

# KENWOOD

## KTS-MP400MR KTS-300MR

CD-RECEIVER

### INSTRUCTION MANUAL

AMPLI-TUNER-LECTEUR DE CD

### MODE D'EMPLOI

REPRODUCTOR DE DISCOS COMPACTOS RECEPTOR DE FM/AM

### MANUAL DE INSTRUCCIONES

Kenwood Corporation

**Take the time to read through this instruction manual.  
Familiarity with installation and operation procedures will help  
you obtain the best performance from your new CD-receiver.**

**For your records**

Record the serial number, found on the back of the unit, in the space provided below. Refer to the model and serial numbers whenever you call upon your Kenwood dealer for information or service on the product.

Model KTS-MP400MR, KTS-300MR

Serial number \_\_\_\_\_

**:ENWOOD**



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## A. Warnin£!

### ii.CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure. In compliance with Federal Regulations, following are reproductions of labels on, or inside the product relating to laser product safety.

KENWOOD CORPORATION  
2967-3, ISHIKAWA-CHO,  
HACHIOJI-SHI  
TOKYO, JAPAN

KENWOOD CORP. CERTIFIES THIS EQUIPMENT  
CONFORMS TO DHHS REGULATIONS NO.21 CFR  
1040. 10, CHAPTER 1, SUBCHAPTER 1

Location :Bottom Panel

### FCC WARNING

This equipment may generate or use radio frequency energy. Changes or modifications to this equipment may cause harmful interference unless the modifications are expressly approved in the instruction manual. The user could lose the authority to operate this equipment if an unauthorized change or modification is made.

### NOTE

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

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

### AWARNING

#### 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 0.75mm<sup>2</sup> (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.

### A.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.
- 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 use your own screws. Use only the screws provided. If you use the wrong screws, you could damage the unit.

### 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 3-in. CDs in the CD slot

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

### NOTE

- If the unit fails to operate properly, press the Reset button. 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.



- 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 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.

## Notes

### 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.

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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 erase characters.

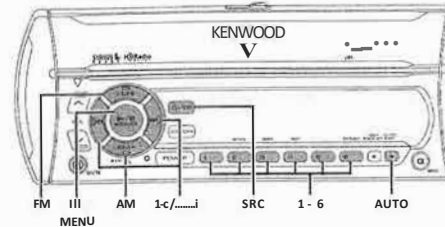
### NOTE

This Class B digital apparatus complies with Canadian ICES-003.

### About SIRIUS Satellite radio tuner

Refer to the instruction manual of SIRIUS Satellite radio tuner KTC-SR901/SR902/SR903 (optional accessory), when connected, for the operation method.

Refer to the sections of A models for operation;



### <SIRIUS ID [ESN] display> and <Select SIRIUS Satellite Radio Mode>

At the operation to press [SRC] button, press [TU/SR] button.

## About CDs

### Handling CDs

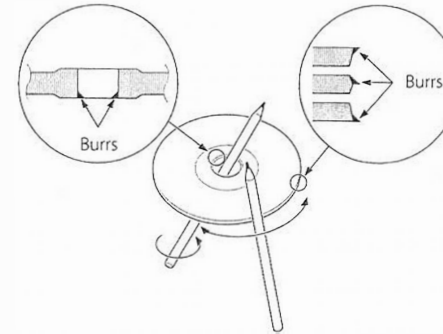
- Don't touch the recording surface of the CD.



- 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.

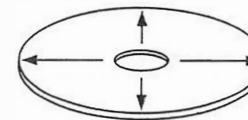


### CD accessories

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.
- This unit can only play the CDs with

1u

- It may not correctly play discs 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.

## Notes on playing MP3/WMA

KTS-MP400MR can play MP3 (MPEG 1, 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 and folder 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.

A  
.....L

• 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 1x. 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										p	.	p			
1										1	A	O	.	Q	
2										2	B	A	b	.	A
3										3	C	S	C	S	t
4										4	D	T	d	1	o
5										5	E	u	.	u	V
6										6	F	V	I	.	:
7										7	C	w	g	w	.
8										8	H	X	h	.	>
9										9	I	y	I	y	C
A										A	J	z	z	.	E
B										B	K	k	.	.	E
C										C	.	C	.	.	I
D										D	.	M	.	.	I
E										E	.	X	.	.	I
F										F	I	.	.	.	I

### 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  
.....L

- 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

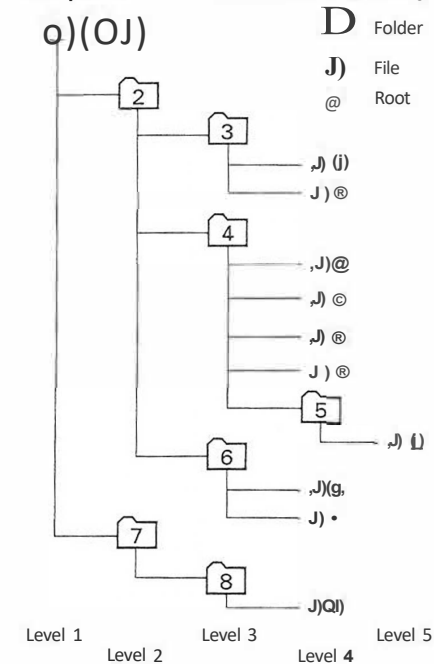
## MP3/WMA playing order

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 .I>@ being played ...

Operation of the button	(Current file: J)@)
I Button	Beginning of file J)@ J)@
▶IButton	.I>@ .I>@

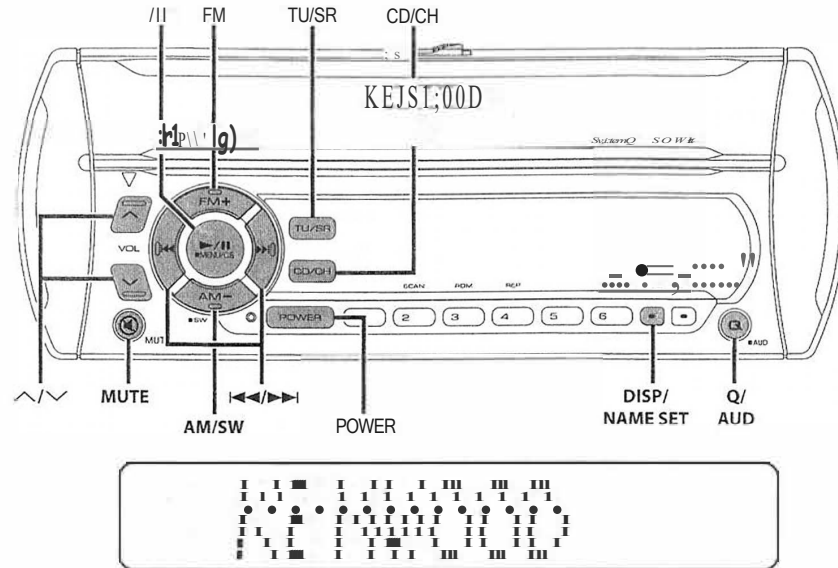
### When a Folder Search is executed with file J)@ being played ...

