM2, or AM.
- 2 Hold down **←** or **→** until the frequency you want appears in the display, then release the button.
- 3 Press MENU.



- 4 Select “P.Mode” and press **→** to move to the sub menu, then select “Preset” using **↑** or **↓**.



Note

If you set a new frequency to a preset station number that has already been assigned a frequency, the new frequency replaces the old frequency.

Useful tips

You can start Automatic Tuning by momentarily rotating the AMS/SEEK control on the rotary remote, then releasing it.

- 5** Press **→**, then **↑** or **↓** to select “Manual,” then **ENTER**.

Manual Preset FM1 10		98.3 MHz	
1.	106.3	6.	99.6
2.	101.9	7.	99.0
3.	96.0	8.	98.3
4.	102.5	9.	98.3
5.	105.4	10.	98.3

- 6** Press **↑**, **↓**, **→**, or **←** to select the preset station number to which the frequency will be stored (the selected preset station number is highlighted), then press **ENTER**.

You can preset up to 20 FM stations (10 stations in FM1 and 2 each) and up to 10 AM stations.

To quit the Manual Preset Memory function

Press the **BACK** button.

To receive a station automatically (Automatic Tuning)

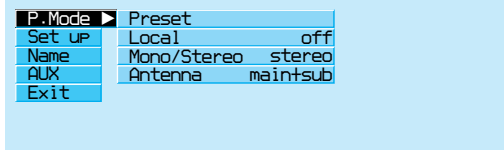
Press and release the **←** or **→** button.

“Seek Up” or “Seek Down” appears until the system detects a station.

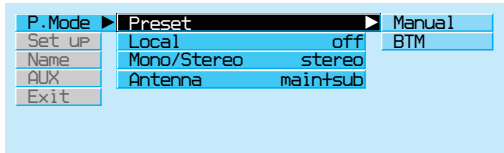

 A light blue rectangular display area showing the text "FM Seek Up". To the left of the text is a circular icon with a stylized 'S' shape inside, representing the seek function.

Selecting Stations With the Strongest Signals (BTM)

- 1 While listening to an FM or AM broadcast, press MENU.



- 2 Select "P.Mode," press → to move to the sub menu, then select "Preset" using ↑ or ↓.



- 3 Press →, then ↑ or ↓ to select "BTM," then ENTER.

The Best Tuning Memory function is activated.

What is the BTM (Best Tuning Memory) function?

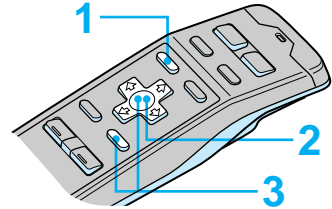
The BTM is a function that selects the radio stations with the strongest signals and automatically sets them to preset station numbers. The BTM function starts tuning in stations from the lowest frequency on the band (FM or AM). When a station is found, the system assigns the frequency to the currently selected preset station number. When preset numbers are not displayed, the system assigns frequencies starting with preset station 1. Even after the system has assigned frequencies to all the preset station numbers, the system continues tuning. If stronger signals are found, the system replaces the current preset stations with the stronger frequencies. Finally, the system sorts the stations in ascending order by frequency.

Note

If the radio can only tune in a few stations or only weak frequencies, the BTM function may not assign frequencies to all the preset station numbers.

Specifying Monaural/Stereo Mode

If the FM stereo reception is poor, you can select “Mono” to improve the sound.

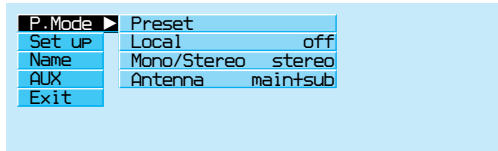


Useful tips

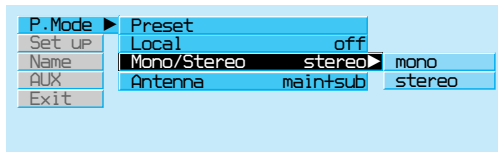
To return to previous steps (one at a time) Press the ← button.

To return to the normal display Press the MENU button.

- 1 While listening to an FM broadcast, press MENU.



- 2 Select “P.Mode,” press → to move to the sub menu, then select “Mono/Stereo” using ↑ or ↓.



