

KENWOOD

DPX-8030MD

DOUBLE DIN SIZE CD/MP3/WMA/MD/DSP RECEIVER
INSTRUCTION MANUAL

KENWOOD CORPORATION



©B64-2329-00/00 (MW)

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Safety precautions

▲WARNING

To prevent injury or fire, take the following precautions:

- Insert the unit all the way in until it is fully locked in place. Otherwise it may fall out of place when jolted.
- When extending the ignition, battery, or ground wires, make sure to use automotive-grade wires or other wires with a 0.75mm² (AWG18) or more to prevent wire deterioration and damage to the wire coating.
- To prevent a short circuit, never put or leave any metallic objects (such as coins or metal tools) inside the unit.
- If the unit starts to emit smoke or strange smells, turn off the power immediately and consult your Kenwood dealer.
- Make sure not to get your fingers caught between the faceplate and the unit.
- Be careful not to drop the unit or subject it to strong shock.
The unit may break or crack because it contains glass parts.

▲CAUTION

To prevent damage to the machine, take the following precautions:

- Make sure to ground the unit to a negative 12V DC power supply.
- Do not open the top or bottom covers of the unit.
- Do not install the unit in a spot exposed to direct sunlight or excessive heat or humidity. Also avoid places with too much dust or the possibility of water splashing.
- Do not subject the faceplate to excessive shock, as it is a piece of precision equipment.
- When replacing a fuse, only use a new one with the prescribed rating. Using a fuse with the wrong rating may cause your unit to malfunction.
- To prevent a short circuit when replacing a fuse, first disconnect the wiring harness.
- Do not place any object between the faceplate and the unit.
- Do not use your own screws. Use only the screws provided. If you use the wrong screws, you could damage the unit.
- Do not apply excessive force to the moving faceplate. Doing so will cause damage or malfunction.
- Do not apply excessive force to the open faceplate or place objects on it. Doing so will cause damage or breakdown.

Do Not Load 3-in. CDs in the CD slot

If you try to load a 3 in. CD with its adapter into the unit, the adapter might separate from the CD and damage the unit.

IMPORTANT INFORMATION

About the disc changer to be connected:

To connect a disc changer having the "O-N" switch to this unit, set the "O-N" switch to "N". Note that none of the KDC-C100, KDC-C302, C205, C705, and non-Kenwood CD changers can be connected.



You can damage both your unit and the CD changer if you connect them incorrectly.

Precautions when connecting disc changers released in 1997 or earlier.

If a model with no "O-N" switch is connected, some unavailable functions and information that cannot be displayed are generated.

The marking of products using lasers (Except for some areas)

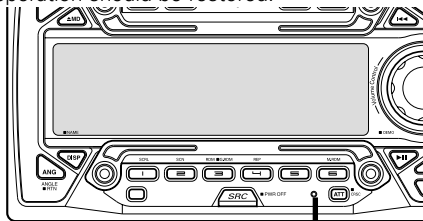
CLASS 1 LASER PRODUCT

The label is attached to the chassis/case and says that the component uses laser beams that have been classified as Class 1. It means that the unit is utilizing laser beams that are of a weaker class. There is no danger of hazardous radiation outside the unit.

Safety precautions

NOTE

- If you experience problems during installation, consult your Kenwood dealer.
- If the unit fails to operate properly, press the Reset button. The unit returns to factory settings when the Reset button is pressed. If the unit still fails to operate properly after the Reset button has been pressed, contact your local KENWOOD dealer for assistance.
- Press the reset button if the disc auto changer fails to operate correctly. Normal operation should be restored.



Reset button

- We recommend the use of the Security Code function (see p. 30) to prevent theft.
- The illustrations of the display and the panel appearing in this manual are examples used to explain more clearly how the controls are used. Therefore, what appears on the display in the illustrations may differ from what appears on the display on the actual equipment, and some of the illustrations on the display may represent something impossible in actual operation.

Lens Fogging

Right after you turn on the car heater in cold weather, dew or condensation may form on the lens in the CD player of the unit. Called lens fogging, CDs may be impossible to play. In such a situation, remove the disc and wait for the condensation to evaporate. If the unit still does not operate normally after a while, consult your Kenwood dealer.

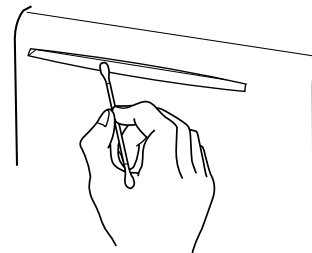
Cleaning the Unit

If the faceplate of this unit is stained, wipe it with a dry soft cloth such as a silicon cloth. If the faceplate is stained badly, wipe the stain off with a cloth moistened with neutral cleaner, then wipe neutral detergent off.

- ⚠ Applying spray cleaner directly to the unit may affect its mechanical parts. Wiping the faceplate with a hard cloth or using a volatile liquid such as thinner or alcohol may scratch the surface or erases characters.

Cleaning the CD Slot

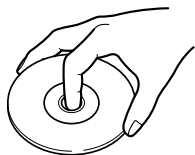
As dust tends to accumulate in the CD slot, clean it every once in a while. Your CDs can get scratched if you put them in a dusty CD slot.



About CDs

Handling CDs

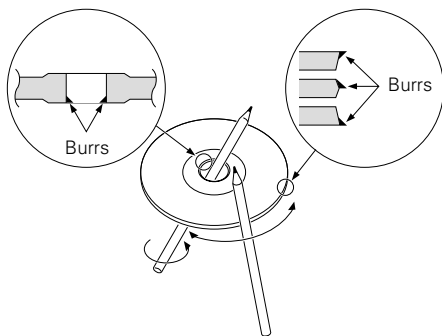
- Don't touch the recording surface of the CD.



- CD-R and CD-RW are easier to damage than a normal music CD. Use a CD-R or a CD-RW after reading the caution items on the package etc.
- Don't stick tape etc. on the CD. Also, don't use a CD with tape stuck on it.

When using a new CD

If the CD center hole or outside rim has burrs, use it after removing them with a ball pen etc.

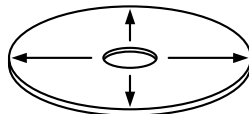


CD accessories

Don't use disc type accessories.

CD cleaning

Clean from the center of the disc and move outward.

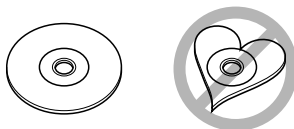



Removing CDs

When removing CDs from this unit pull them out horizontally.

CDs that can't be used

- CDs that aren't round can't be used.



- CDs with coloring on the recording surface or that are dirty can't be used.
 - Don't use CDs without disc mark
- 
- A CD-R or CD-RW that hasn't been finalized can't be played. (For the finalization process refer to your CD-R/CD-RW writing software, and your CD-R/CD-RW recorder instruction manual.)

CD storage

- Don't place them in direct sunlight (On the seat or dashboard etc.) and where the temperature is high.
- Store CDs in their cases.

Notes on playing MP3/WMA

This unit can play MP3(MPEG1, 2, 2.5 Audio Layer 3)/WMA. Note, however, that the MP3/WMA recording media and formats acceptable are limited. When writing MP3/WMA, pay attention to the following restrictions.

Acceptable media

The MP3/WMA recording media acceptable to this unit are CD-ROM, CD-R, and CD-RW.

When using CD-RW, do full format not quick format to prevent malfunction.

Acceptable medium formats

The following formats are available for the media used in this unit. The maximum number of characters used for file name including the delimiter (".") and three-character extension are indicated in parentheses.

- ISO 9660 Level 1 (12 characters)
- ISO 9660 Level 2 (31 characters)
- Joliet (64 characters)
- Romeo (128 characters)

Up to 200 characters can be displayed in the long file name format.

For a list of available characters, see the instruction manual of the writing software and the section Entering file and folder names below. The media reproducible on this unit has the following limitations:

- Maximum number of directory levels: 8
- Maximum number of files per folder: 255
- Maximum number of characters for folder name: 64
- Maximum number of folders: 50

MP3/WMA written in the formats other than the above may not be successfully played and their file names or folder names are not properly displayed.

Settings for your MP3/WMA encoder and CD writer

Do the following setting when compressing audio data in WMA data with the WMA encoder.

- Transfer bit rate: 64k —192 kbps
- Sampling frequency: 32k, 44.1k 48k Hz

When you use your CD writer to record MP3/WMA up to the maximum disc capacity, disable additional writing. For recording on an empty disc up to the maximum capacity at once, check Disc at Once.

Entering ID3 tag and Contents Description

The Displayable ID3 tag is ID3 version 1.x.

The right table shows the characters that can be displayed in this unit.

0	@	P	·	□	°	À	Ð	ä	đ		
1	1	A	Q	a	q	i	±	Ä	Ñ	á	ñ
2	2	B	R	b	r	c	²	Å	Ö	â	ö
3	3	C	S	c	s	£	³	Ä	Ø	ä	ø
4	4	D	T	d	t	¤	´	Å	Ö	ä	ö
5	5	E	U	e	u	¥	µ	Ä	Ö	ä	ö
6	6	F	V	f	v	¦	¶	Æ	O	æ	ø
7	7	G	W	g	w	§	·	Ç	X	ç	±
8	8	H	X	h	x	¸	¸	È	Ö	è	ø
9	9	I	Y	i	y	©	¹	É	Ü	é	ü
:	:	J	Z	j	z	ª	º	Ê	Ü	ê	ü
+	+	K	[k	{	«	»	Ë	Ü	ë	ü
<	<	L	\	l		¼	¼	Ì	Ü	ì	ü
-	-	M]	m	}	½	½	Í	Ý	í	ý
>	>	N	^	n	~	¾	¾	I	Þ	i	þ
/	/	?	_	o	o	■	■	ı	ı	ı	ı

Entering file and folder names

The code list characters are the only file names and folder names that can be entered and displayed.

If you use any other character for entry, the file and folder names are not displayed correctly. They may neither be displayed correctly depending on the CD writer used.

The unit recognizes and plays only those MP3/WMA which have the MP3/WMA extension (.MP3/.WMA).



A file with a name entered with characters not on the code list may not play correctly.

Writing files into a medium

When a medium containing MP3/WMA data is loaded, the unit checks all the data on the medium. If the medium contains a lot of folders or non-MP3/WMA files, therefore, it takes a long time until the unit starts playing MP3/WMA.

