KENWOOD

KDC-W4527
KDC-W4527G

CD-RECEIVER
INSTRUCTION MANUAL

KENWOOD CORPORATION

COMPACT
disc
DIGITAL AUDIO

Designed for
Windows
Media™

CH01

© B64-2828-00/00 (EW)

Contents

Safety precautions

⚠WARNING

To prevent injury and/or fire, take the following precautions:

- Insert the unit all the way until it is fully locked in place. Otherwise it may fly out of place during collisions and other jolts.
- 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 short circuits, never put or leave any metallic objects (e.g., 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.
- Do not touch the liquid crystal fluid if the LCD is damaged or broken due to shock. The liquid crystal fluid may be dangerous to your health or even fatal.
  If the liquid crystal fluid from the LCD contacts your body or clothing, wash it off with soap immediately.

⚠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 set the removed faceplate or the faceplate case in areas exposed to direct sunlight, excessive heat or humidity. Also avoid places with too much dust or the possibility of water splashing.
- To prevent deterioration, do not touch the terminals of the unit or faceplate with your fingers.
- 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 short circuits when replacing a fuse, first disconnect the wiring harness.
- Do not place any object between the faceplate and the unit.
- During installation, do not use any screws except for the ones provided. The use of improper screws might result in damage to the main unit.

IMPORTANT INFORMATION

About CD players/disc changers connected to this unit

KENWOOD disc changers/ CD players released in 1998 or later can be connected to this unit.
Refer to the catalog or consult your Kenwood dealer for connectable models of disc changers/ CD players.
Note that any KENWOOD disc changers/ CD players released in 1997 or earlier and disc changers made by other makers cannot be connected to this unit.
Unsupported connection may result in damage.
Setting the "O-N" Switch to the "N" position for the applicable KENWOOD disc changers/ CD players.
The functions that can be used and the information that can be displayed will differ depending on the models being connected.

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

Do Not Load 8-cm (3-in.) CDs in the CD slot

If you try to load an 8-cm CD with its adapter into the unit, the adapter might separate from the CD and damage the unit.

Safety precautions

NOTE

- If you experience problems during installation, consult your Kenwood dealer.
- If the unit does not seem to be working right, try pressing the reset button first. If that does not solve the problem, consult your Kenwood dealer.
- Press the reset button if the Disc auto changer fails to operate correctly. Normal operation should be restored.
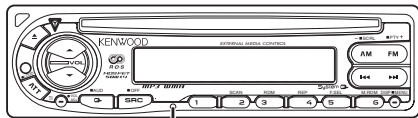
Reset button

- Characters in the LCD may become difficult to read in temperatures below 41 °F (5 °C).
- 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 Faceplate Terminals

If the terminals on the unit or faceplate get dirty, wipe them with a dry, soft cloth.

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 can accumulate in the CD slot, clean it occasionally. Your CDs can get scratched if you put them in a dusty CD slot.
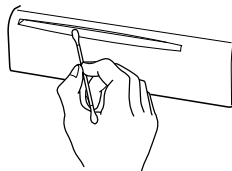
The marking of products using lasers (Except for some areas)

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.

This Product is not installed by the manufacturer of a vehicle on the production line, nor by the professional importer of a vehicle into an EU Member State.

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.

Burrs

Burrs
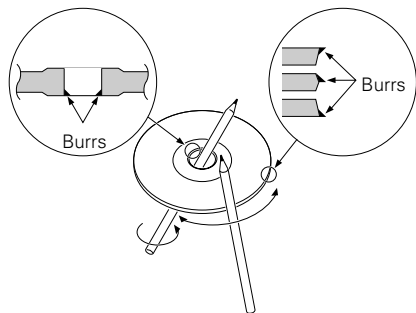
CD accessories

Don't use disc type accessories.

CD cleaning

Clean from the center of the disc and move outward.
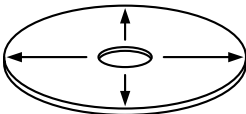
Removing CDs

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.
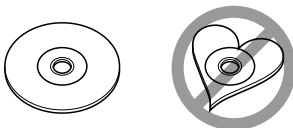
• CDs with coloring on the recording surface or that are dirty can't be used.
• This unit can only play the CDs with

 .

  It may not correctly play disks which do not have the 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.

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Notes on playing MP3/WMA

This unit can play MP3(MPEG1, 2 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 character; Up to 32 characters are displayed)
- Romeo (128 character; Up to 64 characters are displayed)
- Long file name (200 characters; Up to 64 characters are displayed)
- Maximum number of characters for folder name: 64 (Joliet; Up to 32 characters are displayed)

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 folders: 50
- Maximum number of files and folders: 512

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 MP3/WMA data with the MP3/WMA encoder.
- Transfer bit rate   MP3: 8 —320 kbps
                       WMA: 48 —192 kbps
- Sampling frequency

MP3: 8, 11.025, 12, 16, 22.05, 24, 32, 44.1, 48 kHz
WMA: 32, 44.1, 48 kHz

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.

> Play mode may not be possible when portions of the functions of Windows Media Player 9 or higher are used.

Entering ID3 tag
The Displayable ID3 tag is ID3 version 1.x.
For the character code, refer to the List of Codes.

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0				0	@	P	`	p								
1				1	A	Q	a	q								
2			"	2	B	R	b	r								
3				3	C	S	c	s								
4				4	D	T	d	t								
5			%	5	E	U	e	u								
6			&	6	F	V	f	v								
7			'	7	G	W	g	w								
8			(	8	H	X	h	x								
9			)	9	I	Y	i	y								
A			*	:	J	Z	j	z								
B			+	;	K	[	k	{								
C			,	<	L	\	l										
D			-	=	M	]	m	}								
E			.	>	N	^	n	~								
F			/	O	_	o	■									

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 no 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
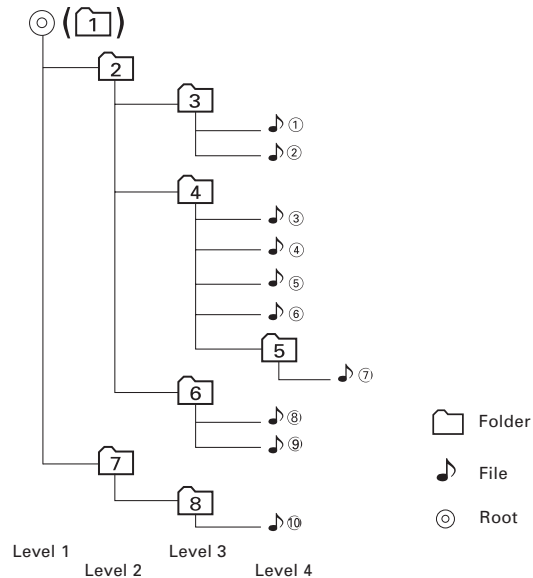
When a File Search is executed with file ♪④ being played ...