- 3 Press →, then ↑ or ↓ to select “Mono,” then ENTER.

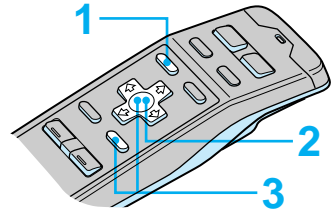
The selected FM mode appears to the right of “Mono/Stereo” in the display.

To receive FM broadcast using two FM antennas (FM Diversity function)

While listening to an FM broadcast, press the MENU button and set Antenna mode to “Main+Sub.”

Receiving Only the Strongest Signals (Local on/off)

The Automatic Tuning function may stop frequently when there are many radio stations in the area. If this happens, you can reduce the sensitivity of the tuner so that only the strongest signals are tuned in.

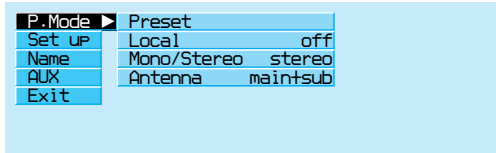


Useful tips

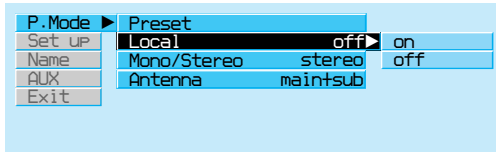
To return to previous steps (one at a time)
Press the ← button.

To return to the normal display
Press the MENU button.

- 1 While listening to an FM or AM broadcast, press MENU.



- 2 Select "P.Mode," then press → to move to the sub menu, then select "Local" using ↑ or ↓.

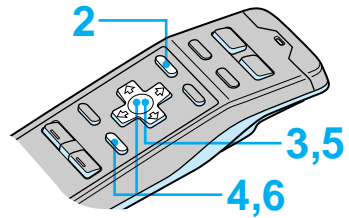


- 3 Press →, then ↑ or ↓ to select "on," then ENTER.

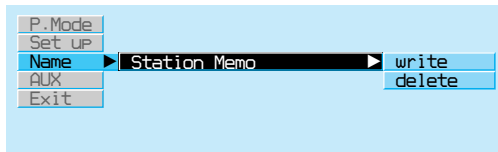
The selected mode appears to the right of "Local" in the display.

Labeling Radio Stations (Station Memo)

You can add a title of up to 8 characters to each station. The station name appears in the display whenever the station is selected. Up to 44 station names can be stored in memory.

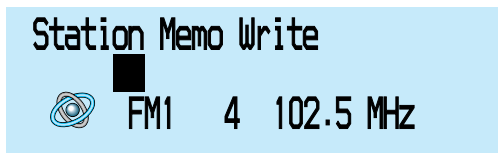


- 1 Tune in the station you want to label.
- 2 Press MENU.
- 3 Select "Name," press → to move to the sub menu, then select "Station Memo" using ↑ or ↓.



- 4 Press →, then ↑ or ↓ to select "write," then ENTER.

The Station Memo Write indication appears.



Useful tips

Hold down the LIST button for more than 2 seconds to display the Disc Memory Delete indication directly.

Useful tips

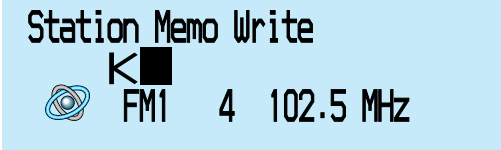
To return to previous steps (one at a time)
Press the ← button.

To return to the normal display
Press the MENU button.

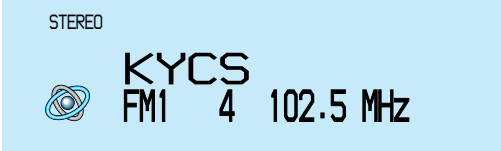
5 Press ↑ or ↓ until the character you want to input appears and press →.

Each press of the ↑ button selects the next character in the order shown below. (Press the ↓ button to move backwards.)