In addition, it may take time for the unit to move to the next MP3/WMA file or a File Search or Folder Search may not be performed smoothly.



Loading such a medium may produce loud noise to damage the speakers.

- Do not attempt to play a medium containing a non-MP3/WMA file with the MP3/WMA extension.
The unit mistakes non-MP3/WMA files for MP3/WMA data as long as they have the MP3/WMA extension.
- Do not attempt to play a medium containing non MP3/WMA.

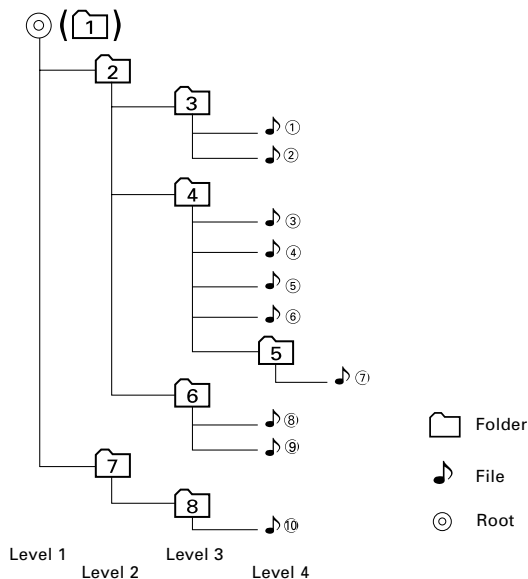
MP3/WMA playing order

When selected for play, Folder Search, File Search, or for Folder Select, files and folders are accessed in the order in which they were written by the CD writer.

Because of this, the order in which they are expected to be played may not match the order in which they are actually played. You may be able to set the order in which MP3/WMA are to be played by writing them onto a medium such as a CD-R with their file names beginning with play sequence numbers such as "01" to "99", depending on your CD writer.

For example, a medium with the following folder/ file hierarchy is subject to Folder Search, File Search, or Folder Select as shown below.

Example of a medium's folder/file hierarchy



When a File Search is executed with file 4 being played ...

Current file number	Operation of the button	
	◀◀ Button	▶▶ Button
4	Beginning of file 4 • 3	5 • 6

When an Folder Search is executed with file 4 being played ...

Current folder number	Operation of the button	
	AM Button	FM Button
4	3 • 2 • 1 • 8 ...	5 • 6 • 7 • 8 • 1 ...

When Folder Select is selected with file 4 being played to move from folder to folder ...

Current folder number	Operation of the button			
	◀◀ Button	▶▶ Button	AM Button	FM Button
4	3	6	2	5

Notes on playing MD Group

This unit is equipped with the group management function that enables quick search for a track you want to listen from the grouped MDs (MDs with group registration thereafter). (Refer to the instruction manual of home audio equipped with the group function or another equipment for the creation of MD.)

The maximum number of playable groups

This unit can play up to the 50th group.

This unit cannot play the 51st group.

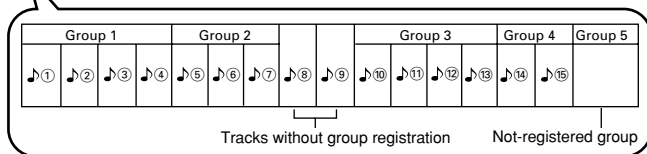
The order of playing tracks with group registration

If Track Search, Group Search or Group Select is selected for a disc created with group in the following:

(The group management function is enabled to use when <MD group setting> of <Function Setting System> (page 30) is ON.)



- If <MD group setting> is ON, tracks without group registration cannot be played.
If <MD group setting> is OFF, tracks without group registration can be played.
- If no track is registered in a group, select the next group in Group Search or Group Select, but do not select any group where no track is registered.



♪ Track

When a Track Search is executed with track ♪6 being played ...

Current Track number	Operation of the button	
	◀◀ Button	▶▶ Button
♪6	Beginning of track ♪6 ♪5 ♪4 ...	♪7 ♪10 ♪11 ...

When an Group Search is executed with track ♪10 being played ...

Current Group number	Operation of the button	
	AM Button	FM Button
Group 3	Group 2 ♪ Group 1 ...	Group 4 ♪ Group 1 ...

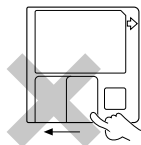
When Group Select is selected with track ♪10 being played ...

Current Group number	Operation of the button	
	AM Button	FM Button
Group 3	Group 4	Group 2 ♪ Group 1

About MDs

Handling Mini discs

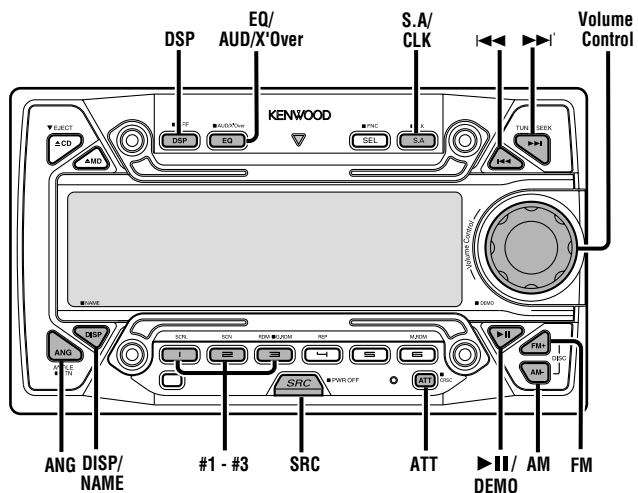
- The MD shutter is designed so that it cannot be opened. If forced open, the cartridge will be damaged and use of the MD will no longer be possible. If the shutter has been opened due to some cause, be careful not to touch the recording portion with a finger. Doing so will cause the sound to skip.



- Do not use an MD that has a peeling label. Use of an MD that has a loose or peeling label may cause problems, such as the label coming off inside the player and the resultant inability to eject the MD.
 - Wipe away dirt or dust from the cartridge surface with a dry cloth before use. Using an oil-soiled cartridge in particular may result in the disc not loading or being unable to eject it. (At time of cleaning, be careful not to open the shutter.)
 - Do not leave the MD in the unit for a prolonged period. The ejected MD should be placed in an MD case for storage.
- Do not leave the MD in a place exposed to direct sunlight (such as on a dashboard) or in other places that attain high temperatures. The MD cartridge will become misshapen and will no longer be usable.
 - MDs designed for use with data cannot be used. Please use MDs designed for music.
 - Do not use lens cleaners. Doing so will lead to breakdown.

US and foreign patents licensed from Dolby Laboratories.

General features



Power

Turning ON the Power

Press the [SRC] button.

Turning OFF the Power

Press the [SRC] button for at least 1 second.

Volume

Increasing Volume

Turn the [Volume Control] knob clockwise.

Decreasing Volume

Turn the [Volume Control] knob counterclockwise.

Attenuator

Turning the volume down quickly.

Press the [ATT] button.

Each time the button is pressed the Attenuator turns ON or OFF.

When it's ON, "ATT On" is displayed.

Selecting the Source

Press the [SRC] button.

Source required	Display
Tuner	"TUNER"
MD	"Mini Disc"
CD	"Compact Disc"
External disc	"CD Changer"/"MD Changer"
Auxiliary input	"AUX"
External TV	"TV"
Standby (Illumination only mode)	"ALL OFF"



- When a medium containing MP3/WMA is inserted, an MP3/WMA file can be played by selecting CD source ("Compact Disc").
- AUX mode is only available when "AUX" is turned ON in the Function setting (page 31).
- "AUX"/"AUX1" is displayed in the Auxiliary input source at the initial state but can be changed in <Auxiliary Input Name Setting> (page 15).
- If AUX has two sources with the optional accessories (to be separately purchased), select the AUX source as shown below:

Select AUX source from	Display (after being selected)
This unit	"AUX"
KCA-S210A	"AUX1"
CA-C1AX	"Disc Changer" ("AUX Mode")
CD changer having AUX input	"CD Changer2" ("AUX Mode")

Clock Display

Press the [CLK] button for at least 1 second.

Each time the button is pressed for at least 1 second the clock display turns ON or OFF.

Adjusting Clock

1 Enter Standby

Press the [SRC] button.

Select the "ALL OFF" display.

2 Enter clock adjustment mode

Press the [DISP] button for at least 2 seconds.

"CLOCK ADJUST" is displayed.

3 Adjust the hours

Press the [FM] or [AM] button.

Adjust the minutes

Press the [◀] or [▶] button.

4 Exit clock adjustment mode

Press the [DISP] button.

Demonstration

Turning the Demonstration ON or OFF.

Press the [DEMO] button for at least 2 seconds.

Each time the button is pressed for at least 2 seconds the Demonstration turns ON or OFF.

When it's ON, "DEMO ON" is displayed.

General features

Display Mode Switching

Switching the display mode.

Press the [DISP] button.

The Reference for the display content is after this operation's explanation.



The each screen graphic can be changed.

- Full Screen Graphic Switching: page 13
- Half Screen Graphic Switching: page 14

In Tuner source

Information	Display
Full screen graphic + Frequency	
Half screen graphic + Station name + Frequency	"SNPS"
Full screen graphic	



For Station name registration refer to <Station/Disc Naming (SNPS/DNPS)> (page 14).

In CD source

Information	Display
Full screen graphic + Track time	"P-Time"
Full screen graphic + Total time	"A-Time"
Half screen graphic + Disc name + Track time	"DNPS"
Half screen graphic + Disc title + Track time	"Disc Title"
Half screen graphic + Track title + Track time	"Track Title"
Disc title + Track title + Track time	"Disc Title" "Track Title"
Full screen graphic	



For Disc name registration refer to <Station/Disc Naming (SNPS/DNPS)> (page 14).

In MP3/WMA source

Information	Display
Full screen graphic + Track time	"P-Time"
Half screen graphic + Folder name + Track time	"Folder Name"
Half screen graphic + File name + Track time	"File Name"
Half screen graphic + Song title & Artist name + Track time	"Title"
Song title & Artist name + Album name + Track time	"Title" "Album"
Folder name + File name + Track time	"Folder Name" "File Name"
Song title & Artist name + Folder name + Track time	"Title" "Folder Name"
Full screen graphic	



The Album name cannot be displayed during WMA play.