Operation of the button	(Current folder: QJ)
AM Button	QJ QJ QJ [tJ "'
RM Button	QJ GJ QJ QJ QJ ...

### When Folder Select is selected with file J)@ being played to move from folder to folder ...

Operation of the button	(Current folder: QJ)
I Button	QJ
▶▶I Button	[tJ
AM Button	QJ
RM Button	GJ

## General features



### Power

#### Turning ON the Power

Press the [POWER] button.

#### Turning OFF the Power

Press the [POWER] button.

### Selecting the Source

Press the [TU/SR] button.

Source Required	Function
Tuner or HD Radio (Optional accessory)	"TUNER" or "HD Radio"
SIRIUS tuner (Optional accessory)	"SIRIUS"
WeatherBand Tuner (Optional accessory)	"WEATHER BAND"

Press the [CD/CH] button.

Source Required	Function
CD	"CD"
External disc (Optional accessory)	"CD CH"/"CD2"
Auxiliary input (Optional accessory)	"ALX EXT"

### Volume

#### Increasing Volume

Press the [A] button.

#### Decreasing Volume

Press the [VJ] button.

### Attenuator

Turning the volume down quickly.

Press the [MUTE] button.

Each time the button is pressed, the Attenuator turns ON and OFF.

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

## System Q

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

### 1 Select the source to set

Press the [TU/SR] or [CD/CH] button.

### 2 Select the Sound type

Press the [Q] button.

Each time the button is pressed the sound setting switches.

Sound setting	Diselal
flat	"flat"
User memory	"User"
Rock	"Rock"
Pop	"Pops"
Easy	"Easy"
Top40	"Top40"
Jazz	"Jag"

### Q...

- User memory: The values set on the <Audio Control> (page 11).

## Audio Control

### 1 Select the source for adjustment

Press the [TU/SR] or [CD/CH] 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 [1] or [1...1] button.

Adjustment Item	Diselal	Range
Bass Center Frequency*2	"Bass F"	(:LJ110/80/100 or 150 Hz
Bass level	"Bass"	- 8 - + 8
Bass Qfactor*2	"Bass Q"	1.00/1.25/1.50/2.00
Bass Extend**	"Bass EXT"	ON/OFF
Middle Center Frequency*2	"MID F"	0.5/LQ/1.5/2.0 kHz
Middle level	"Middle"	- 8 - + 8
Middle QFactor*2	"Middle Q"	1.0/20
Treble Center Frequency*	"TRE F"	10.0/12.5/15.0/17.5 kHz
Treble level	"Treble"	- 8 - + 8

Balance	'Balance'	Left 15 - Right 15
Fader	'Fader'	Rear 15 - Front 15
Sub woofer level**	'SW Level'	- 1 S - + 15
front High Pass filter**	'HPF F'	Through/100/125/170Hz
Rear High Pass Filter*2	'HPF R'	Through/200 Hz
Front/Rear High Pass Filter*3	'HPF'	Through/100/125/170 Hz
Sub woofer Low Pass filter**	'LPF SW'	SO/80/120/THRU Hz
Volume offset	"V-Offset"	- 8 - + 0
Loudness	"LOUD"	ON/OFF

### Q...

- According to the Bass Q Factor setting value, the frequencies that can be set in Bass Center Frequency change as shown below.

Bass Q Factor	Bass Center Frequency
1.00/1.25/1.50	(LJ70/80/100
2.00	(:LJ110/80/150

- When the Bass Extend is set to ON, low frequency response is extended by 20%.
- Volume offset: Each source's volume can be set as a difference from the basic volume.
- Loudness: Compensating for low and high tones during low volume.
- \* You can control this item when <Switching preout> (page 23) is set to "SWPRE Sub-W". (KTS-300MR only)
- \*\* Function of the KTS-MP400MR
- \*\*\* Function of the KTS-300MR

### 5 Exit Audio Control mode

Press the [AUD] button.

## General features

### Switching Display

Switching the information displayed.

Press the [DISPJ] button.

Each time the button is pressed the display switches as shown below.

#### In Tuner source

Information	Dis. E.L.I.I.
Station name or Frequency	"SNPS"*
Frequency	"BAND+FREQ"
Clock	

#### In CD & External disc source

Information	Dis
Disc title (In External disc source or KTS-MP400MR internal CD source)	"D-TITLE"•
Track title (In External disc source or KTS-MP400MR internal CD source)	"I-TITLE"
Track number & P.I.U. time	"P-time"
Disc name	"DNPS"
Clock	

#### In MP3/WMA source (KTS-MP400MR only)

Information	Dis. E.L.I.I.
SoQ title & Art t name	"TITLE"
Album name & Artist name	"ALBUM"
Folder name	"FOLDER NAME"
filename	"FI NAME"
Track number1 & P.I.U. time	"P-Time"
Clock	

#### In HD Radio source

Information	DIS. E.L.I.I.
Station name	"Station Name"*
Song title/ Artist name/ Album name/ Genre	"Title"•
Frequency	"frequency"
Clock	

#### In Weather Band Tuner source

Information	DIS. E.L.I.I.
Frequency	"Frequency"
Clock	

### In Auxiliary input source

Information
Auxiliary name
Clock

- If the contents of the information cannot be displayed, Play time or Frequency is displayed.
- Album name cannot be displayed in WMA file.

### 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

- Refer to the <Switching Display> (page 12) and select either "DNPS" or "SNPS". No name can be attached to the source if "DNPS" or "SNPS" cannot be selected for it.