A → B → C → ...Z → 0 → 1 → 2 → ...9 → + → - → * → / → \ → > → < → . → (space)

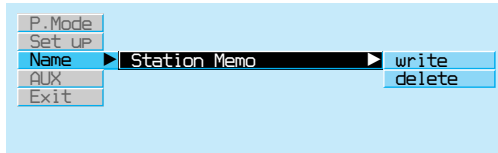


6 Repeat Step 5 until you have entered the entire name, then press ENTER.



Erasing a Station Name

- 1 While listening to FM or AM broadcast, press MENU.
- 2 Select "Name", press **→** to move to the sub menu, then select "Station Memo" using **↑** or **↓**.



- 3 Press **→**, then **↑** or **↓** to select "delete," then ENTER.

The Station Memo Delete indication appears.

- 4 Press **↑** or **↓** to select the station name you want to erase.

- 5 Hold down ENTER for more than 2 seconds.

The selected station name is erased.

To quit the Station Memo Delete function

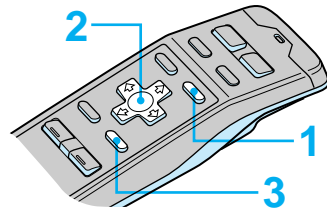
Press the BACK button.

Note

In Step 4, all the station names stored in memory appear in the order they were entered. The last station name entered will therefore appear at the end.

Selecting a Station by Name

You can use this function to select a station by the name that has been stored in memory for it.



1 Press LIST.

PRESET NAME LIST appears.

PRESET NAME LIST	FM1	4	102.5MHz
1. 106.3	6.	93.6	
2. 101.9	7.	99.0	
3. 96.0	8.	98.3	
4. 102.5	9.	98.3	
5. 105.4	10.	98.3	

2 Press **↑**, **↓**, **→**, or **←** to select the station.

3 Press ENTER.

Useful tips

To cancel the selection
Press the LIST button.

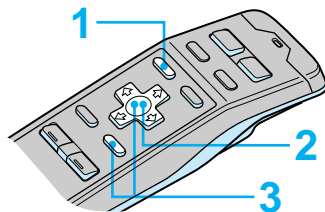
To select a station using the rotary commander

Push in and release the VOL/DISC/PRESET control to display PRESET NAME LIST.

Push and rotate the control to select the station from the list. After about 5 seconds, the normal display reappears.

Set up Menu

Use the Set up menu to perform additional settings, including Contrast, Clock, Beep, and Rotary Remote.



1 Press MENU and select "Set up."

P. Mode		
Set up	Contrast	8
Name	Clock	off
AUX	Beep	off
Exit	Rotary Remote	norm

2 Press → to move to the sub menu, then select the setting using ↑ or ↓.

The current setting appears to the right of the sub menu.

P. Mode			
Set up	Contrast	8	
Name	Clock	on	Time Set
AUX	Beep	on	on
Exit	Rotary Remote	norm	off

3 Change the setting and press ENTER.

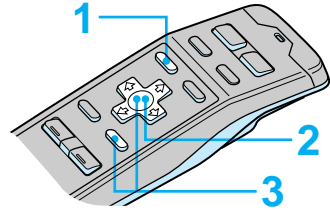
The new setting appears to the right of the sub menu.

Sub menus and the method for changing their settings are explained in the table on the next page.

Sub Menu	Explanation and Settings
Contrast	Selects 1 of 15 contrast levels for the display. Select “Contrast,” then press the ENTER button. You can change the current setting by using the ◀ or ▶ button. Press the ENTER button again to change the setting.
Clock	Select “on” to display the current time in the upper-right corner of the display at all times. If you select “off,” the time is displayed only when the system is turned off. Select “Time Set” to set the clock (see page 13).
Beep	Specifies whether a beep sounds when an operation button is pressed.
Rotary Remote	Reverses the rotational direction of the rotary remote for controlling operations. Select “normal” for increasing volume, frequency, track numbers, etc. by rotating the remote clockwise; select “reverse” for increasing the same parameters by rotating the remote counterclockwise.

AUX Menu

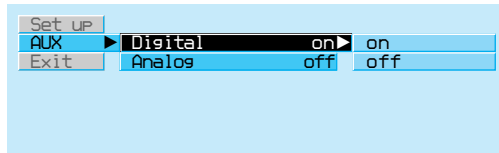
When an external device is connected, use the AUX menu to make settings for the device.