In MD source

Information	Display
Full screen graphic + Track time	"P-Time"
Half screen graphic + Disc title + Track time	"Disc Title"
Half screen graphic + Group title + Track time*	"Group Title"
Half screen graphic + Track title + Track time	"Track Title"
Disc title + Track title + Track time	"Disc Title" "Track Title"
Group title + Track title + Track time*	"Group Title" "Track Title"
Full screen graphic	



* Selectable only when an MD with group registration is played.

In Auxiliary input source

Information	Display
Full screen graphic + Auxiliary input display	
Half screen graphic + Auxiliary input display	"AUX"
Full screen graphic	



The display may differ from the above depending on the Auxiliary input source that has been input into CA-C1AX/ CD changer having AUX input.

In Standby mode

Information	Display
Full screen graphic + "ALL OFF"	"ALL OFF"
Half screen graphic + "ALL OFF"	"ALL OFF"
Full screen graphic	

Full Screen Graphic Switching

Switching the full screen graphic.

1 Select the full screen graphic

Press the [DISP] button.

Refer to <Display Mode Switching> (page 12).

2 Switch the graphic

Press the [S.A] button.

Each time the button is pressed the full screen graphic switches as shown below.

Screen Graphic	Display
Spectrum Analyzer Scan	"Speana Scan"
(The items from Movie 1 to Equalizer Curve are displayed in sequence.)	
Movie 1	"Virtual Cruising"
Movie 2	"Deep Marine Movie"
Spectrum Analyzer 1	"Peak Hold"
Spectrum Analyzer 2	"Plate Falls"
Spectrum Analyzer 3	"Square Glass"
Spectrum Analyzer 4	"Heart Breeze"
Spectrum Analyzer 5	"Crystal Explosion"
Spectrum Analyzer 6	"Cipher"
Spectrum Analyzer 7	"Megaplant"
Equalizer Curve	"EQ Curve"



Movies only are switched in the Standby mode.

General features

Half Screen Graphic Switching

Switching the half screen graphic.

1 Select the half screen graphic

Press the [DISP] button.

Refer to <Display Mode Switching> (page 12).

2 Switch the graphic

Press the [S.A] button.

Each time the button is pressed the half screen graphic switches as shown below.

Screen Graphic

Graphic 1

Graphic 2

Graphic 3



The half screen graphic cannot be switched in the Standby mode.

Station/Disc Naming (SNPS/DNPS)

Attaching a title to a Station or CD.

1 Receive/play the station/disc you want to attach a title to



- A title can't be attached to MD and MP3/WMA media.
- Disc Naming is unavailable when Magazine Random Play is performed.

2 Enter name set mode

Press the [NAME] button for at least 2 seconds.

"Name Set" is displayed.

3 Move the cursor to the enter character position

Press the [◀◀] or [▶▶] button.

4 Select the character type

Press the [▶II] button.

Each time the button is pressed the character type switches as shown below.

Character type	Display
Alphabet upper case	"A"
Alphabet lower case	"a"
Numbers and symbols	"*"

5 Select the characters

Press the [FM] or [AM] button.



Characters can be entered by using a remote with a number buttons.

Example: If "DANCE" is entered.

Character	Button	#Times pressed
"D"	[#3]	1
"A"	[#2]	1
"N"	[#6]	2
"C"	[#2]	3
"E"	[#3]	2

6 Repeat steps 3 through 5 and enter the name.

7 Exit name set mode

Press the [NAME] button.



- When operation stops for 10 seconds the name at that time is registered, and Name Set mode closes.
- At registration, up to 12 characters can be entered into each name.
- Memory numbers
 - Total number of FM and AM stations: 30 stations
 - 50 disc names can be registered in internal CD player and external CD changer.
- The title of station/CD can be changed by the same operation used to name it.
- If this unit is removed from the battery, DNPS/SNPS is erased.

Auxiliary Input Name Setting

Selecting the display when this device is switched to Auxiliary input source.

1 Select Auxiliary input source

Press the [SRC] button.

Select the "AUX"/"AUX1" display.

2 Enter Auxiliary input name setting mode

Press the [NAME] button for at least 2 seconds.

"Name Set" is displayed.

3 Select the Auxiliary input name

Press the [◀◀] or [▶▶] button.

Each time the button is pressed it switches through the below displays.

- "AUX"
- "TV"
- "VIDEO"
- "GAME"
- "PORTABLE"
- "DVD"

4 Exit Auxiliary input name setting mode

Press the [NAME] button.



- When operation stops for 10 seconds, the name at that time is selected, and Auxiliary input name setting mode closes.
- Auxiliary input name setting cannot be applied to the optional Auxiliary input sources shown below.
 - CA-C1AX
 - CD changer with an Auxiliary input function installed.
- If this unit is removed from the battery, the Auxiliary input name is returned to "AUX".

Balance/ Fader Control

1 Enter Audio Control mode

Press the [AUD/X'Over] button for at least 1 second.

"AUDIO CONTROL MODE" is displayed.

2 Select the Balance/ Fader Control mode

Press the [AUD/X'Over] button.

Select the "BAL/FAD" display.

Each time the button is pressed the Audio control, the X'Over control and the Amp control switch.

3 Adjust the Balance

Press the [◀◀] or [▶▶] button.

Adjust the Fader

Press the [FM] or [AM] button.

Each time the button is pressed the items that can be adjusted switch as shown below.

<u>Adjustment Item</u>	<u>Display</u>	<u>Range</u>
Balance	"Balance"	Left 15 — Right 15
Fader	"Fader"	Rear 15 — Front 15

4 Exit Audio Control mode mode

Press the [AUD/X'Over] button for at least 1 second.

General features

X'Over & Amp Control

1 Enter Audio Control mode

Press the [AUD/X'Over] button for at least 1 second.
"AUDIO CONTROL MODE" is displayed.

2 Select the X'Over or Amp Control mode

Press the [AUD/X'Over] button.
Select the "X'OVER CONTROL" (X'Over Control mode) or "AMP CONTROL" (Amp Control mode) display.
Each time the button is pressed the Audio control, the X'Over control and the Amp control switch.

3 Select the X'Over & Amp Control item for adjustment

Press the [FM] or [AM] button.
Each time the button is pressed the items that can be adjusted switch as shown below.

4 Adjust the Audio item

Press the [◀◀] or [▶▶] button.

5 Exit Audio Control mode

Press the [AUD/X'Over] button for at least 1 second.

X'Over control mode

Adjustment Item	Display	Range
Front High Pass Filter	"HPF-Front"	Off/ 40/ 60/ 80/ 100/ 120/ 150/ 180/ 220 (Hz)
Rear High Pass Filter	"HPF-Rear"	Off/ 40/ 60/ 80/ 100/ 120/ 150/ 180/ 220 (Hz)
Low Pass Filter*	"LPF"	50/ 80/ 120/ Off (Hz)
Non-Fading level*	"N-F Level"	- - - — +10
Non-Fading Phase*	"N-F Phase"	Normal (0°)/Reverse (180°)

Amp control mode:

Adjustment Item	Display	Range
Bass boost level	"Amp Bass"	Flat/+6/ +12/ +18 (dB)
Central frequency boost	"Amp Freq"	Normal/ Low



- * This mode is available only when <Switching preout> (page 30) is set on "N-F".
- Refer to the catalog or instruction manual for power amplifiers that can be controlled from this unit.
- For amplifiers there are the model that can be set from Flat to +18 dB, and the model that can be set from Flat to +12 dB.
When an amplifier that can only be set to +12 is connected to the unit, "Amp Bass +18" won't work correctly even if it's selected.

X'Over Preset Memory

You can store into or recall from memory up to three X'Over settings.

1 Adjust the X'Over to put in the memory

Refer to <X'Over & Amp Control> (page 16).

2 Put the X'Over setting in the memory

Press the [#1] — [#3] button for at least 2 seconds.
The preset number display blinks 1 time.

3 Exit Audio Control mode

Press the [AUD/X'Over] button for at least 1 second.

Recalling the X'Over setting

1 Enter X'Over Control mode

Refer to <X'Over & Amp Control> (page 16).

2 Call up the X'Over setting

Press the [#1] — [#3] button.

3 Exit Audio Control mode

Press the [AUD/X'Over] button for at least 1 second.



Non-Fading level cannot be preset into the memory.

DSP(Digital Signal Processor) System

Turning the DSP effects ON or OFF.

A DSP is a device which uses digital control to correct the audio signal and produce sound effects that can compensate for the small passenger compartment of a vehicle.

Turn DSP System ON

Press the [DSP] button.

"DSP CONTROL MODE" is displayed.

Turn DSP System OFF

Press the [DSP] button for at least 1 second.

"DSP OFF" is displayed.

Sound Field Setting

This function reproduces many different virtual sound fields.

1 Enter the DSP control mode

Press the [DSP] button.

"DSP CONTROL MODE" is displayed.

2 Selecting the sound field setting

Press the [DSP] button.

Each time the button is pressed the sound field setting switches as shown below.

Setting

Display

Stadium	"STADIUM"
Concert Hall	"CONCERT"
Club Disco	"CLUB DISCO"
Church	"CHURCH"
Listening	"LISTENING"
Bypass	"BYPASS"

When operation stops for 10 seconds, the Sound Field Setting closes.

Preset Equalizer Curve Selection

Recall the preset equalizer curve classified in groups.

1 Enter the Equalizer control mode

Press the [EQ] button.

"EQ CONTROL MODE" is displayed.

2 Select an equalizer curve

Press the [EQ] button.

Each time the button is pressed the preset equalizer curve switches.

Setting	Display
Flat	"Flat"
Rock	"Rock"
Pops	"Pops"
Dance	"Dance"
Vocal	"Vocal"



When Equalizer Curve is adjusted, the selection starts from "User".

Ending of Equalizer control mode

Press the [EQ] button for at least 1 second.

When operation stops for 10 seconds, the Equalizer control mode closes.

General features

Equalizer Curve Adjustment

You can create your own equalizer curves.

1 Enter the Equalizer control mode

Press the [EQ] button.

"EQ CONTROL MODE" is displayed.

2 Select the frequency

Press the [◀◀] or [▶▶] button.