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

When a 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			
	I◀◀ Button	▶▶I Button	AM Button	FM Button
4	3	6	2	5

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General features

Release button

ATT/
LOUD   Q/   SRC
       AUD

I◄◄   AM   FM   ►►I

DISP

LOUD indicator

ATT indicator
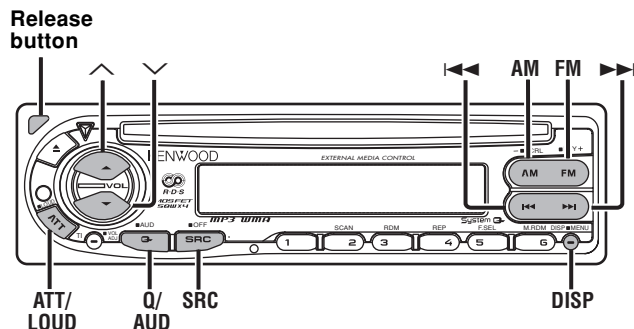
Power

Turning ON the Power
Press the [SRC] button.

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

Selecting the Source

Press the [SRC] button.

Source required	Display
Tuner	"TUNER"
CD	"CD"
External disc (Optional accessory)	"CD CH"
Auxiliary input (Optional accessory)	"AUX EXT"
Standby (Illumination only mode)	"STANDBY"

This unit automatically turns full power OFF after 20 minutes lapses in Standby mode in order to save the vehicles battery.
The time until full power OFF can be set in <Power OFF Timer> (page 25).

Volume

Increasing Volume
Press the [∧] button.

Decreasing Volume
Press the [∨] button.

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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, the "ATT" indicator blinks.

Loudness

Compensating for low and high tones during low volume.

Press the [LOUD] button for at least 1 second.
Each time the button is pressed for at least 1 second the Loudness turns ON or OFF.
When it's ON, "LOUD" indicator is ON.

System Q

You can recall the best sound setting preset for different types of music.

1 Select the source to set
Press the [SRC] button.

2 Select the Sound type
Press the [Q] button.
Each time the button is pressed the sound setting switches.

Sound setting	Display
Flat	"FLAT"
Rock	"ROCK"
Top 40	"TOP40"
Pops	"POPS"
Jazz	"JAZZ"
Easy	"EASY"

- Each setting value is changed with the <Speaker setting> (page 10).
  First, select the speaker type with the Speaker setting.
- When the System Q setting is changed, the Bass, Middle, and Treble set in audio control replace the System Q values.

General features

Audio Control

1 Select the source for adjustment
Press the [SRC] button.

2 Enter Audio Control mode
Press the [AUD] button for at least 1 second.

3 Select the Audio 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 [►►I] button.

Adjustment Item	Display	Range
Bass level	"BAS"	–8 — +8
Middle level	"MID"	–8 — +8
Treble level	"TRE"	–8 — +8
Balance	"BAL"	Left 15 — Right 15
Fader	"FAD"	Rear 15 — Front 15

5 Exit Audio Control mode
Press the [AUD] button.

Speaker Setting

Fine-tuning so that the System Q value is optimal when setting the speaker type.

1 Enter Standby
Press the [SRC] button.
Select the "STANDBY" display.

2 Enter Speaker Setting mode
Press the [Q] button.

3 Select the Speaker type
Press the [◄◄] or [►►I] button.
Each time the button is pressed the setting switches as shown below.

Speaker type	Display
OFF	"SP OFF"
For the OEM speaker	"SP OEM"
For 6 & 6x9 in. speaker	"SP 6/6x9"
For 5 & 4 in. speaker	"SP 5/4"

4 Exit Speaker Setting mode
Press the [Q] button.

Switching Display

Switching the information displayed.

Press the [DISP] button.
Each time the button is pressed the display switches as shown below.

In Tuner source

Information	Display
Program Service name or Frequency	
Radio text, Program Service name or Frequency	"R-TEXT"
Clock	

In CD & External disc source

Information	Display
Disc title & Artist name	"D-TITLE"
Track title	"T-TITLE"
Play time & Track number	"P-TIME"
Disc name (In External disc source)	"DNPS"
Clock	

In MP3/WMA source

Information	Display
Song title & Artist name	"TITLE"
Album name & Artist name	"ALBUM"
Folder name	"FLDR-NAME"
File name	"FILE-NAME"
Play time & Track number	"P-TIME"
Clock	

In Auxiliary input source

Information
Auxiliary input name
Clock

⚇ • If the Disc title, Track title, Song title & Artist name, or Album name & Artist name is selected when the disc which does not have Disc title, Track title, Song title, Album name, or Artist name is played, track number and play time are displayed.
• The Album name cannot be displayed during WMA play.

Theft Deterrent Faceplate

The faceplate of the unit can be detached and taken with you, helping to deter theft.

Removing the Faceplate

Press the Release button.
The faceplate is unlocked, allowing you to detach it.

⚠ • The faceplate is a precision piece of equipment and can be damaged by shocks or jolts. For that reason, keep the faceplate in its special storage case while detached.
• Do not expose the faceplate or its storage case to direct sunlight or excessive heat or humidity. Also avoid places with too much dust or the possibility of water splashing.

Reattaching the Faceplate

1 Align the projections on the unit with the grooves on the faceplate.

Projections

Grooves
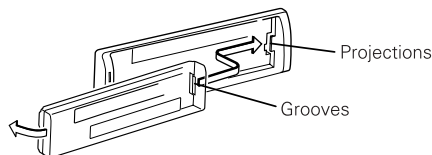
2 Push the faceplate in until it clicks.
The faceplate is locked in place, allowing you to use the unit.

General features

TEL Mute

The audio system automatically mutes when a call comes in.

When a call comes in
"CALL" is displayed.
The audio system pauses.

Listening to the audio during a call
Press the [SRC] button.
The "CALL" display disappears and the audio system comes back ON.

When the call ends
Hang up the phone.
The "CALL" display disappears and the audio system comes back ON.

Tuner features

SRC   1 - 6   MENU

Band display   Frequency display

ST indicator   Preset station number

Tuning

Selecting the station.