1 Press MENU and select “Set up.”

2 Press → to move to the sub menu, then select the item you want to set using ↑ or ↓.

The current sub menu setting appears to the right of the item.



3 Change the setting and press ENTER.

The new setting appears to the right of the item.

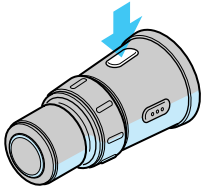
For an explanation of the sub menus, see the table on next page.

Sub menu	Explanation
Digital	Set to “on” when a Sony product that does not support the audio bus connection or a non-Sony component (e.g., a CD or MD player) is connected to the digital input connector of the system. When set to “on,” the “AUX Digital Audio” indication appears when you press the SOURCE button on the rotary remote or the wireless remote.
Analog	Set to “on” when a Sony product that does not support the audio bus connection or a non-Sony component (e.g., a CD or MD player) is connected to the analog input connectors of the system. When set to “on,” the “AUX Analog Audio” indication appears when you press the SOURCE button on the rotary remote or the wireless remote.
GND floating	Selects the ground setting when “Analog” is set to “on.” When set to “off,” the control panel and the CD changer/pre-amplifier share a common ground; when set to “on,” they are grounded separately.
Remote in	When the AMP REM connector of an external component is connected to the REM IN (AUX) connector of the system, the program source automatically switches to AUX when the connected component is turned on. When both the “Digital” and “Analog” parameters are set to “on,” set this item to “digital” or “analog” to specify the source signal input connector (external component) when a control signal is detected at the REM IN (AUX) connector. To switch to the other program source, press the SOURCE button on the rotary remote or the wireless remote.

Selecting the Parametric Equalizer Pattern

Useful tips

To change the contents of the parametric equalizer patterns preset by the Sony dealer, consult your Sony dealer.



You can use the built-in parametric equalizer to customize the sound characteristics to suit the acoustics of your car by adjusting the median frequency, level, and slope (Q, or the extent of each characteristic) of each band.

You can select a parametric equalizer pattern for each program source from 10 that are included in the system's memory.

- 1 Press **SOUND** on the rotary remote to display the Parametric EQ list.

Each press of the button changes the display as follows: Parametric EQ list → Cross-over Network list → previous display.

Parametric EQ

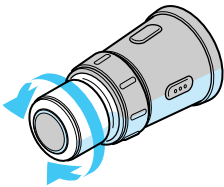
1. MEMORY 1	6. MEMORY 6
2. MEMORY 2	7. MEMORY 7
3. MEMORY 3	8. MEMORY 8
4. MEMORY 4	9. MEMORY 9
5. MEMORY 5	10. MEMORY 10

- 2 With the list displayed, rotate **VOL/DISC/PRESET** on the rotary remote to select a preset pattern.

After appearing for 10 seconds, the list is replaced by the normal display.

Source sound memory

The parametric equalizer pattern is memorized for each program source, and is activated whenever you select that source thereafter, even after switching to another program source or turning the power off, then on again.



Selecting the Cross-over Network Pattern

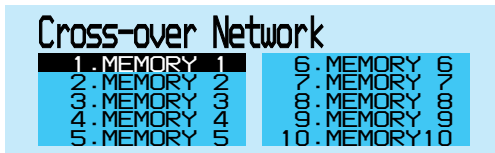
Useful tips

To change the contents of the cross-over network patterns preset by the Sony dealer, consult your Sony dealer.

Your system comes with 10 cross-over network patterns set in memory.

- 1** Press **SOUND** on the rotary remote twice to display the Cross-over Network list.

Each press of the button changes the display as follows: Parametric EQ list → Cross-over Network list → previous display.

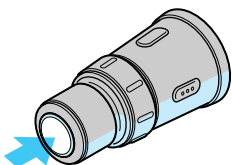


- 2** With the list displayed, rotate **VOL/DISC/PRESET** on the rotary remote to select a preset pattern.

After appearing for 10 seconds, the list is replaced by the normal display.

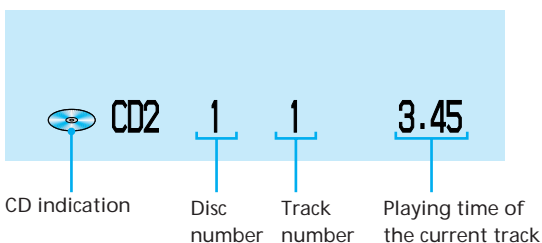
Listening to an Optional CD/MD Changer

If an optional CD or MD changer is connected to the system, you can locate and listen to discs in the optional changer in the same way as you can with those in the system's CD changer.