Item	Setting
Frequency	"60Hz" — "16kHz"
The number of steps	7 bands

3 Adjust the level

Press the [FM] or [AM] button.

Item	Setting
Level	"-12" — "+12" (dB)
The number of steps	13 steps

4 Ending the Equalizer control mode

Press the [EQ] button for at least 1 second.

When operation stops for 10 seconds, the Equalizer control mode closes.

Equalizer Curve Preset Memory

You can store into or recall from memory up to three equalizer curves.

1 Create an equalizer curve to put in the memory

Refer to <Equalizer Curve Adjustment> (page 18).

2 Put the equalizer curve in the memory

Press the [#1] — [#3] button for at least 2 seconds.

The preset number display blinks 1 time.

Recalling the equalizer curve

1 Enter the Equalizer control mode

Press the [EQ] button.

"EQ CONTROL MODE" is displayed.

2 Call up the equalizer curve

Press the [#1] — [#3] button.

Faceplate Angle Adjustment

You can adjust the faceplate angle for easy viewing.

Slide the faceplate

Press the [ANG] button.

Each time the button is pressed the faceplate is slid by one step.

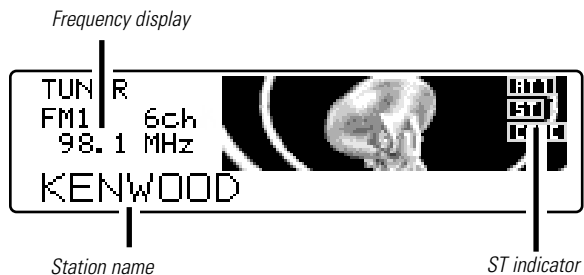
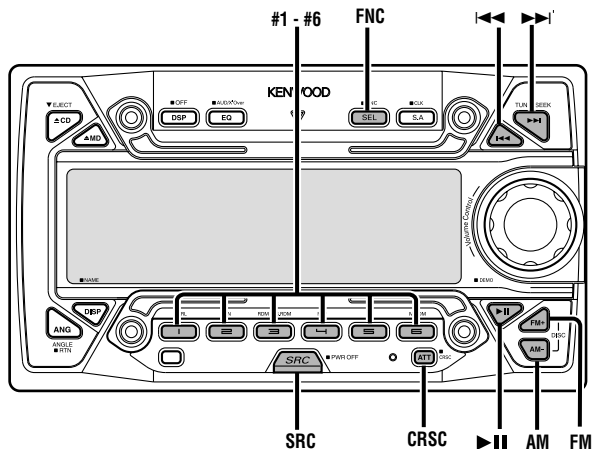
Return the faceplate to the original position

Press the [ANG] button for at least 1 second.



- Do not apply excessive force to the faceplate. It can cause damage.
- During the process of sliding of the panel, FM/AM station sound is suppressed.

Tuner features



ST indicator

Tuning

Selecting the station.

1 Select tuner source

Press the [SRC] button.

Select the "TUNER" display.

2 Select the band

Press the [FM] or [AM] button.

Each time the [FM] button is pressed it switches between the FM1, FM2, and FM3 bands.

3 Tune up or down band

Press the [◀◀] or [▶▶] button.



During reception of stereo stations the "ST" indicator is ON.

Direct Access Tuning (Function of remote)

Entering the frequency and tuning.

1 Select the band

Press the [FM] or [AM] button.

2 Enter Direct Access Tuning mode

Press the [DIRECT] button on the remote.

"- - - -" is displayed.

3 Enter the frequency

Press the number buttons on the remote.

Example:

Desired frequency	Press button
92.1 MHz (FM)	[#9], [#2], [#1]
810 kHz (AM)	[#8], [#1], [#0]

Canceling Direct Access Tuning

Press the [DIRECT] button on the remote.

Tuner features

Station Preset Memory

Putting the station in the memory.

1 Select the band

Press the [FM] or [AM] button.

2 Select the frequency to put in the memory

Press the [◀◀] or [▶▶] button.

3 Put the frequency in the memory

Press the [#1] — [#6] button for at least 2 seconds.

The preset number display blinks 1 time.

On each band, 1 station can be put in the memory on each [#1] — [#6] button.

Auto Memory Entry

Putting a station with good reception in the memory automatically.

1 Select the band for Auto Memory Entry

Press the [FM] or [AM] button.

2 Enter Function Setting mode

Press the [FNC] button for at least 1 second.

"FUNCTION SET" is displayed.

3 Select the Auto Memory Entry mode

Press the [FM] or [AM] button.

Select the "AME Ready" display.

4 Open Auto Memory Entry

Press the [▶■] button for at least 2 seconds.

When 6 stations that can be received are put in the memory Auto Memory Entry closes.

Preset Tuning

Calling up the stations in the memory.

1 Select the band

Press the [FM] or [AM] button.

2 Call up the station

Press the [#1] — [#6] button.

CRSC (Clean Reception System Circuit)

Temporarily have reception switched from stereo to mono to reduce multi-path noise when listening to the FM station.

Press the [CRSC] button for at least 1 second.

Each time the button is pressed CRSC turns ON or OFF.

When it's ON, "CRSC ON" is displayed.

CD/MD/MP3/WMA/External disc control features

Frequency Step Setting

Changing the tuning frequency step.

The original setting is FM band 50 kHz, and AM band 9 kHz.

1 Turn the power OFF

Press the [SRC] button for at least 1 second.

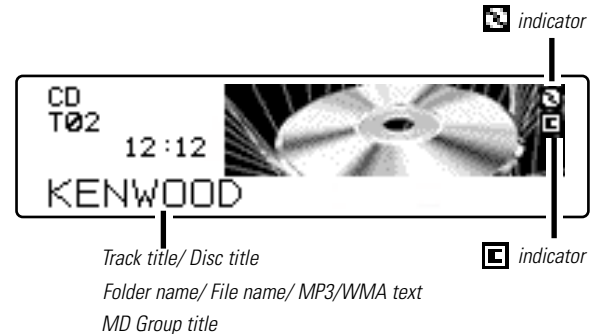
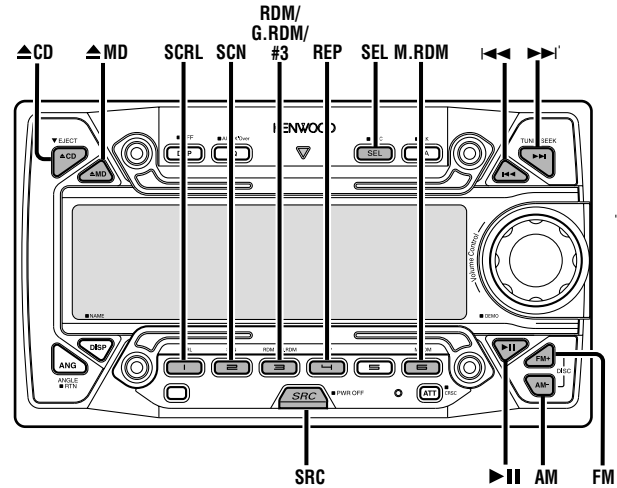
2 Switch the frequency step

While pressing the [#1] and [#5] button, press the [SRC] button.

The frequency step changes to FM band 200 kHz, and AM band 10 kHz.



- When the same operation is repeated, it returns to the original setting.
- When the frequency step is switched, the frequencies in the memory are deleted.



CD/MD/MP3/WMA/External disc control features


Playing CD & MP3/WMA


When there is no disc inserted

1 Slide open the faceplate

Press the [▲CD] button.

2 Insert a disc.

 When the faceplate has been slid open, it might interfere with the shift lever or something else. If this happens, pay attention to safety and move the shift lever or take an appropriate action, then operate the unit.

 When a disc is inserted the  indicator is ON.

When a disc is inserted

Press the [SRC] button.

Select the "Compact Disc" display.

Pause and play

Press the [▶||] button.

Each time the button is pressed the song pauses or plays.


Eject the disc


1 Eject the disc

Press the [▲CD] button.

2 Close the faceplate

Press the [▲CD] button.

 3 in. (8cm) disc can't be played. Using an adapter and inserting them into this unit can cause damage.

 The MP3/WMA media that this unit can play are CD-ROM, CD-R, and CD-RW.
The medium formats must be ISO 9660 Level 1, Level 2, Joliet, or Romeo. The methods and precautions to be followed for writing MP3/WMA data are covered in <Notes on playing MP3/WMA> (page 6). Check that section before creating your MP3/WMA media.


Playing MD



When an MD isn't inserted

1 Slide open the faceplate

Press the [▲MD] button.

2 Insert an MD.

 When the faceplate has been slid open, it might interfere with the shift lever or something else. If this happens, pay attention to safety and move the shift lever or take an appropriate action, then operate the unit.

 • When an MD is inserted, the  indicator is ON.
• The MDs recorded in MDLP mode can also be played.
When an MD is played in the LP2 mode, the "LP2" indicator is turned ON.
When an MD is played in the LP4 mode, the "LP4" indicator is turned ON.
• This unit equipped with the group management function enables quick search for a track you want to listen to with the search function for MDs with group registration.

When an MD is inserted

Press the [SRC] button.

Select the "Mini Disc" display.

Pause and play

Press the [▶||] button.

Each time the button is pressed the MD pauses and plays.


Eject the MD

1 Eject the MD

Press the [▲MD] button.

2 Close the faceplate

Press the [▲MD] button.

 Functions for MDs with group registration, such as Group Repeat, are available when <MD Group Setting> (page 30) is ON.
Refer to <Notes on playing MD Group> (page 8) for the order of play in MDs with group registration.

Playing External Disc

Playing discs set in the optional accessory disc player connected to this unit.

Press the [SRC] button.

Select the display for the disc player you want.

Display examples:

Display	Disc player
"CD Changer"/ "CD Changer1"/ "CD Changer2"	CD changer
"MD Changer"/ "MD Changer1"/ "MD Changer2"	MD changer

Pause and play

Press the [▶||] button.

Each time the button is pressed it pauses and plays.



The functions that can be used and the information that can be displayed will differ depending on the external disc players being connected.

Fast Forwarding and Reversing

Fast Forwarding

Hold down on the [▶▶] button.

Release your finger to play the disc at that point.

Reversing

Hold down on the [◀◀] button.

Release your finger to play the disc at that point.



When an MP3/WMA file is played, the sound is disabled during Fast Forwarding and Reversing.