1 Select tuner source
Press the [SRC] button.
Select the "TUNER" display.

2 Select the band
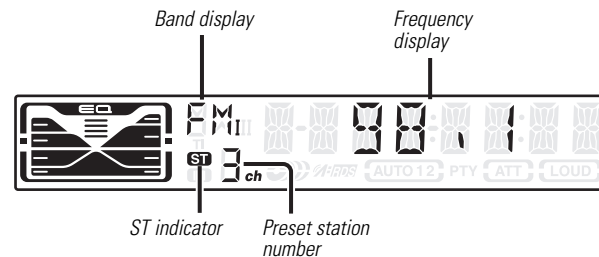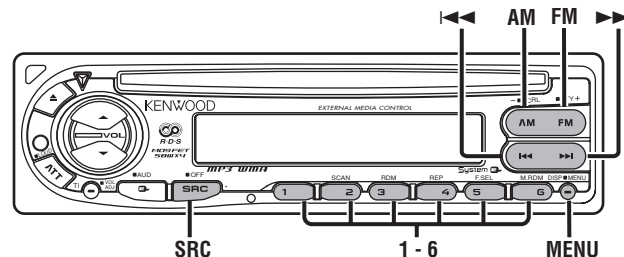Press the [FM] or [AM] button.
Each time the [FM] button is pressed it switches between the FM1, FM2, and FM3 bands.

3 Tune up or down band
Press the [◄◄] or [►►|] button.

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

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 desired [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 Menu mode
Press the [MENU] button for at least 1 second.
"MENU" is displayed.

3 Select the Auto Memory Entry mode
Press the [FM] or [AM] button.
Select the "A-MEMORY" display.

4 Open Auto Memory Entry
Press the [◄◄] or [►►|] button for at least 2 seconds.
When 6 stations that can be received are put in the memory Auto Memory Entry closes.

> • When the <AF (Alternative Frequency)> (page 24) is ON, only RDS stations are put in the memory.
> • When Auto Memory Entry is done in the FM2 band, the RDS stations preset in the FM1 band aren't put in the memory. Likewise, when it is done in the FM3 band, RDS stations preset in FM1 or FM2 aren't put in the memory.

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 desired [1] — [6] button.

RDS features

AM/ SCRL **FM/ PTY**

TI/ VOL ADJ   **1 - 6**   **DISP**

TI indicator   *PTY indicator*
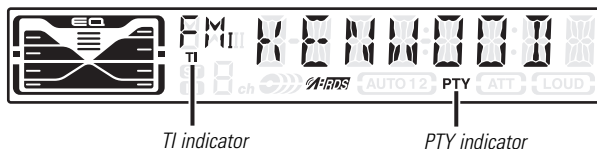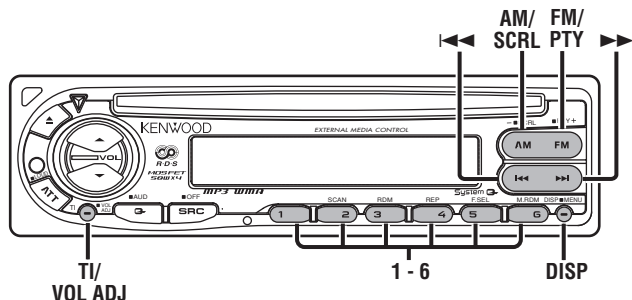
Traffic Information

Switching to traffic information automatically when a traffic bulletin starts even when you aren't listening to the radio.

Press the [TI] button.
Each time the button is pressed the Traffic Information function turns ON or OFF.
When it's ON, "TI" indicator is ON.
When a traffic information station isn't being received the "TI" indicator blinks.
When a traffic bulletin starts, "TRAFFIC" is displayed it and it switches to traffic information.

• During reception of an AM station when the Traffic Information function is turned ON, it switches to an FM station.
• During reception of traffic information the adjusted volume is automatically remembered, and the next time it switches to traffic information it's automatically the remembered volume.

Presetting Volume for Traffic Information

Setting the volume during Traffic Information.

1 Receive the station.

2 Set the volume you want.

3 **Preset the volume**
Press the [VOL ADJ] button for at least 2 seconds.
The volume level display blinks 1 time.

Radio Text Scroll

Scrolling the displayed radio text.

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

PTY (Program Type)

Selecting the Program Type and searching for a station.

1 Enter PTY mode
Press the [PTY] button for at least 1 second.
During PTY mode the "PTY" indicator is ON.

This function can't be used during a traffic bulletin or AM reception.

2 Select the Program Type
Press the [FM] or [AM] button.
Each time the button is pressed the Program Type switches as shown below.

No.	Program Type	Display
1.	Speech	"SPEECH"
2.	News	"NEWS"
3.	Current Affairs	"AFFAIRS"
4.	Information	"INFO"
5.	Sport	"SPORT"
6.	Education	"EDUCATE"
7.	Drama	"DRAMA"
8.	Culture	"CULTURE"
9.	Science	"SCIENCE"
10.	Varied	"VARIED"
11.	Pop Music	"POP M"
12.	Rock Music	"ROCK M"
13.	Easy Listening Music	"EASY M"
14.	Light Classical	"LIGHT M"
15.	Serious Classical	"CLASSICS"
16.	Other Music	"OTHER M"
17.	Weather	"WEATHER"
18.	Finance	"FINANCE"
19.	Children's programs	"CHILDREN"
20.	Social Affairs	"SOCIAL"
21.	Religion	"RELIGION"
22.	Phone In	"PHONE IN"
23.	Travel	"TRAVEL"
24.	Leisure	"LEISURE"
25.	Jazz Music	"JAZZ"
26.	Country Music	"COUNTRY"
27.	National Music	"NATION M"
28.	Oldies Music	"OLDIES"
29.	Folk Music	"FOLK M"
30.	Documentary	"DOCUMENT"
31.	Music	"MUSIC"

- Speech and Music include the Program type shown below.
  Music: No.12 — 17, 26 — 30
  Speech: No.3 — 11, 18 — 25, 31
- The Program Type can be put in the [1] — [6] button memory and called up quickly. Refer to the <Program Type preset> (page 16).
- The display language can be changed. Refer to <Changing Language for PTY Function> (page 16).

3 Search for the selected Program Type station
Press the [I◄◄] or [►►I] button.
When you want to search for other stations press the [I◄◄] or [►►I] button again.

When the selected Program Type isn't found, "NO PTY" is displayed. Select another Program Type.

4 Exit PTY mode
Press the [PTY] button for at least 1 second.

RDS features

Program Type preset

Putting the Program Type in the Preset button memory and calling it up quickly.