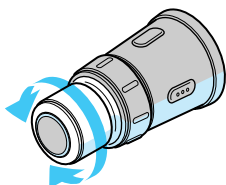


- 1 Press SOURCE repeatedly to select "CD2" or "MD."

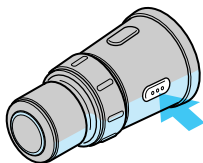
Pressing the button changes the program source as follows: CD1 → CD2 → MD → FM1 → FM2 → AM.



- 2 Rotate VOL/DISC/PRESET to adjust the volume.



- 3 Press OFF to turn off the system.



Useful tips

- You can connect multiple CD or MD changers through the optional XA-C30 Source Selector.
- When a non-Sony digital component is connected to the optical input connector of the system, be sure to set the "Digital" sub menu in the AUX menu to "on." (See page 50.)
- When a non-Sony analog component is connected to the analog input connectors of the system, be sure to set the "Analog" sub menu in the AUX menu to "on." (See page 50.)

Notes

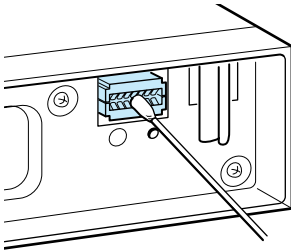
- The Disc Sound Memory function (see page 29) is supported only when a CD changer capable of program play is connected to the system. You can memorize sound effects for up to 110 discs (CDs or MDs).
- The display of CD TEXT disc information is possible only when a CD TEXT disc is played.

Precautions and Maintenance

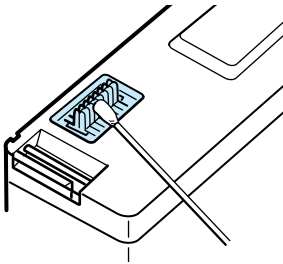
On cleaning the front panel connector

If the front panel connectors are dirty, the system may not function properly. Use a cotton swab slightly moistened with mild detergent solution to clean the connectors.

Connector on the control unit



Connector at the rear of the display section



Handling CDs

- A scratch, dust, and warp on a disc may result in a malfunction such as sound drop-out. Follow the precautions below to keep the disc clean for maximum listening pleasure.
 - Handle the disc by its edge. Do not touch the surface.
 - Do not stick paper or tape onto the disc.
- Should you encounter a CD with a sticker on, remove it and wipe off any residual adhesive before listening to it.
 - Do not scratch discs.
- Do not expose the disc to high heat, such as direct sunlight, or high humidity.
- Before playing the disc, clean it with cleaning cloth (not supplied). Wipe the disc from the center towards the edge.
- Do not use solvents such as benzene, thinner, commercially available cleaners or anti-static spray intended for analog discs.

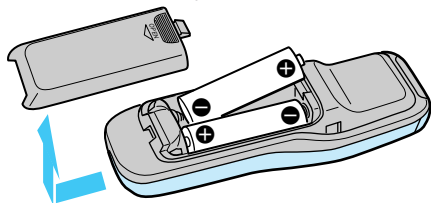
About the LCD display on the display section

When the temperature is extremely high or low, the display may become dim and hard to see. This is due to the characteristics of the LCD and is not a malfunction. The display will return to normal when the temperature becomes normal.

Wireless Remote

Installing batteries in the wireless remote

Insert two size-AA (R6) batteries with the correct polarity.



On batteries

Battery life

When the batteries become weak, you will not be able to operate the system with the wireless remote. Battery life is about six months (or shorter, depending on the way the remote is used). If the remote becomes inoperative, replace the batteries, then verify that it can operate the system.

If the red indicator no longer flashes when you press an operation button on the remote, it means the batteries are weak.

Notes on battery use

To avoid damage from battery leakage and corrosion:

- Make sure the polarity of the batteries match the + and - markings in the battery compartment.
- Do not use an old battery with a new one, or different types of batteries together.
- Remove the batteries when the system will not be used for a long period of time.
- Do not charge the batteries.