Track/File Search

Searching the song on the disc or in the MP3/WMA folder.

Press the [◀◀] or [▶▶] button.

Disc/Group Search

Disc Search (Function of disc changer)/ Group Search (Function of MD with Group Registration)

Searching the disc or MD group.

Press the [FM] or [AM] button.

Folder Search (Function of MP3/WMA)

Selecting the folder recorded on the MP3/WMA media.

Press the [FM] or [AM] button.



Folder Search is enabled while the play is paused, when the disc is played in an MP3 compatible disc changer.

CD/MD/MP3/WMA/External disc control features

Direct Track/File Search (Function of remote)

Doing Track/File Search by entering the Track number.

1 Enter the Track number

Press the number buttons on the remote.

2 Do Track/File Search

Press the [◀◀] or [▶▶] button.

Canceling Direct Track/File Search

Press the [▶||] button.

Direct Disc Search (Function of disc changers with remote)

Doing Disc Search by entering the disc number.

1 Enter the disc number

Press the number buttons on the remote.

2 Do Disc Search

Press the [DISC+] or [DISC-] button.

Canceling Direct Disc Search

Press the [▶||] button.

Track/File/Disc/Folder/Group Repeat

Repeating the currently played song.

Also repeating the currently played disc in the Disc changer, MP3/WMA folder or song in the MD group.

Press the [REP] button.

Each time the button is pressed the Repeat Play switches as shown below.

During CD/MD play

Repeat play	Display
Track Repeat	"Repeat" + "REP" indicator
Disc Repeat (In Disc Changer)	"Disc Repeat" + "D.REP" indicator
Group Repeat (In MD with group registration)	"Group Repeat" + "G.REP" indicator
OFF	

During MP3/WMA play

Repeat play	Display
File Repeat	"File Repeat" + "REP" indicator
Folder Repeat	"Folder Repeat" + "REP" indicator
OFF	

Track Scan

Searching the song you want to listen to by playing the first part of each song.

You can search the song on disc, in MP3/WMA folder or MD group.

1 Start Track Scan

Press the [SCN] button.

"Track Scan"/"Scan" is displayed.

"SCN" indicator is ON.

2 Release it when the song you want to listen to is played

Press the [SCN] button.

Random Play

Play all the songs on the disc or MP3/WMA folder in random order.

Press the [RDM] button.

Each time the button is pressed Random Play turns ON or OFF.

When it's ON, "Random" is displayed.

When it's ON, "RDM" indicator is ON.



- When the [▶▶] button is pressed, the next song select starts.
- Group Search is disabled during Random Play.

Group Random Play

(Function of MD with Group Registration)

When an MD with group registration is played, the songs in the group are played in random order.

Turn the Group Random play ON

Press the [G.RDM] button for at least 2 seconds.

When it's ON, "G-Random" is displayed.

When it's ON, "G.RDM" indicator is ON.

Turn the Group Random play OFF

Press the [G.RDM] button.

"G.RDM" indicator is OFF.



- When the [▶▶] button is pressed, the next song select starts.

Magazine Random Play

(Function of disc changer)

Play the songs on all the discs in the disc changer in random order.

Press the [M.RDM] button.

Each time the button is pressed the Magazine Random Play turns ON or OFF.

When it's ON, "M-Random" is displayed.

When it's ON, "M.RDM" indicator is ON.



- When the [▶▶] button is pressed, the next song select starts.

CD/MD/MP3/WMA/External disc control features

Folder Select (Function of MP3/WMA)

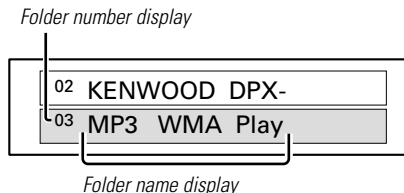
Quickly selecting the folder you want to listen to.

1 Enter Folder Select mode

Press the [SEL] button.

"FOLDER SELECT" is displayed.

During Select mode the folder information is displayed as shown below.



- Folder name display: Display the currently selected folder name.
- Folder number display: Displays the number in the folder belonging to the currently selected folder.

2 Select the folder level

Press the [FM] or [AM] button.

With the [FM] button you move 1 level down and with the [AM] button 1 level up.

Selecting a folder in the same level

Press the [◀◀] or [▶▶] button.

With the [◀◀] button you move to the previous folder, and with the [▶▶] button to the next folder.

Returning to the top level

Press the [#3] button.

To scroll the Folder names

Press the [SCRL] button.

Canceling the Folder Select mode

Press the [SEL] button.

3 Decide the folder to play

Press the [▶||] button.

The Folder Select mode releases, and the MP3/WMA in the folder being displayed is played.

- The methods for moving to other folders in the folder select mode are different from those in the folder search mode.
- See <Notes on playing MP3/WMA> (page 6) for details.

Group Select (Function of MD with Group Registration)

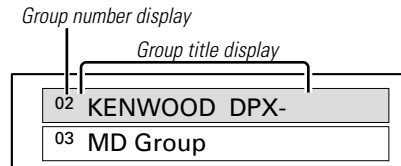
Displaying the title of the group containing the song you want to listen to, and selecting the group.

1 Enter Group Select mode

Press the [SEL] button.

"GROUP SELECT" is displayed.

During Select mode the group information is displayed as shown below.



- Group title display: Display the currently selected group title.
- Group number display: Displays the number of currently selected group.

2 Select the group

Press the [FM] or [AM] button.

External TV control features

When a commercially available LX BUS Television is connected to this unit, it can be controlled from this unit.

For functions not described in this instruction manual refer to the instruction manual for the LX BUS Television.

Tuning

Selecting the TV channel.

1 Select TV source

Press the [SRC] button.

Select the "TV" display.

2 Select the TV band

Press the [FM] button.

Each time the [FM] button is pressed TV bands and Video input switch.

3 Select the TV channel

Press the [◀◀] or [▶▶] button.

Direct Access Tuning (Function of remote)

Entering the TV channel and tuning.

1 Select the TV band

Press the [FM] button.

2 Enter Direct Access Tuning mode

Press the [DIRECT] button on the remote.

"-- ch" is displayed.

3 Enter the TV channel number

Press the number buttons on the remote.

Example:

Desired TV channel	Press button
5	[#0], [#5]

Canceling Direct Access Tuning

Press the [DIRECT] button on the remote.

Channel Preset Memory

Putting the channel in the memory.

1 Select the TV band

Press the [FM] button.

2 Select the TV channel

Press the [◀◀] or [▶▶] button.

3 Put the channel in the memory

Press the [#1] — [#6] button for at least 2 seconds.

The channel number display blinks 1 time.

Preset Tuning

Calling up the TV channels in the memory.

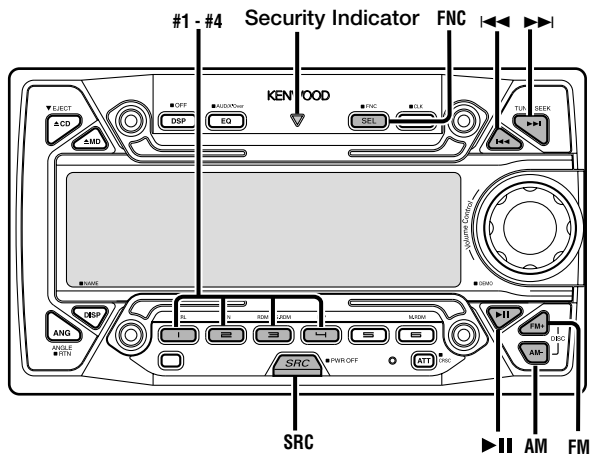
1 Select the TV band

Press the [FM] button.

2 Call up the TV channel

Press the [#1] — [#6] button.

Function Setting System



Function setting display

Function Setting System

Setting during operation beep sound etc. functions. The Function Setting System basic operation method is explained here. The reference for the Function items and their setting content is after this operation explanation.

1 Select the source to set

Press the [SRC] button.

Select the source containing the function item you want to set.

2 Enter Function Setting mode

Press the [FNC] button for at least 1 second.

"FUNCTION SET" is displayed.

3 Select the Function item

Press the [FM] or [AM] button.

Example: When you want to set the beep sound select the "BEEP" display.

4 Set the Function item

Press the [◀◀] or [▶▶] button.

Example: When "BEEP" is selected, each time the button is pressed it switches "BEEP On" or "BEEP Off". Select 1 of them as the setting.

You can continue by returning to step 3 and setting other items.

5 Exit Function Setting mode

Press the [FNC] button.



When other items that are applicable to the basic operation method above are displayed afterwards their setting content chart is entered. (Normally the uppermost setting in the chart is the original setting.)

Also, the explanation for items that aren't applicable are entered step by step.

Function Setting System

Function items in Standby:

Touch Sensor Tone

Setting the operation check sound (beep sound) ON/OFF.

Display	Setting
"BEEP On"	Beep is heard.
"BEEP Off"	Beep canceled.

Switching preout

Switching the preout between the rear and non-fading. (In non-fading it outputs without effect from the fader control.)

Display	Setting
"Preout Rear"	Rear preout.
"Preout N-F"	Non-fading preout.

MD Group Setting

Switching ON and OFF the MD Group function.

Display	Setting
"MD Group On"	Group management function is ON.
"MD Group Off"	Group management function is OFF.



The MD group functions of Group Search, Group Repeat Play, Group Random Play and Group Select are available when an MD with group registration is played if <MD Group Setting> is ON. Because any track without group registration is not played, register it into any group or turn <MD Group Setting> OFF. For MD Group refer to <Notes on playing MD Group> (page 8).

Opening Demonstration

Setting the Demonstration when Power is turned ON.

Display	Setting
"Opening On"	Demonstration is carried out when Power is turned ON.
"Opening Off"	Demonstration is not carried out when Power is turned ON.

Security Code

Because authorization by the Security Code is required when it's removed from the vehicle, personalizing this unit is by using the Security Code is a help in preventing theft.



When the Security Code function is activated, the code can't be changed and the function can't be released.

Note, the Security Code can be set as the 4 digit number of your choice.

1 Select Security Code mode

Press the [FM] or [AM] button.
Select the "CODE STBY" display.

2 Enter Security Code mode

Press the [▶||] button for at least 2 seconds.
When "CODE WRITE" is displayed, "CODE ****" is displayed.