Presetting the Program Type

1 Select the Program Type to preset
Refer to <PTY (Program Type)> (page 15).

2 Preset the Program Type
Press the desired [1] — [6] button for at least 2 seconds.

Calling up the preset Program Type

1 Enter PTY mode
Refer to <PTY (Program Type)> (page 15).

2 Call up the Program Type
Press the desired [1] — [6] button.

Changing Language for PTY Function

Selecting the Program Type display language.

1 Enter PTY mode
Refer to <PTY (Program Type)> (page 15).

2 Enter Changing Language mode
Press the [DISP] button.

3 Select the language
Press the desired [1] — [3] button.

Button	Language
[1]	English
[2]	French
[3]	German

4 Exit Changing Language mode
Press the [DISP] button.

AM/
DISC-/ FM/
SCRL DISC+

◄◄ ►►

▲

SRC SCAN REP M.RDM
1 RDM/ F.SEL MENU
3

Disc number Track number

IN indicator Track time
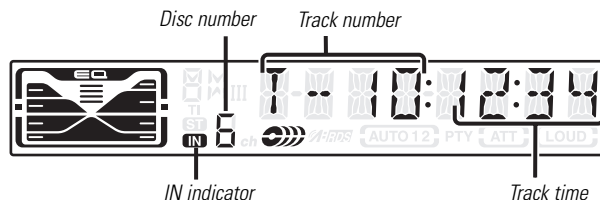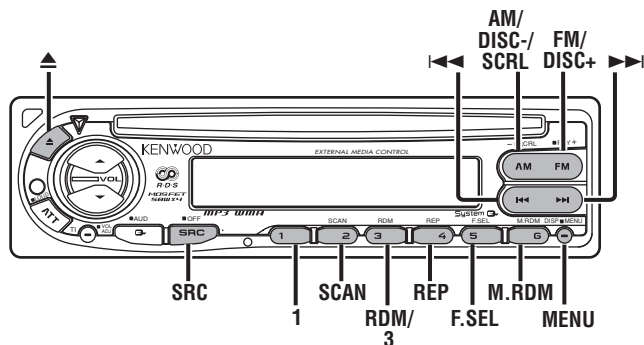
Playing CD & MP3/WMA

When a disc is inserted
Press the [SRC] button.
Select the "CD" display.

When a disc is inserted, the "IN" indicator is ON.

Eject the disc
Press the [▲] button.

⚠ 3 in. (8cm) disc cannot 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.

CD/MP3/WMA/External disc control features

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-2"	CD player
"CD CH"	CD changer
"MD CH"	MD changer

⊛ • Disc 10 is displayed as "0".
• 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.

Track/File Search

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

Press the [◀◀] or [▶▶] button.

⊛ If the remote with number buttons is used as optional accessories, a song you'd like to listen to can directly be selected with the operation below.
1. Enter a track/file number.
   Press the number buttons on the remote.
2. Do the Track/File Search.
   Press the [◀◀] or [▶▶] button.

Disc/ Folder Search
Disc Search (Function of disc changer)
Folder Search (Function of MP3/WMA)

Selecting the disc set in the Disc changer or the folder recorded on the MP3/WMA media.

Press the [DISC–] or [DISC+] button.

Track/File/Disc/Folder Repeat

Replaying the song, disc in the Disc changer or MP3/WMA folder you're listening to.

Press the [REP] button.
Each time the button is pressed the Repeat Play switches as shown below.

In CD & External disc source

Repeat play	Display
Track Repeat	"REP ON"/ "TREP ON"
Disc Repeat (In Disc Changer)	"DREP ON"
OFF	"REP OFF"

In MP3/WMA source

Repeat play	Display
File Repeat	"FILE REP"
Folder Repeat	"FOLD REP"
OFF	"REP OFF"

Scan Play

Playing the first part of each song on the disc or MP3/WMA folder you are listening to and searching for the song you want to listen to.

1 Start Scan Play
Press the [SCAN] button.
"SCAN ON"/ "TSCAN ON" is displayed.

2 Release it when the song you want to listen to is played
Press the [SCAN] 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, "RDM ON" is displayed.

When the [▶▶I] 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, "MRDM ON" is displayed.

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

CD/MP3/WMA/External disc control features

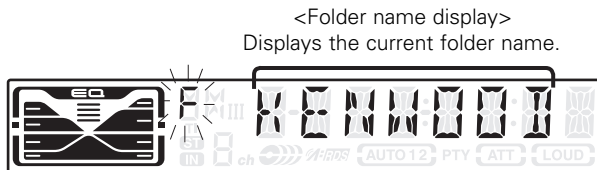## Folder Select (Function of MP3/WMA)

Quickly selecting the folder you want to listen to.

1 Enter Folder Select mode
Press the [F.SEL] button.
"F-SELECT" is displayed.
During Select mode the folder information is displayed as shown below.

<Folder name display>
Displays the current folder name.

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.

3 Decide the folder to play
Press the [1] 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.

Canceling the Folder Select mode
Press the [F.SEL] button.

Function of the External CD changer / External CD player

Disc Naming (DNPS)

Attaching a title to a CD.

1 Play the disc you want to attach a name to

2 Enter Menu mode
Press the [MENU] button for at least 1 second.
"MENU" is displayed.

3 Select Name set mode
Press the [FM] or [AM] button.
Select the "NAME SET" display.

4 Enter Name set mode
Press the [◄◄] or [►►] button for at least 2 seconds.

5 Move the cursor to the enter character position
Press the [◄◄] or [►►] button.

6 Select the characters
Press the [FM] or [AM] button.

7 Repeat steps 5 through 6 and enter the name.

8 Exit Name Set mode
Press the [MENU] button.

• When operation stops for 10 seconds the name at that time is registered, and Name Set mode closes.
• Media that you can attach a name to
  - External CD changer/ player: Varies according to the CD changer/ player. Refer to the CD changer/ player manual.
• The name of a CD can be changed by the same operation you used to name it.

Text/Title Scroll

Scrolling the displayed CD text, MP3/WMA text, or MD title.

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

Menu display

RDS indicator   *AUTO indicator*
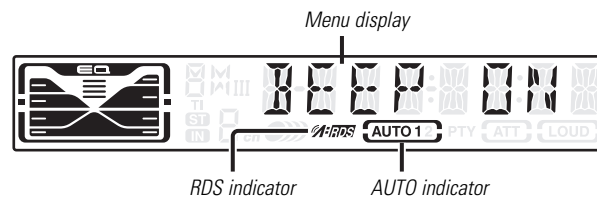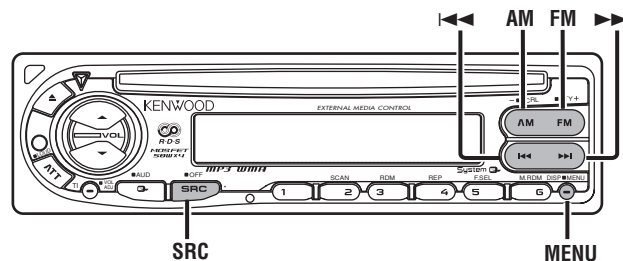
Menu system

Menu System

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

1 Enter Menu mode
Press the [MENU] button for at least 1 second.
"MENU" is displayed.

2 Select the menu item
Press the [FM] or [AM] button.
Example: When you want to set the beep sound select the "BEEP" display.