#### 2 Enter name set mode

Press the [NAME SET] 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 [/11] button.  
Each time the button is pressed the character type switches as shown below.

Character tree
A r case
Alc. habet lower case
Numbers and mbols
Special characters (Accent characters)

#### 5 Select the characters

Press the [FM] or [AM] button.

#### 6 Repeat steps 3 through 5 and enter the name.

#### 7 Exit name set mode

Press the [NAME SET] button.

C-).

- When operation stops for 10 seconds the name at that time is registered, and Name Set mode closes.

- Memory numbers

- FM: 32 stations
- AM: 16 stations
- Internal CD player: 30 discs
- External CD changer/ player: Varies according to the CD changer/ player. Refer to the CD changer/ player manual.

- The title of station/CD can be changed by the same operation used to name 11

### Auxiliary Input Display Setting 9

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

#### 1 Select Auxiliary input source

Press the [CD/CH] button.  
Select the 'AUX EXT' display.

#### 2 Enter Auxiliary input display setting mode

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

The presently selected AUX Name is blinks.

#### 3 Select the Auxiliary input display

Press the [ ] or [ ] button.  
Each time the button is pressed it switches through the below displays.

- 'AUX EXT'
- 'TV'
- 'VIDEO'
- 'GAME'
- 'PORTABLE'
- 'DVD'

#### 4 Exit Auxiliary input display setting mode

Press the [NAME SET] button.

C-).

- When operation stops for 10 seconds, the name at that time is selected, and Auxiliary input display setting mode closes.
- The Auxiliary input display can be set only when the auxiliary input of optional KCA-S210A is used.

### Subwoofer Output

Turning the Subwoofer output ON or OFF.

Press the [SW] button for at least 1 second.  
Each time the button is pressed Subwoofer output switches ON or OFF.

When it's ON, "Sub-WON" is displayed.

- You can control this function when <Switching precut> (page 23) is set to 'SWPRE Sub-W'. (KTS-300MR only)

### TEL Mute

The audio system automatically mutes when a call comes in.

#### When a call comes in

"CALL" is displayed.  
The audio system pauses.

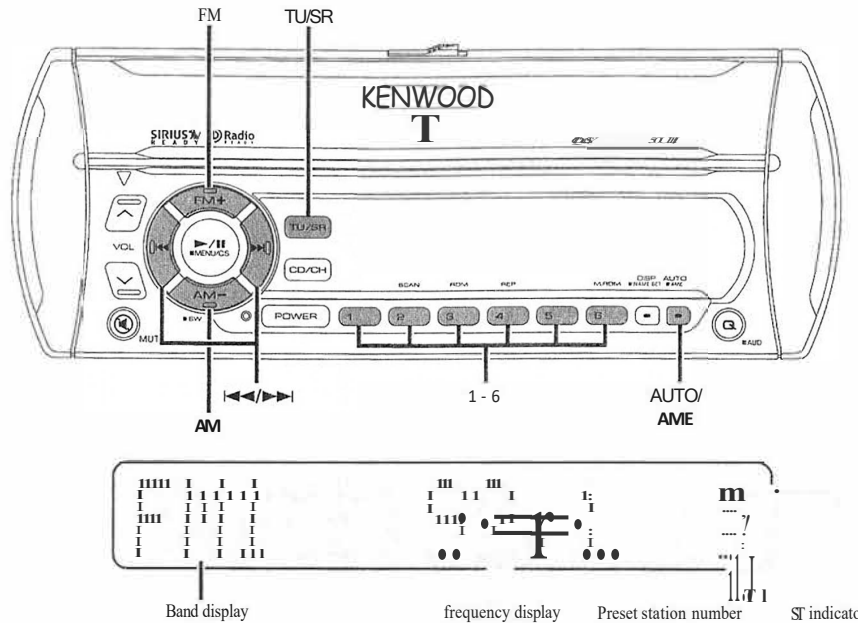
#### Listening to the audio during a call

Press the [TU/SR] or [CD/CH] 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



### Tuning

Selecting the station.

- 1 Select tuner source  
Press the [TU/SR] 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

### Tuning Mode

Choose the tuning mode.

Press the [AUTO] button.

Each time the button is pressed the Tuning mode switches as shown below.

Tuning mode	Display	Operation
Auto seek	"Auto 1"	Automatic search for a station.
Preset station seek	"Auto2"	Search in order of the stations in the Preset memory
Manual	"Manual"	Normal manual tuning operation.

### 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 stations with good reception in the memory automatically.

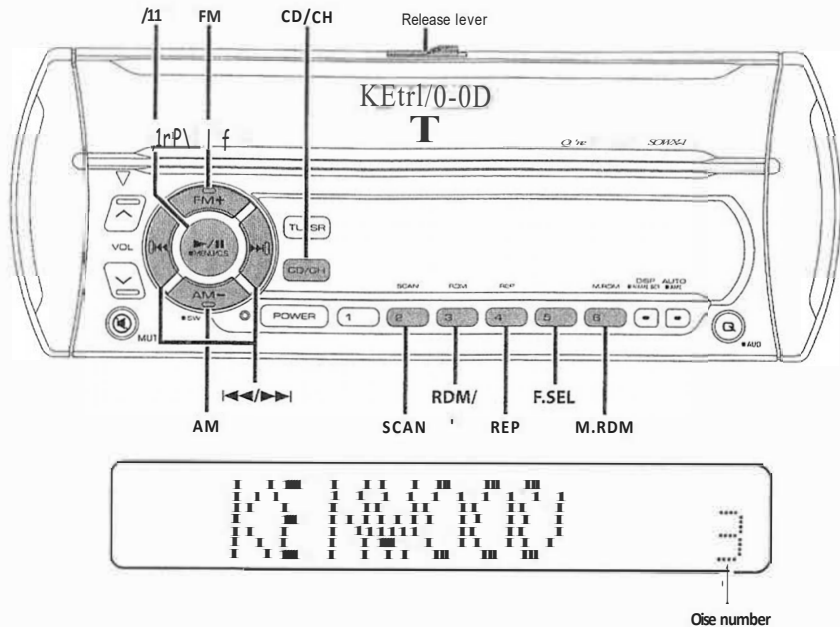
- 1 Select the band for Auto Memory Entry  
Press the [FM] or [AM] button.
- 2 Open Auto Memory Entry  
Press the [AME] button for at least 2 seconds.  
When 6 stations that can be received are put in the memory Auto Memory Entry closes.