If any battery leakage occurs, replace both batteries after cleaning the battery compartment.

Notes on the wireless remote

- To prevent deformation due to heat, do not install the remote in a place subject to direct sunlight.
- Direct sunlight may affect the system's ability to receive infrared signals from the remote. If this happens, move the remote closer to the remote control sensor of the system.
- When parking your car, put the remote somewhere, such as the glove compartment, that is away from direct sunlight to prevent deformation due to heat.

Troubleshooting Guide

The following checklist will help you remedy most problems you may encounter with your system. Before going through the checklist, check the connections and the operating procedures. Should a problem persist even after trying the remedy, consult your Sony dealer.

General

Problem	Cause/Remedy
No sound.	<ul style="list-style-type: none"> • Check the connection. • Turn up the volume.
The clock does not appear when the power is turned off.	The system is installed in a car with an accessory power supply, and "ACC Position" in the initial settings is set to "no." → If your car has an accessory power supply, set "ACC Position" to "yes."
The beep does not sound when you press an operation button on the wireless remote.	"Beep" in the set up menu is set to "off." → Set "Beep" to "on."

CD/MD

Problem	Cause/remedy
The sound skips, drops, or breaks.	<ul style="list-style-type: none"> • The disc is dirty. → Clean the disc. • The disc is damaged.
The sound skips.	The CD or MD changer is not installed at a stable location.

Radio

The system cannot tune in a radio broadcast; only noise is heard.	<ul style="list-style-type: none"> • Check the connection of the car antenna. • Power is not being supplied to the power antenna. → Connect the power antenna control lead to the REM ANT wire (blue) of the system. • Make sure the frequency is the one you want.
The Automatic Tuning function frequently stops.	Set "Local" in the P.mode menu to "on."
The Automatic Tuning function does not stop at the station you want.	<ul style="list-style-type: none"> • Only the strongest signals are received when "Local" in the P.mode menu is set to "on." → Set "Local" in the P.mode menu to "off." • Keep rotating the AMS/SEEK control until you find the station.

Error Messages on the CD/MD Discs

When a malfunction occurs in a CD or MD changer, an alarm is sounded and one of the following error messages flashes for about five seconds.

Message	Cause	Remedy
Blank*	The MD is blank.	Replace with a recorded MD.
Error*	The CD is inserted upside down.	Insert the CD correctly.
	The CD is dirty.	Clean the CD.
	The MD does not play for some reason.	Replace the MD.
High Temp	The surrounding temperature has risen to 120°F and playback becomes impossible.	Wait until the temperature falls.
NO Disc	There is no disc in the magazine.	Insert a disc or discs into the magazine.
NG Discs	None of the discs in the magazine can be played back.	Replace the discs with others.
No Magazine	There is no magazine in the changer.	Insert discs into the magazine and load the magazine.
Not Ready	The door of the MD changer is not locked.	Lock the changer.
	There is no CD or MD.	Insert CDs or MDs.
Push Reset	The changer does not operate for some reason.	Push the reset button on the control panel or on the rotary remote holder.

Specifications

Tuner section

FM

Tuning range	87.5 - 108.0 MHz
Frequency response	30 - 15,000 Hz
Usable sensitivity	8 dBf
Signal-to-noise ratio	60 dB (stereo) 68 dB (monaural)
Harmonic distortion at 1 kHz	0.5% (stereo) 0.3% (monaural)

AM

Tuning range	530 - 1,710 kHz
Usable sensitivity	30 μ V

CD Changer section

Signal-to-noise ratio	106 dB
Frequency response	5 - 20,000 Hz
Laser diode properties	

Material: GaAIAs
 Wavelength: 780 nm
 Emission duration:
 Continuous
 Laser output power:
 Less than 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.