3 Set the menu 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 2 and setting other items.

4 Exit Menu mode
Press the [MENU] 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 (<Manual Clock Adjustment>etc.) are entered step by step.

Touch Sensor Tone

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

Display	Setting
"BEEP ON"	Beep is heard.
"BEEP OFF"	Beep canceled.

Manual Clock Adjustment

This adjustment can be done when the <Synchronize Clock> (page 22) is set as OFF.

1 Select Clock Adjustment mode
Press the [FM] or [AM] button.
Select the "CLK ADJ" display.

2 Enter Clock Adjust mode
Press the [◀◀] or [▶▶] button for at least 2 seconds.
The clock display blinks.

3 Adjust the hours
Press the [FM] or [AM] button.

Adjust the minutes
Press the [◀◀] or [▶▶] button.

4 Exit Clock adjustment mode
Press the [MENU] button.

Synchronize Clock

Synchronizing the RDS station time data and this unit's clock.

Display	Setting
"SYNC ON"	Synchronizes the time.
"SYNC OFF"	Adjust the time manually.

It takes 3 to 4 minutes to synchronize the clock.

DSI (Disabled System Indicator)

A red indicator will blink on the unit after the faceplate is removed, warning potential thieves.

Display	Setting
"DSI ON"	LED flashes.
"DSI OFF"	LED OFF.

Selectable Illumination

Selecting the button illumination color as green or red.

Display	Setting
"COL RED"	The illumination color is red
"COL GRN"	The illumination color is green.

News Bulletin with Timeout Setting

It switches automatically when a news bulletin starts even if the radio isn't being listened to. Also, the time interval when interrupt is prohibited can be set.

Display and Setting
"NEWS OFF"
"NEWS 00M"
⋮
"NEWS 90M"

When "NEWS 00M" — "NEWS 90M" is set, the News Bulletin Interrupt function is ON.
When the news bulletin starts, "NEWS" is displayed, and it switches to the news bulletin.

- If you choose the "20M" setting, further news bulletins will not be received for 20 minutes once the first news bulletin is received.
- The news bulletin volume is the same level that was set for <Traffic Information> (page 14).
- This function is only available if the desired station sends PTY-code for news bulletin or belongs to <Enhanced Other Network>-Network sending PTY-code for news bulletin.
- When the News Bulletin Interrupt function is ON, it switches to an FM station.

Local Seek   <In Tuner mode>

Only stations whose reception is good are searched for in auto seek tuning.

Display	Setting
"LO.S OFF"	The local seek function is OFF.
"LO.S ON"	The local seek function is ON.

Menu system

Tuning Mode   <In Tuner mode>

Sets the tuning mode.

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

Auto Memory Entry   <In Tuner mode>

For the operation method refer to <Auto Memory Entry> (page 13).

AF (Alternative Frequency)

When poor reception is experienced, automatically switch to another frequency broadcasting the same program in the same RDS network with better reception.

Display	Setting
"AF ON"	The AF function is ON.
"AF OFF"	The AF function is OFF.

When the AF function is ON, the "RDS" indicator is ON.

When no other stations with stronger reception are available for the same program in the RDS network, you may hear the incoming broadcast in bits and snatches. Turn OFF the AF function in such a case.

Restricting RDS Region
(Region Restrict Function)

You can choose whether or not to restrict the RDS channels, received with the AF function for a particular network, to a specific region.

Display	Setting
"REG ON"	The Region Restrict Function is ON.
"REG OFF"	The Region Restrict Function is OFF.

Sometimes stations in the same network broadcast different programs or use different program service names.

Auto TP Seek

When the TI function is ON and poor reception conditions are experienced when listening to a traffic information station, another traffic information station with better reception will be searched for automatically.

Display	Setting
"ATPS ON"	The Auto TP Seek Function is ON.
"ATPS OFF"	The Auto TP Seek Function is OFF.

Monaural Reception   <In FM reception>

Noise can be reduced when stereo broadcasts are received as monaural.

Display	Setting
"MONO OFF"	The monaural reception is OFF.
"MONO ON"	The monaural reception is ON.

Text Scroll

Setting the displayed text scroll.

Display	Setting
"SCL MANU"	Doesn't scroll.
"SCL AUTO"	Scrolls when the display changes.

⌨ The text scrolled is shown below.
   • CD text
   • Folder name/ File name/ Song title/ Artist name/ Album name
   • MD title
   • Radio text

Auxiliary Input Display Setting & Disc Naming

For selecting the display when switched to Auxiliary input source. For the Disc Naming refer to the <Disc Naming (DNPS)> (page 20).

1 Select Auxiliary input source
Press the [SRC] button.
Select the "AUX EXT" display.

2 Enter Menu mode
Press the [MENU] button for at least 1 second.
"MENU" is displayed.

3 Select Auxiliary input display setting mode
Press the [FM] or [AM] button.
Select the "AUX NAME" display.

4 Enter Auxiliary input display setting mode
Press the [◄◄] or [►►I] button for at least 2 seconds.
The presently selected Auxiliary input display is displayed.

5 Select the Auxiliary input display
Press the [◄◄] or [►►I] button.

Each time the button is pressed the display switches as shown below.
   • "AUX EXT"
   • "TV"
   • "DVD"
   • "VIDEO"
   • "GAME"
   • "PORTABLE"

6 Exit Auxiliary input display setting mode
Press the [MENU] button.

⌨ When operation stops for 10 seconds, the name at that time is selected, and Auxiliary input display setting mode closes.

Power OFF Timer

Setting the timer to turn this unit's power OFF automatically when Standby mode continues.
Using this setting can save the vehicle's battery power.

Display	Setting
"OFF – – –"	Power OFF Timer function is OFF.
"OFF 20M" (Original setting)	Turns the power OFF after 20 minutes.
"OFF 40M"	Turns the power OFF after 40 minutes.
"OFF 60M"	Turns the power OFF after 60 minutes.