3 Enter the Security Code

Press the [#1] — [#4] button.

Example: If the Security Code is "3510".

Step	Button	#Times pressed	Display
1	[#1]	4	"3"
2	[#2]	6	"5"
3	[#3]	2	"1"
4	[#4]	1	"0"

4 Confirm the Security Code

Press the **[▶II]** button.

When "CODE ****1" is displayed.

5 Do the step 3 and 4 step operation, and reenter the security code.

"CODE WRITE" is displayed.

The Security Code function activates.



When a Code different from step 3 is entered, repeat from step 3.

Press the Reset button and when it's removed from the battery power source

1 Turn the power ON.

2 Do the step 3 and 4 operation, and enter the Security Code.

"CODE OK!" is displayed.

The unit can be used.



If you enter the incorrect code, the power will turn off. Enter the correct code to turn the unit on.

Built-in Auxiliary input Setting

Set the Built-in Auxiliary Input function.

Display	Setting
"AUX Off"	When selecting the source there's no Auxiliary Input.
"AUX On"	When selecting the source there's Auxiliary Input.

Built-in Amp Setting

Setting the built-in amplifier ON/OFF.

Turning OFF this control enhances the preout quality.

Display	Setting
"Built in AMP On"	The built-in amplifier activates.
"Built in AMP Off"	The built-in amplifier deactivates.

Security Indicator

A red indicator will blink on the unit after the ACC is set to OFF, warning potential thieves.

Display	Setting
"S.I. Off"	LED OFF.
"S.I. On"	LED flashes.

Function items in Tuner source:

Tuning Mode

Sets the tuning mode.

Tuning mode	Display	Operation
Auto seek	"Seek Auto 1"	Automatic search for a station.
Preset station seek	"Seek Auto 2"	Search in order of the stations in the Preset memory.
Manual	"Seek Manual"	Normal manual tuning control.

Function Setting System

Auto Memory Entry

For the operation method refer to <Auto Memory Entry> (page 20).

Function items in CD/MP3/WMA/MD/External disc source:

Text Scroll

Setting the displayed text scroll.

Display	Setting
"Scroll Auto"	Repeats scroll.
"Scroll Manual"	Scrolls when the display changes.



The text scrolled is shown below.

- CD text
- Folder name/ File name/ MP3/WMA text
- MD title/ MD Group title

Function items in Auxiliary input source:

Auxiliary Input Volume Adjustment

Adjusting the volume of built-in Auxiliary input source.

Display and Setting

"AUX VOL +00"

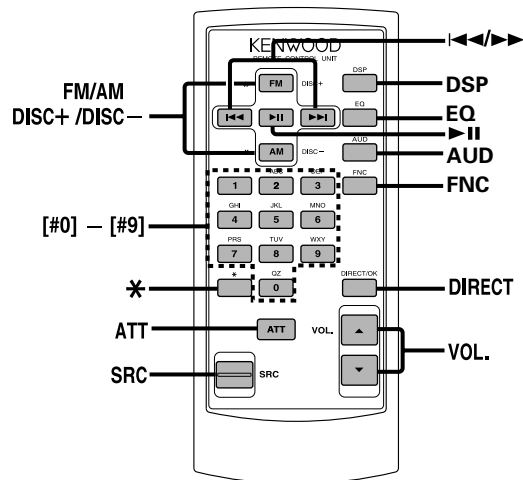
⋮

"AUX VOL +15"



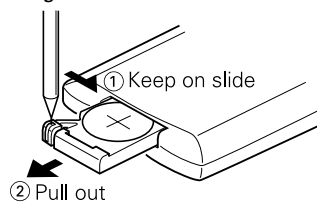
- Auxiliary Input Volume Adjustment cannot be applied to the optional Auxiliary input sources shown below.
 - KCA-S210A
 - CA-C1AX
 - CD changer with an Auxiliary input function installed
- Auxiliary Input Volume Adjustment is available to be set when <Built-in Auxiliary input Setting> (page 31) is set to ON.

Basic Operations of remote



Loading and Replacing the battery

Use one lithium battery (CR2025).
Insert the batteries with the + and – poles aligned properly,
following the illustration inside the case.



⚠ WARNING

Store unused batteries out of the reach of children. Contact a doctor immediately if the battery is accidentally swallowed.

⚠ Do not set the remote on hot places such as above the dashboard.

Basic operations

[VOL.] buttons

Adjusting the volume.

[SRC] button

Each time the button is pressed the source switches.
For the source switching order refer to <Selecting the Source>
(page 11).

[ATT] button

Turning the volume down quickly.
When it is pressed again it returns to the previous level.

[*] button

Adjusting the Faceplate Angle.

[DSP] button

Turns <DSP(Digital Signal Processor) System> (page 17) ON and OFF.
Selects <Sound Field Setting> (page 17).

[EQ] button

Makes <Preset Equalizer Curve Selection> (page 17).

[AUD] button

Enters the Audio control mode.
Select the Audio control, X'Over control and Amp control mode.
When the button is pressed for at least 1 second the Audio control mode is turned OFF.

[FNC] button

Enters and exits the Function Setting mode.
Refer to <Function Setting System> (page 29).

[FM]/ [AM] buttons [◀◀]/ [▶▶] buttons

Selects and adjusts the item.
Refer to
<Balance/ Fader Control> (page 15)/
<X'Over & Amp Control> (page 16)/
<Function Setting System> (page 29)/
<Equalizer Curve Adjustment> (page 18).

[#0] — [#9] buttons

Press buttons [#1] — [#3] to recall preset settings.
Refer to <Recalling the X'Over setting> (page 16)/
<Recalling the equalizer curve> (page 18).

Basic Operations of remote

In Tuner source

[FM]/ [AM] buttons

Select the band.

Each time the [FM] button is pressed it switches between the FM1, FM2, and FM3 bands.

[◀◀]/ [▶▶] buttons

Tune up or down band.

[#0] — [#9] buttons

Press buttons [#1] — [#6] to recall preset stations.

[DIRECT] button

Enters and cancels the <Direct Access Tuning> (page 19) mode.

In Disc source

[◀◀]/ [▶▶] buttons

Searching the song on the disc or in the MP3/WMA folder.

[DISC+]/ [DISC-] buttons

Searching the disc, MD group and MP3/WMA folder.

[II] button

Each time the button is pressed the song pauses and plays.

[#0] — [#9] buttons

When in <Direct Track/File Search> (page 24) and <Direct Disc Search> (page 24), enter the track/disc number.

In TV source

[FM] button

Select the TV band and Video input.

[◀◀]/ [▶▶] buttons

Select the TV channel.

[#0] — [#9] buttons

Press buttons [#1] — [#6] to recall preset TV channels.

[DIRECT] button

Enters and cancels the <Direct Access Tuning> (page 28) mode.

Accessories

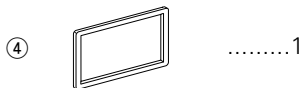
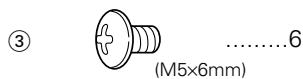
External view

..... Number of items



External view

..... Number of items



The use of any accessories except for those provided might result in damage to the unit. Make sure only to use the accessories shipped with the unit, as shown above.

Installation Procedure

1. To prevent a short circuit, remove the key from the ignition and disconnect the \ominus battery.
2. Make the proper input and output wire connections for each unit.
3. Connect the speaker wires of the wiring harness.
4. Connect the wiring harness wires in the following order: ground, battery, ignition.
5. Connect the wiring harness connector to the unit.
6. Install the unit in your car.
7. Reconnect the \ominus battery.
8. Press the reset button.

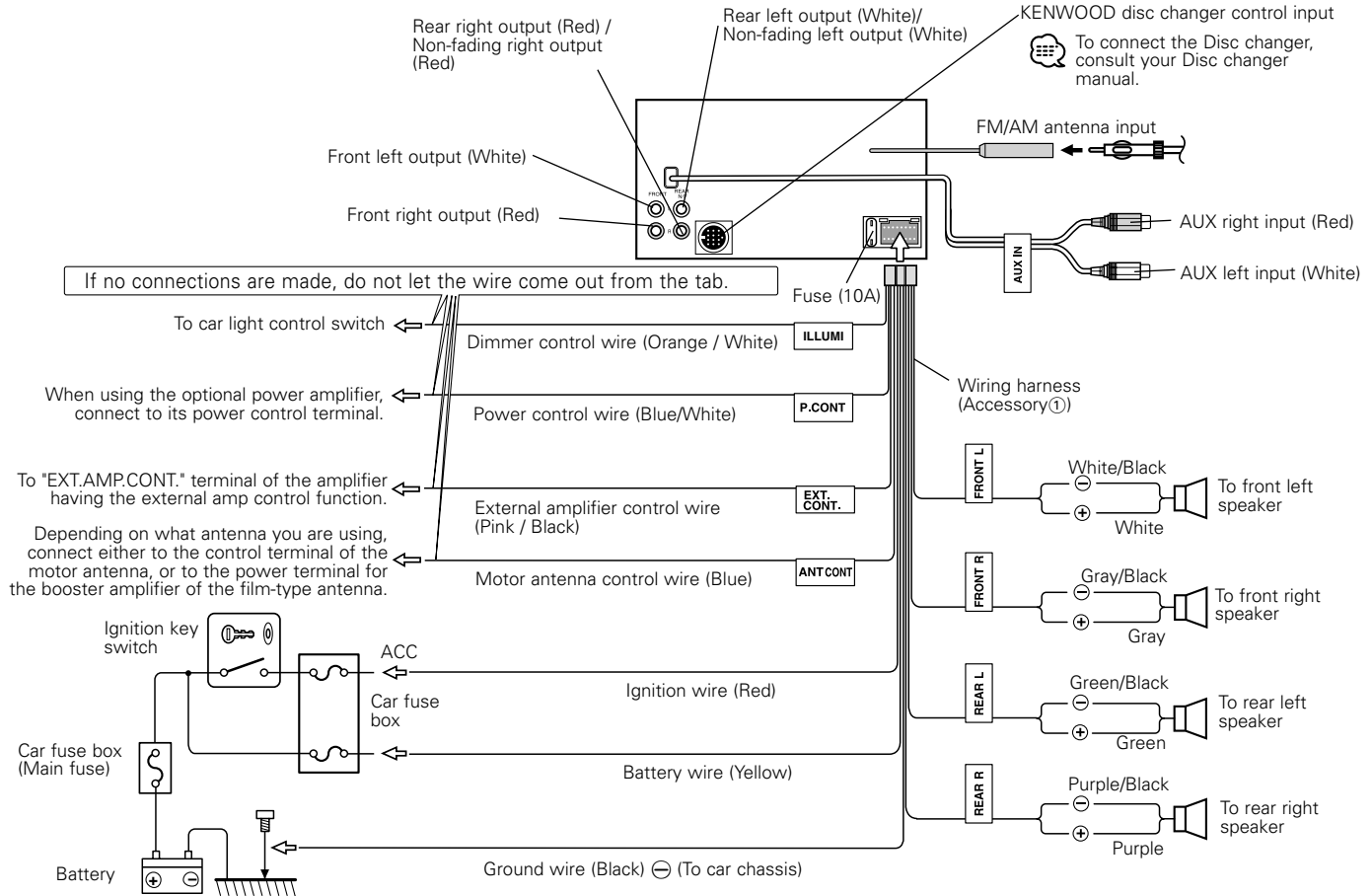
▲WARNING

If you connect the ignition wire (red) and the battery wire (yellow) to the car chassis (ground), you may cause a short circuit, that in turn may start a fire. Always connect those wires to the power source running through the fuse box.