### Preset Tuning

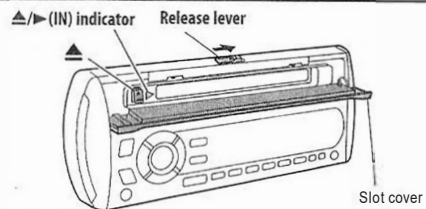
Calling up the stations in the memory.

- 1 Select the band  
Press the [FM] or [AM] button.
- 2 Call up the station  
Press the desired [1] - [6] button.



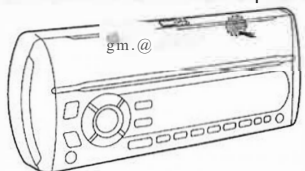


**Playing CD & MP3/WMA**



**When there is no disc inserted**

- 1 Pull down the slot cover to open it  
Slide the Release lever.
- 2 Insert a disc.
- 3 Close the slot cover  
Press the slot cover on the mark positions.



**Lt.**

- Do not use the unit with the slot cover in the open condition. If it's used in the open position water can enter the inside part and cause damage.
- C;1-
- If the slot cover is open, 'DOOR OPEN' is displayed and only the [ ] and [POWER] buttons are operational. Close the slot cover.
- When a disc is inserted, the '▶'(IN) indicator is ON

**When a disc is inserted**

Press the [CD/CH] button.  
Select the 'CD' display.

**Pause and play**

Press the [▶/11] button.  
Each time the button is pressed it pauses and plays.

**Eject the disc**

- 1 Pull down the slot cover to open it  
Slide the Release lever.
- 2 Eject the disc  
Press the [ ] button.
- 3 Close the slot cover  
Press the slot cover on the mark positions.



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

C;1-

- The MP3/WMA media that this unit can play are CD, ROM, CDR, and CDRW.  
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 8).  
Check that section before creating your MP3/WMA media.

**Playing External Disc**

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

Press the [CD/CH] button.  
Select the display for the disc player you want.  
Display examples:

Di	Disc player
"D2"	CD@#
"CDCH"	CDchan.gr

**Pause and play**

Press the [▶/11] button.  
Each time the button is pressed it pauses and plays.  
C;1-

- Disc 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.

**Function of disc changer/MP3/WMA**

**Disc Search/Folder Search**

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

Press the [AM] or [FM] 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	"(L)Repeat ON"
Disc Repeat (In Disc Changer)	"DRatON"
Off	"R atOff"

**In MP3/WMA source**

File	Disc
file Repeat	"file REPON"
folder Repeat	"FOLD REPON"
Off	"at 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' 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 [ROM] button.  
Each time the button is pressed Random Play turns ON or OFF.  
When it's ON, "Random ON" is displayed.

- When the (...i) button is pressed, the next song select starts.

*Function of disc changer*

**Magazine Random Play**

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

Press the [M.RDMJ] button.  
Each time the button is pressed the Magazine Random Play turns ON or OFF.  
When it's ON, "M-Random ON" is displayed.

- When the (...i) button is pressed, the next song select starts.

*Function of the KTS-MP400MR  
Function of MP3/WMA*

**Folder Select**

Quickly selecting the folder you want to listen to.

- 1 Enter Folder Select mode  
Press the [F.SEL] button.  
"Select Mode" 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 [F4] or [F5] button.**  
With the [F4] button you move to the previous folder, and with the [F5] button to the next folder.

**Returning to the top level**  
**Press the [3] button.**

- 3 Decide the folder to play  
**Press the [F11] 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 8) for details.

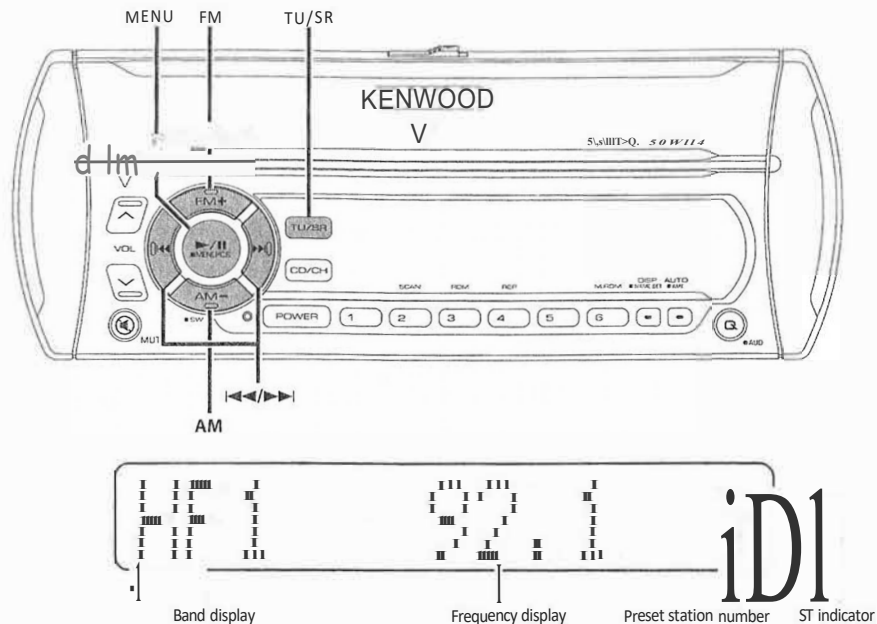
**Canceling the Folder Select mode**

Press the [F.SEL] button.

**Text/Title Scroll**

Scrolling the displayed CD text, or MP3/WMA text  
Press the [DISP] button for at least 1 second.

## HD Radio control features



A

- When you connect an HD Radio, Tuner features of the unit are disabled and switched to HD Radio tuner features. A portion of the setting methods including the Tuning Mode will change.
- With the HD Radio tuner, you can use the similar functions to <Station Preset Memory> and <Preset Tuning> of Tuner features. Refer to Tuner features for how to use the functions.
- The HD Radio cannot be selected as a dual zone source.

## Tuning

Selecting the station.