Menu system
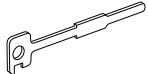
CD Read Setting	<In Standby mode>

When there is a problem on playing a CD with special format, this setting play the CD by force.

Display	Setting
"CD READ1"	Play CD and MP3/WMA.
"CD READ2"	Play CD by force.

Setting "CD READ2" cannot play MP3/WMA.
Some music CDs may not be played back even in the "CD READ2" mode.

Accessories

External view	Number of items
①	1
②	2
③	1

⚠ 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.
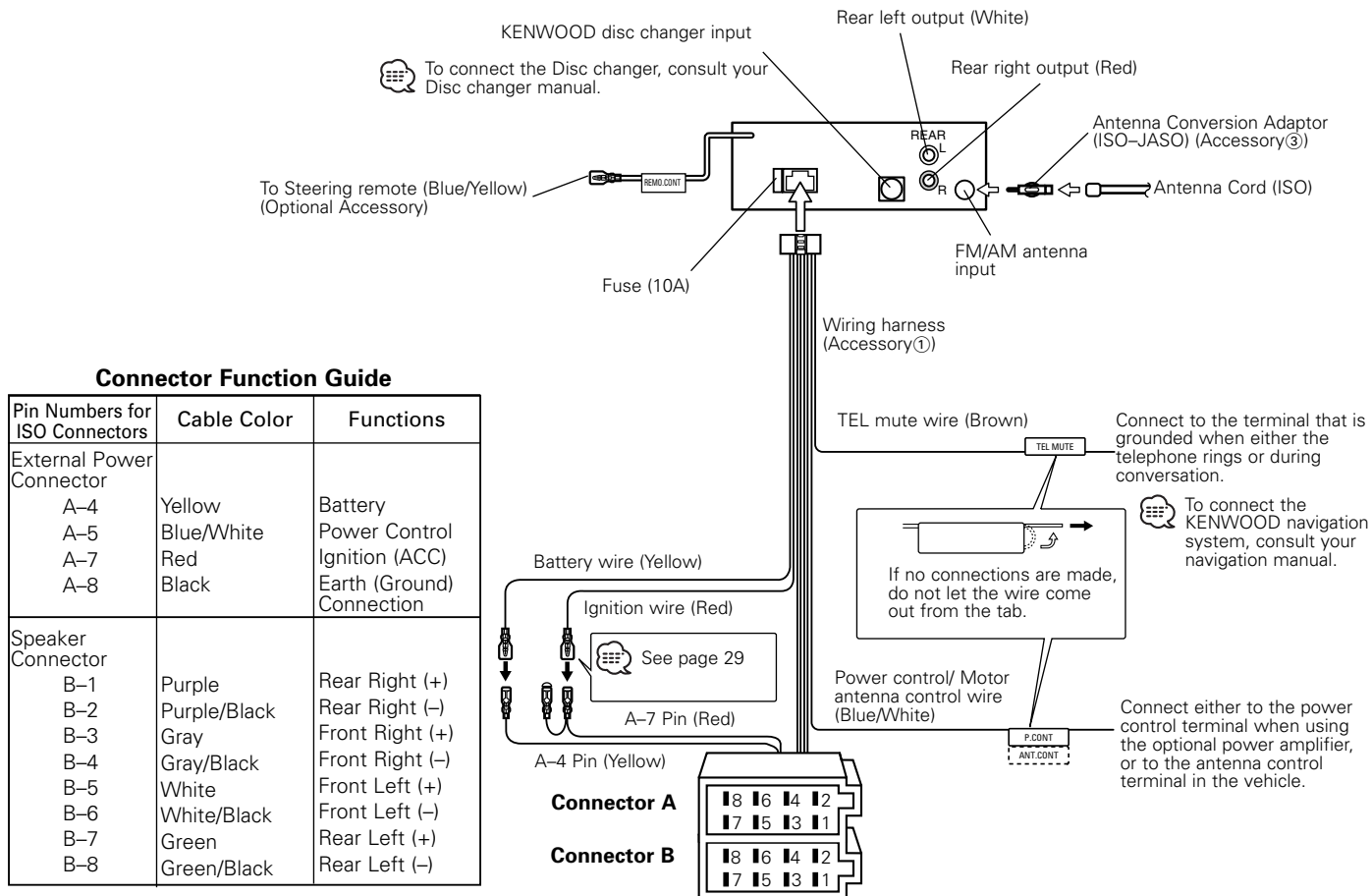
Installation Procedure

1. To prevent short circuits, remove the key from the ignition and disconnect the ⊖ terminal of the battery.
2. Make the proper input and output wire connections for each unit.
3. Connect the wire on the wiring harness.
4. Take Connector B on the wiring harness and connect it to the speaker connector in your vehicle.
5. Take Connector A on the wiring harness and connect it to the external power connector on your vehicle.
6. Connect the wiring harness connector to the unit.
7. Install the unit in your car.
8. Reconnect the ⊖ terminal of the battery.
9. Press the reset button.

⚠ **CAUTION**
- If your car is not prepared for this special connection-system, consult your Kenwood dealer.
- Only use antenna conversion adapters (ISO-JASO) when the antenna cord has an ISO plug.
- Make sure that all wire connections are securely made by inserting jacks until they lock completely.
- If your vehicle's ignition does not have an ACC position, or if the ignition wire is connected to a power source with constant voltage such as a battery wire, the power will not be linked with the ignition (i.e., it will not turn on and off along with the ignition). If you want to link the unit's power with the ignition, connect the ignition wire to a power source that can be turned on and off with the ignition key.
- If the fuse blows, first make sure that the wires have not caused 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 short circuits, also 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 receive damage or fail to work if you share the ⊖ wires and/or ground them to any metal part in the car.
- After the unit is installed, check whether the brake lamps, indicators, wipers, etc. on the car are working properly.
- If the console has a lid, make sure to install the unit so that the faceplate does not hit the lid when closing and opening.
- Mount the unit so that the mounting angle is 30° or less.

Connecting Wires to Terminals

KENWOOD disc changer input

To connect the Disc changer, consult your Disc changer manual.

Rear left output (White)

Rear right output (Red)

Antenna Conversion Adaptor (ISO–JASO) (Accessory③)

Antenna Cord (ISO)

To Steering remote (Blue/Yellow) (Optional Accessory)

REMO.CONT

REAR L R

FM/AM antenna input

Fuse (10A)

Wiring harness (Accessory①)

TEL mute wire (Brown)

TEL MUTE

Connect to the terminal that is grounded when either the telephone rings or during conversation.

To connect the KENWOOD navigation system, consult your navigation manual.

If no connections are made, do not let the wire come out from the tab.