▲CAUTION

- If your car's ignition does not have an ACC position, connect the ignition wires to a power source that can be turned on and off with the ignition key. If you connect the ignition wire to a power source with a constant voltage supply, as with battery wires, the battery may die.
- If the console has a lid, make sure to install the unit so that the faceplate will not hit the lid when closing and opening.
- If the fuse blows, first make sure the wires aren't touching to cause a short circuit, then replace the old fuse with one with the same rating.
- Insulate unconnected wires with vinyl tape or other similar material. To prevent a short circuit, do not remove the caps on the ends of the unconnected wires or the terminals.
- Connect the speaker wires correctly to the terminals to which they correspond. The unit may be damaged or fail to work if you share the \ominus wires or ground them to any metal part in the car.
- When only two speakers are being connected to the system, connect the connectors either to both the front output terminals or to both the rear output terminals (do not mix front and rear). For example, if you connect the \oplus connector of the left speaker to a front output terminal, do not connect the \ominus connector to a rear output terminal
- After the unit is installed, check whether the brake lamps, blinkers, wipers, etc. on the car are working properly.
- Mount the unit so that the mounting angle is 30° or less.

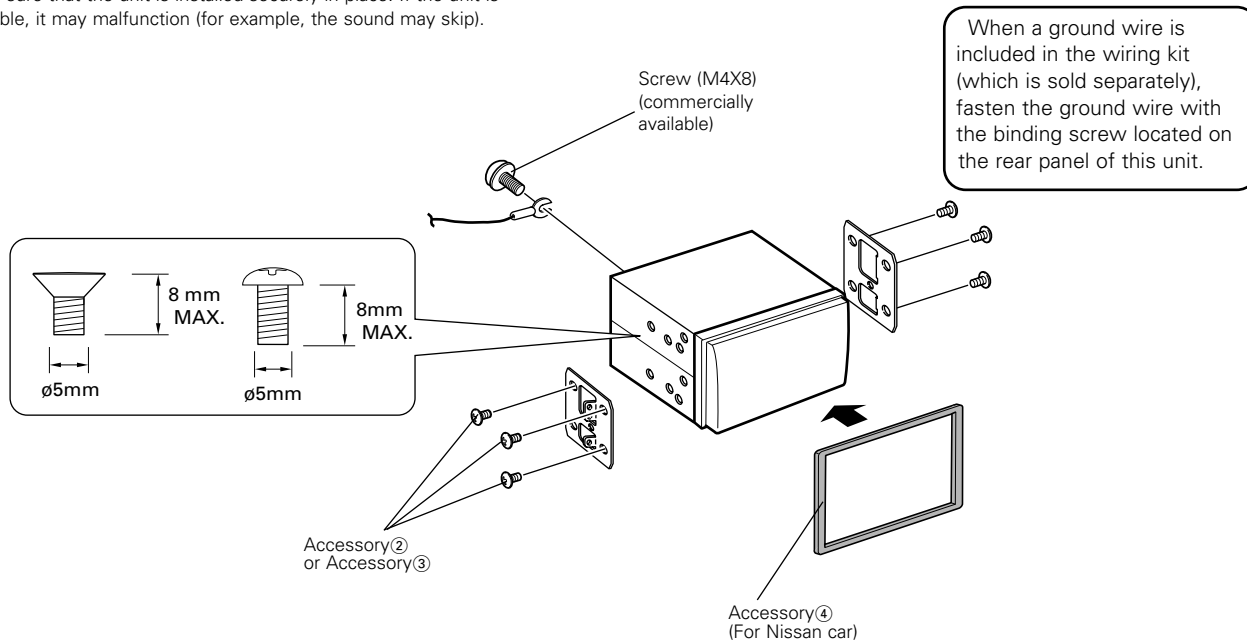
Connecting Wires to Terminals



Installation

■ Installation

Make sure that the unit is installed securely in place. If the unit is unstable, it may malfunction (for example, the sound may skip).



Troubleshooting Guide

What might seem to be a malfunction in your unit may just be the result of slight misoperation or miswiring. Before calling service, first check the following table for possible problems.

General

? The power does not turn ON.

- ✓ The fuse has blown.
 - ☞ After checking for short circuits in the wires, replace the fuse with one with the same rating.
- ✓ No ACC position on vehicle ignition.
 - ☞ Connect the same wire to the ignition as the battery wire.

? Nothing happens when the buttons are pressed.

- ✓ The computer chip in the unit is not functioning normally.
 - ☞ Press the reset button on the unit (page 4).

? There's a source you can't switch.

- ✓ There's no CD inserted.
 - ☞ Set the media you want to listen to. If there's no media in this unit, you can't switch to each source.
- ✓ There's no MD inserted.
 - ☞ Set the MD you want to listen to. If there's no MD in this unit, you can't switch to each source.
- ✓ The Disc changer isn't connected.
 - ☞ The Disc changer isn't connected to its input terminal, You can't switch to an external disc source.

? The memory is erased when the ignition is turned OFF.

- ✓ The battery wire has not been connected to the proper terminal.
 - ☞ Connect the wire correctly, referring to the section on <Connecting Wires to Terminals>.
- ✓ The ignition and battery wire are incorrectly connected.
 - ☞ Connect the wire correctly, referring to the section on <Connecting Wires to Terminals>.

? No sound can be heard, or the volume is low.

- ✓ The fader or balance settings are set all the way to one side.
 - ☞ Center the fader and balance settings.
- ✓ The input/output wires or wiring harness are connected incorrectly.
 - ☞ Reconnect the input/output wires or the wiring harness correctly. See the section on <Connecting Wires to Terminals>.
- ✓ The <Built-in Amp Setting> (page 31) is OFF.
 - ☞ Turn it ON.

? The sound quality is poor or distorted.

- ✓ One of the speaker wires is being pinched by a screw in the car.
 - ☞ Check the speaker wiring.
- ✓ The speakers are not wired correctly.
 - ☞ Reconnect the speaker wires so that each output terminal is connected to a different speaker.

? Non-fading output can't be done.

- ✓ The <Switching preout> (page 30) is set on Rear preout.
 - ☞ Set it on Non-fading preout.

? The Security Code item isn't displayed in the Function Setting System.

- ✓ The Security Code function is already activated.
 - ☞ When the Security Code function is activated it isn't displayed in the Function Setting items.

? The Touch Sensor Tone doesn't sound.

- ✓ The preout jack is being used.
 - ☞ The Touch Sensor Tone can't be output from the preout jack.

? AUX cannot be selected.

- ✓ <Built-in Auxiliary input Setting> is turned off.
 - ☞ Refer to the <Built-in Auxiliary input Setting> (page 31) in the Function Setting and turn on the <Built-in Auxiliary input Setting>.

Troubleshooting Guide

? The DSP effects are imperceptible.

- ✓ You are using a two-speaker system.
 - ☞ Use a front/rear four-speaker system.

 - ✓ The front and rear output are reversed.
 - ☞ Connect the wire correctly, referring to the section on <Connecting Wires to Terminals>.

 - ✓ The ⊕ and ⊖ of speakers are reversed.
 - ☞ Connect the wire correctly, referring to the section on <Connecting Wires to Terminals>.

 - ✓ The fader or balance settings are set all the way to one side.
 - ☞ Reset the fader or balance settings.
-

Tuner source

? Radio reception is poor.

- ✓ The car antenna is not extended.
 - ☞ Pull the antenna out all the way.

 - ✓ The antenna control wire is not connected.
 - ☞ Connect the wire correctly, referring to the section on <Connecting Wires to Terminals>.
-

? The desired frequency can't be entered with the Direct Access Tuning.

- ✓ A station that can't be received is being entered.
 - ☞ Enter a station that can be received.

 - ✓ You're trying to enter a frequency with a 0.01 MHz unit.
 - ☞ What can be designated in the FM band is to 0.1 MHz.
-

Disc source

? The specified disc does not play, but another one plays instead.

- ✓ The specified CD is quite dirty.
 - ☞ Clean the CD.

 - ✓ The CD is upside-down.
 - ☞ Load the CD with the labeled side up.

 - ✓ The disc is loaded in a different slot from that specified.
 - ☞ Eject the disc magazine and check the number for the specified disc.

 - ✓ The disc is severely scratched.
 - ☞ Try another disc instead.
-

? The specified track will not play.

- ✓ Random play or magazine random play has been selected.
 - ☞ Turn off random play or magazine random play.
-

? Cannot play CD-R or CD-RW.

- ✓ Finalization processing is not being conducted for CD-R/CD-RW.
 - ☞ Conduct finalization processing with CD recorder.

 - ✓ A non-compatible CD changer is being used to play the CD-R/CD-RW.
 - ☞ Use a CD changer compatible with CD-R/CD-RW to play.
-

? Can't remove disc.

- ✓ The cause is that more than 10 minutes has elapsed since the vehicle ACC switch was turned OFF.
 - ☞ The disc can only be removed within 10 minutes of the ACC switch being turned OFF. If more than 10 minutes has elapsed, turn the ACC switch ON again and press the Eject button.
-

? The disc won't insert.