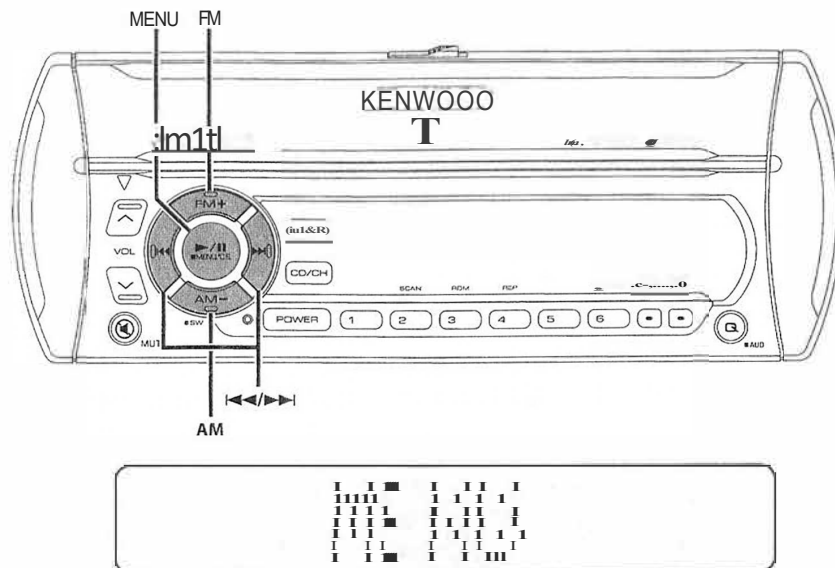
- 1 Select HD Radio source  
Press the [TU/SR] button.  
Select the "HD Radio" display.
- 2 Select the HD FM band  
Press the [FM] button.  
Each time the [FM] button is pressed it switches between the HF1, HF2, and HF3 bands.  
  
**Select the HD AM band**  
Press the [AM] button.
- 3 Tune up or down band  
Press the [◀◀] or [▶▶] 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 "Auto-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.
- 5 Exit Menu mode  
Press the [MENU] button.  
A
  - The receiving method can be switched with the setting of <Receive mode Setting> (page 26).

## 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 [1] 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

- Select Clock Adjustment mode  
Press the [FM] or [AM] button.  
Select the "Clock Adjust" display.
- Enter Clock Adjust mode  
Press the [◀◀] or [1] button for at least 1 second.  
The clock display blinks.
- Adjust the hours  
Press the [FM] or [AM] button.  
Adjust the minutes  
Press the [◀◀] or [1] button.
- Exit Clock adjustment mode  
Press the [MENU] button.

### Selectable Illumination

Selecting the button illumination color as green or red.

Display	Setting
"Illum Red"	The illumination color is red.
"Illum Green"	The illumination color is green.

### Contrast Adjustment

Adjusting the display contrast.

Display and Setting
"Contrast 0"
⋮
"Contrast 10"

### Dimmer

Dimming this unit's display automatically when the light switch is turned ON.

Display	Setting
"Dimmer ON"	The display dims.
"Dimmer OFF"	The display doesn't dim.

Function of the KTS-MP400MR

### System Q Setting

Setting whether the display indicates the System Q factors (Bass center frequency, Bass Q factor, Bass extend, Middle center frequency, Middle Q factor, and Treble center frequency) in Audio control.

Display	Setting
"System Q ON"	The System Q factors are displayed.
"System Q OFF"	The System Q factors aren't displayed.

Function of the KTS-300MR

### Switching preout

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

Display	Setting
"SWPRE Rear"	Rear Preout
"SWPRE Sub-W"	Subwoofer preout

**Built-in Amp Mute Setting**

Toggles ON or OFF the mute control on the built-in amplifier.

Turning ON this control enhances the preout quality.

DIS.11fil	Setting
"AMP Mute Off"	The built-in amplifier activates.
"AMP Mute ON"	The built-in amplifier deactivates.

**In SIRIUS tuner source**

**SIRIUS ID (ESN) display**

Displaying the SIRIUS ID (Electronic Serial Number) display.

DI	Setting
"ESN"	The SIRIUS ID (Electronic Serial Number) display.

c,...

- Serial & SIRIUS ID (ESN) It is especially important to retain the unit serial number and the electronic SIRIUS Identification number for service activation and potential future service changes.

*In SIRIUS Tuner, External disc, or Auxiliary input source*

**Dual Zone System**

Makes the sound different for the front channel and rear channel.

DIS.11fil	Setting
"Zone 2 OFF"	The front and rear are the same source sound.
"Zone 2 ON"	The front and rear are the different source sound.

- When the Dual Zone System is on, there is only sound effect including Audio control for internal source.
- When you set the Dual zone system to ON while the sub woofer preout is switched ON, the sound of the sub woofer preout isn't output.

*When the Dual Zone System is OFF*

**Dual Zone System Setting**

Setting the Front channel and Rear channel sound in the Dual Zone System.

Display	Setting
"Zone 2 Rear"	The rear is this unit's internal source, and the front is selected source sound.
"Zone 2 Front"	The front is this unit's internal source, and the rear is selected source sound.

**B.M.S. (Bass Management System)**

Adjust the bass boost level of the external amplifier using the main unit.

DI	Setting
"AMP Bass FLT"	Bass boost level is flat
"AMP Bass +6"	Bass boost level is low (+6dB).
"AMP Bass+12"	Bass boost level is mid (+12dB).
"AMP Bass+18"	Bass boost level is high (+18 dB).

c,...

- 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 dB is connected to the unit, "AMP Bass +18" won't work correctly even if it's selected.

**B.M.S. Frequency Offset**

Setting the central frequency boosted by B.M.S.

Dis	Setting
"AMP Freq NML"	Boost with the normal central frequency
"AMP Freq Low"	Drop the normal central frequency 20%.

*In FM reception*

**CRSC (Clean Reception System Circuit)**

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

Dis	Setting
"CRSC ON"	The CRSC is ON
"CRSC Off"	The CRSC is OFF

c,...

- Strong electrical fields (such as from power lines) may cause unstable sound quality when CRSC is turned ON. In such a situation, turn it OFF.

*When LX AMP unit connecting*

**AMP Control**

You can control the LX AMP connected to the unit.

- Select AMP Control mode**  
Press the [FM] or [AM] button.  
Select the "AMP Control" display.
- Enter AMP Control mode**  
Press the [◀] or [▶] button for at least 1 second.
- Select the AMP Control item for adjustment**  
Press the [FM] or [AM] button.  
c,...