Battery wire (Yellow)

Ignition wire (Red)

See page 29

A–7 Pin (Red)

A–4 Pin (Yellow)

Connector A

Connector B

Power control/ Motor antenna control wire (Blue/White)

P.CONT
ANT.CONT

Connect either to the power control terminal when using the optional power amplifier, or to the antenna control terminal in the vehicle.

Connector Function Guide

Pin Numbers for ISO Connectors	Cable Color	Functions
External Power Connector		
A–4	Yellow	Battery
A–5	Blue/White	Power Control
A–7	Red	Ignition (ACC)
A–8	Black	Earth (Ground) Connection
Speaker Connector		
B–1	Purple	Rear Right (+)
B–2	Purple/Black	Rear Right (–)
B–3	Gray	Front Right (+)
B–4	Gray/Black	Front Right (–)
B–5	White	Front Left (+)
B–6	White/Black	Front Left (–)
B–7	Green	Rear Left (+)
B–8	Green/Black	Rear Left (–)

Connector A
8 6 4 2
7 5 3 1
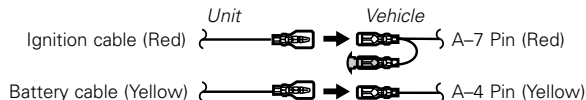
Connector B
8 6 4 2
7 5 3 1

— 28 —

⚠WARNING Connecting the ISO Connector

The pin arrangement for the ISO connectors depends on the type of vehicle you drive. Make sure to make the proper connections to prevent damage to the unit.

The default connection for the wiring harness is described in 1 below. If the ISO connector pins are set as described in 2 or 3, make the connection as illustrated.

Please be sure to reconnect the cable as shown 2 below to install this unit to the **Volkswagen** vehicles etc.

1 (Default setting) The A-7 pin (red) of the vehicle's ISO connector is linked with the ignition, and the A-4 pin (yellow) is connected to the constant power supply.

Unit   *Vehicle*

Ignition cable (Red) ⟶ ▸ ⟶ A–7 Pin (Red)

Battery cable (Yellow) ⟶ ▸ ⟶ A–4 Pin (Yellow)

2 The A-7 pin (red) of the vehicle's ISO connector is connected to the constant power supply, and the A-4 pin (yellow) is linked to the ignition.

Unit   *Vehicle*

Ignition cable (Red) ⟶ ▸ ⟶ A–7 Pin (Red)

Battery cable (Yellow) ⟶ ▸ ⟶ A–4 Pin (Yellow)
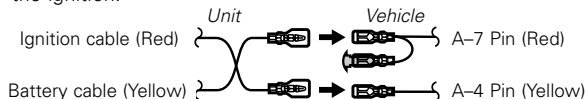
3 The A-4 pin (yellow) of the vehicle's ISO connector is not connected to anything, while the A-7 pin (red) is connected to the constant power supply (or both the A-7 (red) and A-4 (yellow) pins are connected to the constant power supply).

Unit   *Vehicle*

Ignition cable (Red) ⟶ ▸ ⟶ A–7 Pin (Red)

Battery cable (Yellow) ⟶ ⟶ A–4 Pin (Yellow)
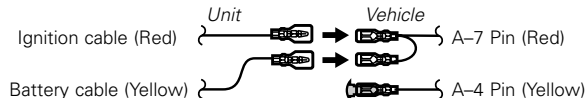
When the connection is made as in 3 above, the unit's power will not be linked to the ignition key. For that reason, always make sure to turn off the unit's power when the ignition is turned off.

To link the unit's power to the ignition, connect the ignition cable (ACC...red) to a power source that can be turned on and off with the ignition key.

Installation

■ *Installation*

Firewall or metal support

Screw (M4X8) (commercially available)

Self-tapping screw (commercially available)

Metal mounting strap (commercially available)

Bend the tabs of the mounting sleeve with a screwdriver or similar utensil and attach it in place.
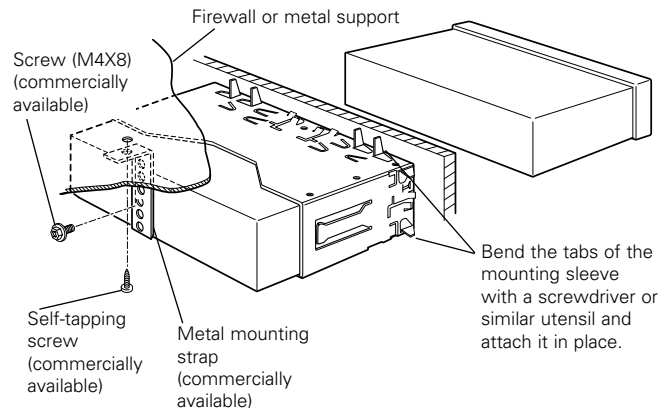
Make sure that the unit is installed securely in place. If the unit is unstable, it may malfunction (eg, the sound may skip).

Installation

■ *Removing the hard rubber frame*

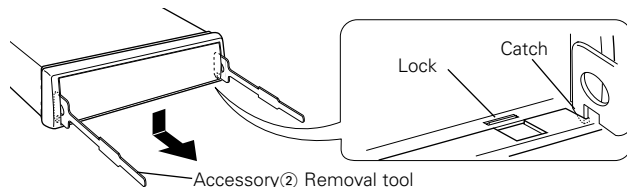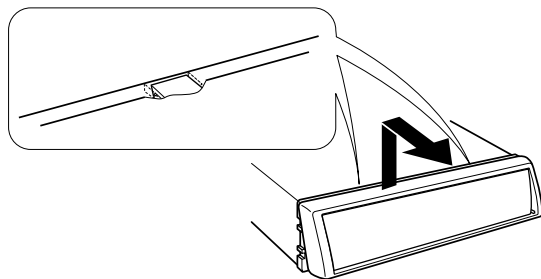**1** Engage the catch pins on the removal tool and remove the two locks on the lower level.
Lower the frame and pull it forward as shown in the figure.

Lock   Catch

Accessory② Removal tool

2 When the lower level is removed, remove the upper two locations.

The frame can be removed from the top side in the same manner.