- ✓ There's already another disc inserted.
 - ☞ Press the [▲] button and remove the disc.
-

Troubleshooting Guide

? The MD does not load.

- ✓ The insertion orientation of the MD is incorrect or the MD is upside down.
 - ☞ Insert the MD in the proper orientation.

? Direct Track Search and Direct Disc Search can't be done.

- ✓ Another function is ON.
 - ☞ Turn Random Play or other functions OFF.

? Track Search can't be done.

- ✓ For the discs first or last song.
 - ☞ For each discs, Track Search can't be done in the backward direction for the first song or in the forward direction for the last song.

? The disc title is not displayed correctly.

- ✓ Because <MD Group Setting> (page 30) is set to OFF, the Disc title and Group title are displayed.
 - ☞ Set <MD Group Setting> of <Function Setting System> (page 30) to ON.

? Can't select the song you want to listen to.

- ✓ The song you want to listen to has not been registered in any group.
 - ☞ Set <MD Group Setting> of <Function Setting System> (page 30) to OFF or register the song into any Group.

MP3/WMA source

? Cannot play an MP3/WMA.

- ✓ Not conforming to ISO 9660 Level 1/2, Joliet, and Romeo.
 - ☞ Use a medium conforming to ISO 9660 Level 1/2, Joliet, and Romeo.

- ✓ The MP3/WMA has no or invalid file name extension.
 - ☞ Add the ".MP3/.WMA" extension to the MP3/WMA file name.

- ✓ The media is scratched or dirty.
 - ☞ Clean the media, referring to the section on <CD cleaning> (page 5).

? Noise or no sound generated when an MP3/WMA is played.

- ✓ The file has the MP3/WMA file name extension while it is not an MP3/WMA.
 - ☞ Do not use the ".MP3/.WMA" extension in non-MP3/WMA.

? Takes time before the unit starts playing MP3/WMA.

- ✓ The medium contains many folders, files, and hierarchical levels.
 - ☞ The unit checks all files on the loaded medium first. If the medium has many files recorded, it may take a long time for the unit before it starts playing MP3/WMA.

? Fails to play MP3/WMA in the intended order.

- ✓ The MP3/WMA files were not written by the CD writer in the order in which you wanted them to be played.
 - ☞ Depending on the CD writer, you may be able to set the order in which MP3/WMA files are to be played by writing them onto a medium with their file names beginning with play sequence numbers such as "01" to "99".

? The sound skips when an MP3/WMA is being played.

- ✓ The media is scratched or dirty.
 - ☞ Clean the media, referring to the section on <CD cleaning> (page 5).
- ✓ The recording condition is bad.
 - ☞ Record the media again or use another media.

Troubleshooting Guide

? The songs in the selected folder aren't played in Folder Select mode.

- ✓ There are no MP3/WMA in the selected folder.
 - ☞ Make sure there's recorded content in the MP3/WMA media.
-

? The MP3/WMA file/folder search takes time.

- ✓ Many files are recorded on the media.
 - ☞ When the media directory is complex, the file/folder search can take time.
-

? The MP3/WMA related text isn't displayed correctly.

- ✓ A character is entered that this unit can't display.
 - ☞ For the characters that can be used for MP3/WMA text entry, refer to <Notes on playing MP3/WMA> (page 6).
-

? The MP3/WMA track time isn't displayed correctly.

- ✓ ---
 - ☞ There are times when it isn't displayed correctly according to the MP3/WMA recording conditions.
-

? Can't display the ID3 tag information correctly.

- ✓ Record is not made in conformity with the ID 3 tag version1.X.
 - ☞ Record in conformity with the ID 3 tag version1.X.
-

? Can't perform File Search.

- ✓ You tried to perform File Search from the first file to the previous file or from the last file to the next file.
 - ☞ File Search can't be performed from the first file to the last file or from the last file to the first file except Folder Repeat being performed.
-

MD Group

? The MD group function doesn't work.

- ✓ <MD Group Setting> of <Function Setting System> (page 30) is OFF.
 - ☞ Set <MD Group Setting> of <Function Setting System> (page 30) to ON.
-

? Can't play MDs with group registration in the order of registration.

- ✓ The MD has been edited by an editor not equipped with the Group function or another inapplicable equipment.
 - ☞ Register the MD Group with an editor equipped with the Group function or another applicable equipment.
 - ✓ The Group title is attached by "/".
 - ☞ Do not attach "/" to any title because the Group information may not correctly be recognized.
-

? When <MD Group Setting> of <Function Setting System> (page 30) is set, the MD play is returned to the first track.

- ✓ ---
 - ☞ When <MD Group Setting> of <Function Setting System> is set during the MD play, the MD play is returned to the first track.
-

Troubleshooting Guide

The messages shown below display your systems condition.

EJECT: No disc magazine has been loaded in the changer.
The disc magazine is not completely loaded.

No Disc: No disc has been loaded in the disc magazine.
⇨ Load a disc into the disc magazine.

Error 04: The CD is quite dirty. The CD is upside-down. The CD is scratched a lot.
⇨ Clean the CD and load it correctly.

Error 05: The CD is upside-down.
⇨ Load the CD correctly.

Blank Disc: Nothing has been recorded on the MD.

No Track: No tracks are recorded on the MD, although it has a title.

Error 12: MDs designed for data.

Error 15: Media was played that doesn't have data recorded that the unit can play.

Error 30: The faceplate of the slave unit being connected to this unit has been removed.
⇨ Replace it.

Error 77: The unit is malfunctioning for some reason.
⇨ Press the reset button on the unit. If the "Error 77" code does not disappear, consult your nearest service center.

Mecha Error: Something is wrong with the disc magazine. Or the unit is malfunctioning for some reason.
⇨ Check the disc magazine. And then press the reset button on the unit. If the "Mecha Error" code does not disappear, consult your nearest service center.

H-HOLD: The protective circuit in the unit activates when the temperature inside the automatic disc changer exceeds 60°C (140°F), stopping all operation.
⇨ Cool down the unit by opening the windows or turning on the air conditioner. As the temperature falls below 60°C (140°F), the disc will start playing again.

No Name:

- Attempted to display DNPS during the CD play having no disc names preset.
- Attempted to display SNPS during the receiving session of the station having no station name preset.

No Title: Attempted to display the disc title or track title while the MD having no MD title/MD Group title is being played.

No Text:

- Attempted to display the disc text or track text while the CD having no CD text is being played.
- Attempted to display the ID3 tag or contents description while the MP3/WMA having no ID3 tag or contents description is being played.

LOAD (Blink): Discs are being exchanged in the Disc changer.

File Check: The unit is reading the data on the disc.

Please Close: Attempted to operate the disabled button while the disc is being ejected (faceplate being slid open).

Troubleshooting Guide

- ❏ (Blink): The CD player section is not operating properly.
 - ⇨ Reinsert the CD. If the CD cannot be ejected or the display continues to flash even when the CD has been properly reinserted, please switch off the power and consult your nearest service center.

- ❏ (Blink): The MD player section is not operating properly.
 - ⇨ Reinsert the MD. If the MD cannot be ejected or the display continues to flash even when the MD has been properly reinserted, please switch off the power and consult your nearest service center.

UNSUPPORTED FILE:

A MP3/WMA is played with a format that this unit can't support.

COPY PROTECTION:

A copy-protected file is played.

Specifications

Specifications subject to change without notice.

FM tuner section

Frequency (50 kHz space)	87.5 MHz – 108.0 MHz
(200 kHz space)	87.9 MHz – 107.9 MHz
Usable sensitivity (S/N = 30dB)	9.3dBf (0.8 μ V/75 Ω)
Quieting Sensitivity (S/N = 50dB)	15.2dBf (1.6 μ V/75 Ω)
Frequency response (\pm 3.0 dB)	30 Hz – 15 kHz
Signal to Noise ratio (MONO)	75 dB
Selectivity (\pm 400 kHz)	\geq 80 dB
Stereo separation (1 kHz)	40 dB

AM tuner section

Frequency range (9 kHz space)	531 kHz – 1611 kHz
(10 kHz space)	530 kHz – 1700 kHz
Usable sensitivity (S/N = 20dB)	28 dB μ V (25 μ V)

CD player section

Laser diode	GaAlAs (λ =780 nm)
Digital filter (D/A)	8 Times Over Sampling
D/A Converter	1 Bit
Spindle speed (CD-DA/MP3/WMA)	400 – 1000 rpm (CLV 2times)
Wow & Flutter	Below Measurable Limit
Frequency response (\pm 1 dB)	10 Hz – 20 kHz
Total harmonic distortion (1 kHz)	0.01 %
Signal to Noise ratio (1 kHz)	105 dB
Dynamic range	95 dB
Channel separation	85 dB
MP3 decode	Compliant with MPEG-1/2/2.5 Audio Layer-3
WMA decode	Compliant with Windows Media Audio

MD player section

Laser diode	GaAlAs (λ =780 nm)
Digital filter (D/A)	8 Times Over Sampling
D/A Converter	1 Bit
Spindle speed	400 – 900 rpm (CLV)
Wow & Flutter	Below Measurable Limit
Frequency response (\pm 1 dB)	20 Hz – 20 kHz
Total harmonic distortion (1 kHz)	0.01 %
Signal to Noise ratio (1 kHz)	90 dB
Dynamic range	90 dB
Channel separation	85 dB

Audio section

Maximum output power	50 W x 4
Full Bandwidth Power (at less than 1% THD)	23 W x 4
Preout level	1800 mV/10 k Ω
Preout impedance	\leq 600 Ω

Auxiliary input

Frequency response (\pm 1 dB)	20 Hz – 20 kHz
Input Maximum Voltage	1.5 V
Input Impedance	\geq 68 k Ω

DSP/Equalizer section

A/D, D/A converter	3-dimensional 18bit $\Delta\Sigma$ system 128 times oversampling
Equalizer frequency	60/160/400/1k/2k/6k/16k Hz
Adjustable range	\pm 12 dB (\pm 6 STEP)

General

Operating voltage (11 – 16V allowable)	14.4 V
Current consumption	10 A
Installation Size (W x H x D)	178 x 100 x 155 mm
Weight	2.8 kg