  - For the details of the AMP Control item, see the instruction manual attached to the LX AMP

- Adjust the AMP Control item**  
Press the [◀] or [▶] button.
- Exit AMP Control mode**  
Press the [MENU] button.

## Menu system

In HD Radio mode

### Receive mode Setting

Sets the receive mode.

- 1 Select the Receive mode  
Press the [FM] or [AM] button.  
Select the "Receive Mode" display.
- 2 Open Receive mode  
Press the [◀] or [▶] button for at least 1 second.

- 3 Set the Receive mode  
Press the [FM] or [AM] button.  
Each time the button is pressed the Receive mode switches as shown below.

Receive mode	Display	Operation
Auto mode	"Auto"	Analog broadcasts and digital broadcasts will be switched automatically. When both are being unsmoothed, the digital broadcast will have priority.
Digital	"Digital"	Digital broadcast only.
Analog	"Analog"	Analog broadcasts only.

#### 4 Exit Receive mode

Press the [MENU] button.

Q..

- Even if the "Auto" setting, an analog broadcast will be received during the reception of a ball game mode (non-delayed broadcast program).

In HD Radio mode

### Tuning Mode

Sets the tuning mode.

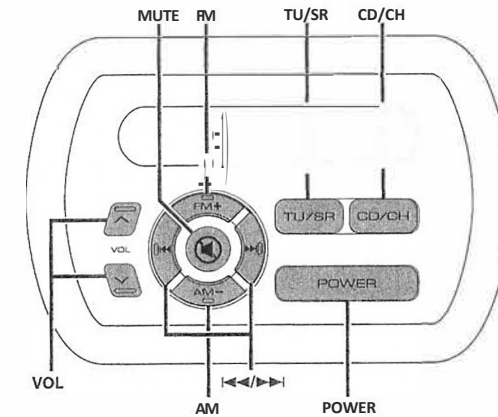
Tuning mode	Display	Operation
Auto seek	"Auto 1"	Automatic search for 31 station.
Preset station seek	"Auto 2"	Search in order of the stations in the Preset memory.
Manual	"Manual"	Normal manual tuning control.

In HD Radio mode

### Auto Memory Entry

For the operation method refer to <Auto Memory Entry> (page 21).

## Basic Operations of remote



A

- Refer to the instruction manual of Remote controller.

### Basic operations

#### [POWER] button

*Turning ON the Power*

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

*Turning OFF the Power*

Press the [POWER] button.

#### [VOL] buttons

Adjusting the volume.

#### [TU/SR] or [CD/CH] button

Each time the button is pressed the source switches.

For the source switching order refer to <Selecting the Source> (page 10).

#### [MUTE] button

Turning the volume down quickly.

When it is pressed again it returns to the previous level.

### In Tuner source

#### [FM]/ [AM] buttons

Select the band.

Each time the [FM] button is pressed it switches between the FM 1, FM2, and FM3 bands.

#### [◀]/ [▶] buttons

Tune up or down band.

### In Disc source

#### [ ]/ [ ] buttons

Doing track/file forward and backward.

#### [FM]/ [AM] buttons

Doing disc/folder forward and backward.

## Basic Operations of remote

### In HD Radio source

#### [FM] button

Select the HD FM band.

Each time the [FM] button is pressed it switches between the HF1, HF2, and HF3 bands.

#### [AM] button

Select the HD AM band.

#### [↑/↓] buttons

Tune up or down band.

### In SIRIUS tuner source

#### [FM] buttons

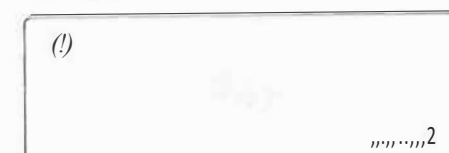
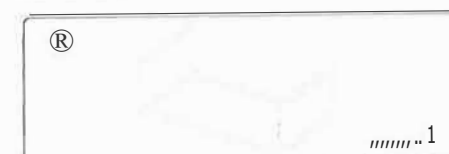
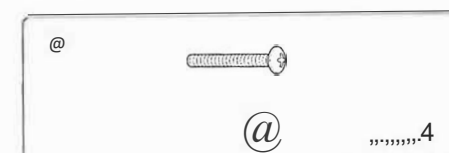
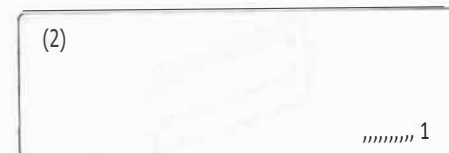
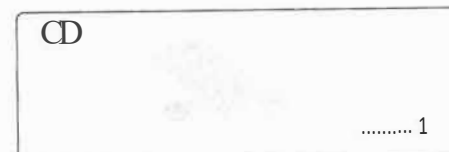
Select the preset band.

#### [↑/↓] buttons

Search up or down channel.

## Accessories/Installation Procedure

### Accessories



### Installation, Procedure

- 1 To prevent a short circuit, remove the key from the ignition and disconnect the 0 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 vessel.
- 7 Reconnect the 0 battery.
- 8 Press the reset button.

#### .A.WARNING

If you connect the ignition wire (red) and the battery wire (yellow) to the negative ground point, 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.