■ *Removing the Unit*

1 Refer to the section <Removing the hard rubber frame> and then remove the hard rubber frame.

2 Remove the screw (M4×8) on the back panel.

3 Insert the two removal tools deeply into the slots on each side, as shown.

Screw (M4X8)
(commercially available)

Accessory② Removal tool
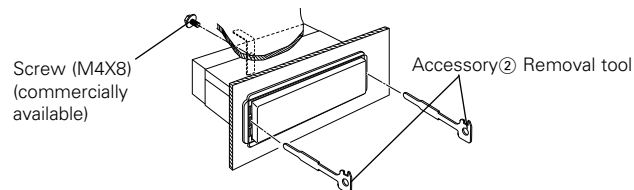
4 Lower the removal tool toward the bottom, and pull out the unit halfway while pressing towards the inside.
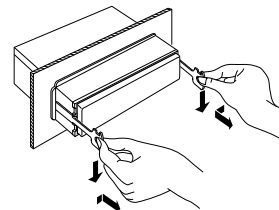
⚠ Be careful to avoid injury from the catch pins on the removal tool.

5 Pull the unit all the way out with your hands, being careful not to drop it.

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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.

? **There's a source you can't switch.**
- ✔ There's no media inserted.
  - ☞ Set the media you want to listen to. If there's no media in this unit, you can't switch to each source.
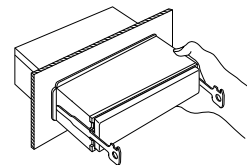- ✔ The Disc changer isn't connected.
  - ☞ Connect the Disc changer. If the Disc changer isn't connected to it's input terminal, You can't switch to an external disc source.

? **The memory is erased when the ignition is turned OFF.**
- ✔ The ignition and battery wire are incorrectly connected.
  - ☞ Connect the wire correctly, referring to the section on <Connecting Wires to Terminals>.

? **The TEL mute function does not work.**
- ✔ The TEL mute wire is not connected properly.
  - ☞ Connect the wire correctly, referring to the section on <Connecting Wires to Terminals>.

? **The TEL mute function turns ON even though the TEL mute wire is not connected.**
- ✔ The TEL mute wire is touching a metal part of the car.
  - ☞ Pull the TEL mute wire away from the metal part of the car.

? **Even if Loudness is turned ON, high-pitched tone isn't compensated for.**
- ✔ Tuner source is selected.
  - ☞ High-pitched tone isn't compensated for when in Tuner source.

? **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 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.

? **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.

? **Even though Synchronize Clock is ON, the clock can't be adjusted.**
- ✔ The received RDS station isn't sending time data.
  - ☞ Receive another RDS station.

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>.

? **It isn't the set Traffic information sound volume.**
- ✔ The set sound volume is less than the tuner sound volume.
  - ☞ If the tuner sound volume is louder than the set sound volume,the tuner sound volume is used.

Disc source

? **"AUX EXT" is displayed without achieving External disc control mode.**
- ✔ Unsupported disc changer is connected.
  - ☞ Use the disc changer mentioned in the IMPORTANT INFORMATION of the section on <Safety precautions> (page 3).

? **The specified disc does not play, but another one plays instead.**
- ✔ The specified CD is quite dirty.
  - ☞ Clean the CD.

- ✔ 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.

? **A CD ejects as soon as it is loaded.**
- ✔ The CD is quite dirty.
  - ☞ Clean the CD, referring to the CD cleaning of the section on <About CDs> (page 5).

? **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.

? **Direct 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/folders first or last song.
  - ☞ For each disc/folder, Track Search can't be done in the backward direction for the first song or in the forward direction for the last song.

MP3/WMA source

? **Cannot play an MP3/WMA.**
- ✔ The media is scratched or dirty.
  - ☞ Clean the media, referring to the CD cleaning of the section on <About CDs> (page 5).

? **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.

? **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.

If the following situations, consult your nearest service center:

Even though the disc changer is connected, the Disc Changer source is not ON, with "AUX EXT" showing in the display during the Changer Mode.

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.
⇨ Load the disc magazine properly.
No CD in the unit.
⇨ Insert the CD.

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

E-04:   No disc has been loaded in the disc magazine.
⇨ Load a disc into the disc magazine.
The CD is quite dirty. The CD is upside-down. The CD is scratched a lot.
⇨ Clean the CD and load it correctly.

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

BLANK: Nothing has been recorded on the MD.

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

E-15:   Media was played that doesn't have data recorded that the unit can play.
⇨ Use media that has data recorded that the unit can play.

NO PANEL: The faceplate of the slave unit being connected to this unit has been removed.
⇨ Replace it.

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

E-99:   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 "E-99" code does not disappear, consult your nearest service center.

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.

WAITING: Radio text data is being received.

LOAD: Discs are being exchanged in the Disc changer.

READING: The unit is reading the data on the disc.

IN (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.

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

PROTECT: A copy-protected file is played.
⇨ ----

This is the privileged Microsoft® Windows Media Audio file.
⇨ ----

Specifications

Specifications subject to change without notice.

FM tuner section
Frequency range (50 kHz space) ....87.5 MHz – 108.0 MHz
Usable sensitivity (S/N = 26dB) ....0.7 µV/75 Ω
Quieting Sensitivity (S/N = 46dB) ....1.6 µV/75 Ω
Frequency response (±3 dB) ....30 Hz – 15 kHz
Signal to Noise ratio (MONO) ....65 dB
Selectivity (DIN) (±400 kHz)..≥ 80 dB
Stereo separation (1 kHz) ....35 dB

MW tuner section
Frequency range (9 kHz space) ....531 kHz – 1611 kHz
Usable sensitivity (S/N = 20dB) ....25 µV

LW tuner section
Frequency range ....153 kHz – 281 kHz
Usable sensitivity (S/N = 20dB) ....45 µV

CD player section
Laser diode ....GaAlAs
Digital filter (D/A) ....8 Times Over Sampling
D/A Converter ....1 Bit
Spindle speed ....1000 – 400 rpm (CLV 2times)
Wow & Flutter..Below Measurable Limit
Frequency response (±1 dB)................................10 Hz – 20 kHz
Total harmonic distortion (1 kHz) ....0.01 %
Signal to Noise ratio (1 kHz) ....105 dB
Dynamic range ....93 dB
Channel separation..85 dB
MP3 decode ....Compliant with MPEG-1/2 Audio Layer-3
WMA decode ....Compliant with Windows Media Audio

Audio section
Maximum output power..50 W x 4
Output power (DIN 45324, +B=14.4V) ....30 W x 4
Tone action
    Bass : ....100 Hz ±10 dB
    Middle : ....1 kHz ±10 dB
    Treble : ....10 kHz ±10 dB
Preout level / Load (during disc play)....................2000 mV/10 kΩ
Preout impedance (during disc play) ....≤ 600 Ω

General
Operating voltage (11 – 16V allowable) ....14.4 V
Current consumption...10 A
Installation Size (W x H x D) ....182 x 53 x 155 mm
Weight ....1.4 kg

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