Digital pre-amplifier section

Frequency response (+0, -1 dB)	5 - 20,000 Hz
Signal-to-noise ratio	106 dB
Harmonic distortion at 1 kHz, 20 bit	0.002%
Dynamic range at 20 bit	100 dB
Channel separation at 1 kHz	100 dB
Maximum power output	8 V rms
Maximum power input (AUX analog audio)	1.2 Vrms
Sampling frequency (AUX digital audio)	44.1 kHz
Audio input	Analog (RCA-type) \times 1 Digital (optical) \times 1
Audio output	Analog (RCA-type) \times 3

General

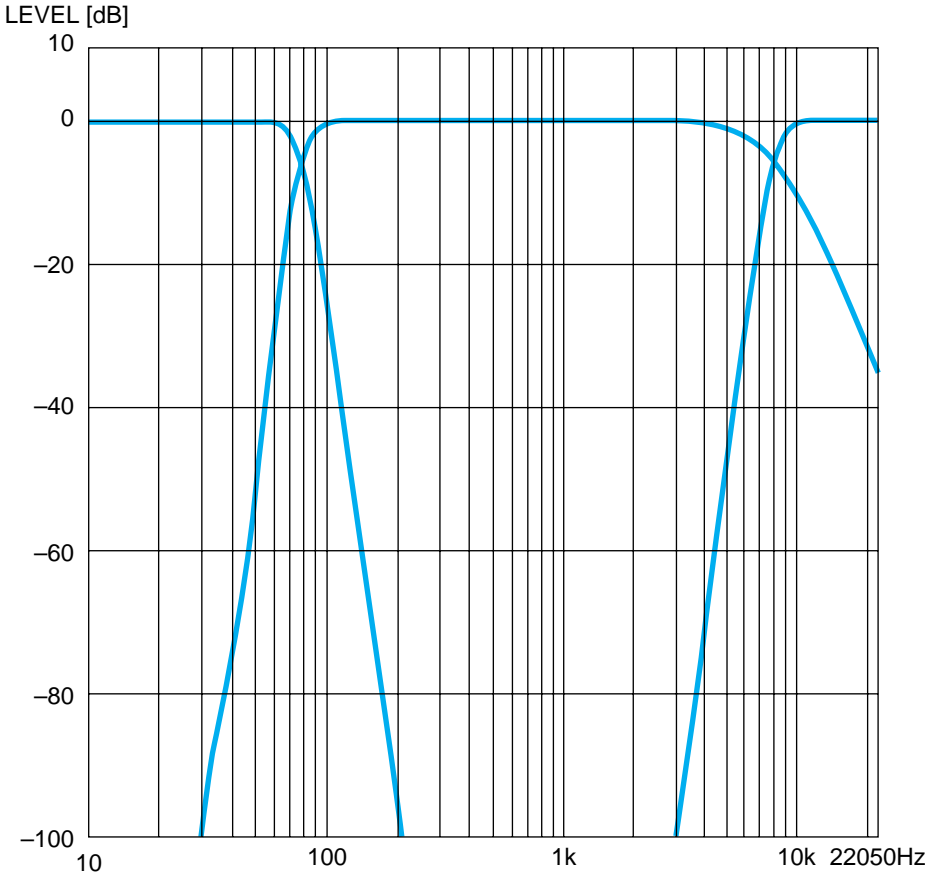
Power requirements	12 V DC car battery (negative ground)
Power consumption	Control unit: 0.7 A CD changer: 1.5 A
Mass	Control unit: 1.9 kg (4 lb 3 oz) CD changer: 6.5 kg (14 lb 5 oz)
Dimensions (w/h/d)	Control unit: 178 \times 50 \times 170 mm (7 $\frac{1}{8}$ \times 2 \times 6 $\frac{3}{4}$ inches) CD changer: 318 \times 106 \times 259 mm (12 $\frac{5}{8}$ \times 4 $\frac{1}{4}$ \times 10 $\frac{1}{4}$ inches)

Supplied accessories

- Wireless remote (1)
- Wired rotary remote (1)
- Disc magazine (1)
- SUM-3 batteries (2)
- Case for holding the front panel and rotary remote (1)
- Installation accessories (1 set)

Design and specifications are subject to change without notice.

An Example of FIR Filter (4095 tap) Frequency Response Table



The table above shows the frequency response of the FIR filter (4095 tap) with the following settings:

- Low: Cut-off frequency 78 Hz, Slope -72 dB/oct.
- Mid-L: Cut-off frequency 78 Hz, Slope -72 dB/oct.
- Mid-H: Cut-off frequency 8 kHz, Slope -24 dB/oct.
- High: Cut-off frequency 8 kHz, Slope -72 dB/oct.

XES