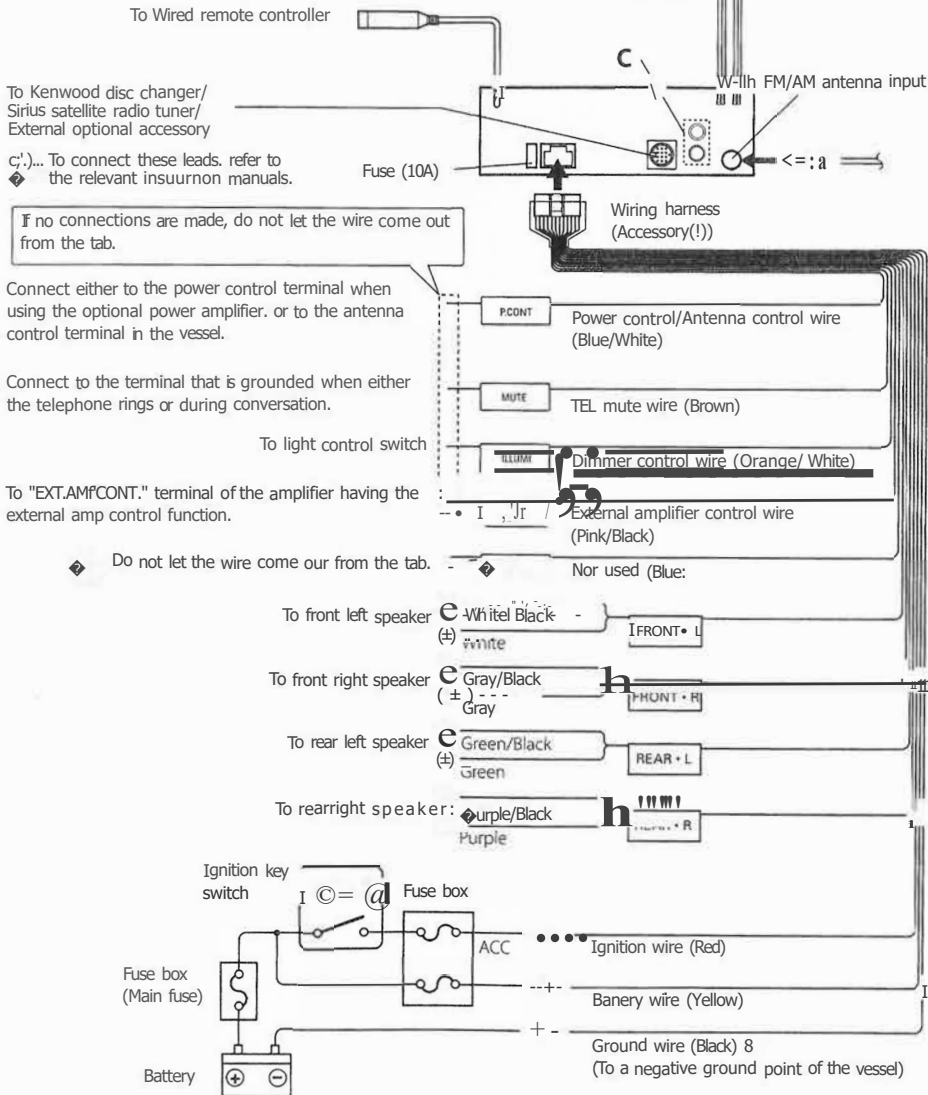
#### &

- If your vessel 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 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 8 wires or ground them to any metal part in the vessel.
- 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 (+) connector of the left speaker to a front output terminal, do not connect the (-) connector to a rear output terminal.
- After installing the unit, check to make sure that electrical equipment such as the signal lamps and gauges operate normally.
- Mount the unit so that the mounting angle is 30° or less.

## Co1In cIJ '19 Wires to Terminals

IKTS-MP400MR	IKTS-300MR
A Rear output	-
B Front output	Front output
C Subwoofer output	Rear output/ Subwoofer output

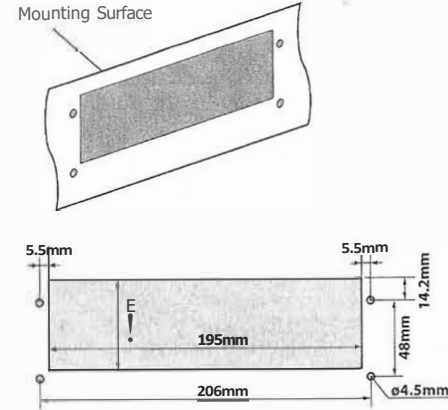
◆ Left output (White). Right output (Red)



## Installation

### Installation

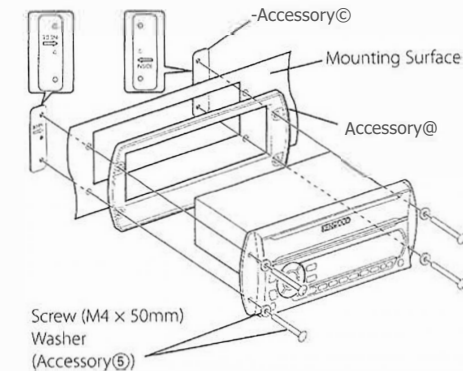
- 1 Confirm the mounting position.
- 2 Cut the mounting surface as shown below.



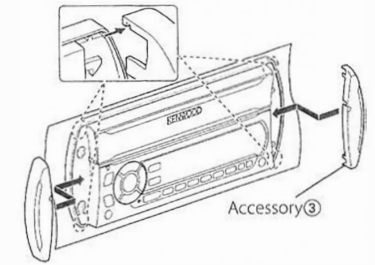
### ffi

- When making a hole in the vessel, check that there is nothing hazardous on the opposite side such as a pipe, or wiring harness, and be careful not to cause scratches or other damage.

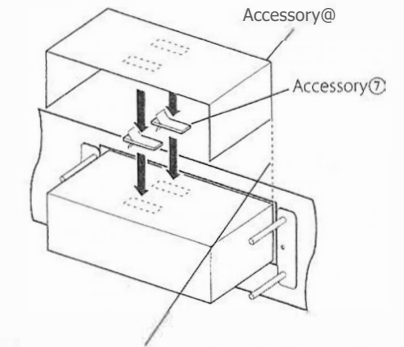
- 3 Attach the packing (accessory @).
- 4 Secure the main body with screws (accessory @) and brackets (accessory ©). Orient the brackets with the "INSIDE" arrows facing inward.



- 5 Attach the side cover (accessory @).



- 6 Affix the top cover (accessory ®).



- ◆ Affix the top cover tightly with no clearance between it and the mounting surface.

### Remote controller

Refer to the instruction manual of Remote controller.



## 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.

- II' The fuse has blown.
  - '3' 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.

- III' 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.
- II' The Disc changer isn't connected.
  - & Connect the Disc changer. If 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.

- II' The ignition and battery wire are incorrectly connected.
  - B' Connect the wire correctly, referring to the section on <Connecting Wires to Terminals>.

? There's no loudness effect.

- III' You're using Subwoofer preout.
  - ... Loudness has no effect in Subwoofer preout.

? Even if Loudness is turned ON, high-pitched tone isn't compensated for.

- II' Tuner source is selected.
  - ''' High-pitched tone isn't compensated for when in Tuner source.

? The TEL mute function does not work.

- II' 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.

- V' The TEL mute wire is touching a metal part of the vessel.
  - Q' Pull the TEL mute wire away from the metal part of the vessel.

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

- II' The fader or balance settings are set all the way to one side.
  - - Center the fader and balance settings.
- II' 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>.
- II' The values of Volume offset are low.
  - Q' Turn up the Volume offset, referring to the section on <Audio Control> I-
- II' The <Built-in Amp Setting> (page 25) is ON.
  - Turn it OFF.

? The sound quality is poor or distorted.

- II' One of the speaker wires is being pinched by a screw in the vessel.
  - ... Check the speaker wiring.
- II' 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.

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

? The Dimmer function doesn't work.

- V' The Dimmer wire isn't connected correctly,
  - ... Check the Dimmer wire connection.

### Tuner source

? Radio reception is poor.

- II' The antenna is not extended.
  - W' Pull the antenna out all the way.
- II' The antenna control wire is not connected.
  - ... Connect the wire correctly, referring to the section on <Connecting Wires to Terminals>.

### Disc source

? "AUX EXT" is displayed without achieving External disc control mode.

- II' Unsupported disc changer is connected.
  - o' Use the disc changer mentioned in the <About CD players/disc changers connected to this unit> (page 5) of the section on <Safety precautions>.

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

- II' 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.
- II' The disc is severely scratched.
  - W' Try another disc instead.

? A CD ejects as soon as it is loaded.

- V' The CD is quite dirty.
  - Clean the CD, referring to the CD cleaning of the section on <About CDs> (page 7).

? Can't remove disc.

- II' The cause is that more than 10 minutes has elapsed since the ACC switch was turned OFF.
  - o' 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.

- II' There's already another disc inserted.
  - er Press the (!) button and remove the disc.

? Track Search can't be done.

- II' For the discs/folders first or last song.
  - er 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.

- II' The media is scratched or dirty.
  - ... Clean the media, referring to the CD cleaning of the section on <About CDs> (page 7).

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

- II' The media is scratched or dirty.
  - ''' Clean the media, referring to the CD cleaning of the section on <About CDs> (page 7).
- II' The recording condition is bad.
  - ''' Record the media again or use another media.

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

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

### HD Radio source

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

- II' The preset broadcast station is not transmitting in the mode that was set with <Receive mode Setting> (page 26).
  - a Please set <Receive mode Setting> to "Auto".
- II' In digital AM broadcasting, receive mode switches between stereo and monaural too often.
  - ... Receiving condition is bad or unstable. Stereo is chosen when receiving condition is good, and it switches to monaural when the condition becomes bad.
- V' HD Radio tuner is connected to OKCA-S21 0A or other units.
  - Connect the HD Radio tuner directly to the control unit.

### The messages shown below display your systems condition.

DOOR OPEN:	Open the slot cover. ⌘ Close the slot cover.
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.
NoD,SC:	No disc has been loaded in the disc magazine. ⌘ Load a disc into the disc magazine.
TOC Error:	No disc has been loaded in the disc magazine. ⌘ Load a disc into the disc magazine. The CD is 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.
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.
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.

Hold Error:	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 the ID3 tag while the MP3/WMA having no ID3 tag is being played.
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.
Unsupported:	A MP3/WMA is played with a format that this unit can't support. ⌘ ---
Protected:	A copy-protected file is played. ⌘ ---

Specifications subject to change without notice.

### FM tuner section

Frequency range (200 kHz space)	: 87.9 MHz - 107.9 MHz
Usable sensitivity (S/N = 30dB)	: 93 dBf (0.8 μV /75 Ω)
Quieting Sensitivity (S/N = 50dB)	: 15.2 dBf (1.6 μV /75 Ω)
Frequency response (±3.0 dB)	: 30 Hz - 15 kHz
Signal to Noise ratio (MONO)	: 70 dB
Selectivity (±400 kHz)	: 80 dB
Stereo separation (1 kHz)	: 40 dB

### AM tuner section

Frequency range (10 kHz space)	: 530 kHz - 1700 kHz
Usable sensitivity (S/N = 20dB)	: 28 dBμ (25 μV)

### CD player section

Laser diode	: GaAlAs
Digital filter (D/A)	: 8 Times Over Sampling
D/A Converter	: 1 Bit
Spindle speed	KTS-MP400MR: 1000 - 400 rpm (CLV 2times) KTS-300MR: 500 - 200 rpm (CLV)
Wow & Flutter	: Below Measurable Limit
Frequency response	: 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	KTS-MP400MR: 96 dB KTS-300MR: 85 dB
MP3 decode (KTS-MP400MR)	: Compliant with MPEG-1/2 Audio Layer-3
WMA decode (KTS-MP400MR)	: Compliant with Windows Media Audio

### Audio section

Maximum output power	: SOW X 4
Full Bandwidth Power (at less than 1% THD)	: 22 W X 4
Tone action	8 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	: 600 Ω

### General

Operating voltage (11 - 16V allowable)	: 14.4 V
Current consumption	: 1.0 A
Installation Size (W x H x D)	: 185 x 50 x 155 mm 7-1/4 x 2 x 6-1/8 inch
Dimensions (W x H x DJ)	: 230 x 85 x 181 mm 9-1/16 x 3-3/8 x 7-1/8 inch
Weight	: 3.3 lbs (1.5 kg)



**KENWOOD**  
Listen to the Future

This warranty will be honored only in the U.S.A.

**TRISTAR DISTRIBUTING LIMITED WARRANTY  
FOR MODELS KTS-300MR & KTS-MP400MR**

**HOW LONG IS THE WARRANTY**

TRISTAR DISTRIBUTING ("TRJSTAR") warrants this product for a period of one (1) year from the date of original purchase.

**WHAT IS COVERED AND WHAT IS NOT COVERED**

Except as specified below, this warranty covers all defects in material and workmanship in this component. The following are not covered by the warranty:

1. Any product which is not distributed in the U.S.A. by TRISTAR or which is not purchased in the U.S.A. from an authorized TRJSTAR dealer.
2. Any product on which the serial has been defaced, modified or removed.
3. Damage, deterioration or malfunction resulting from:
  - a. Any shipment of the product (claims must be presented to the carrier).
  - b. Installation or removal of the product.
  - c. Accident, acts of nature, misuse, abuse, neglect, unauthorized product modification or failure to follow instructions supplied with the product.
  - d. Repair or attempted repair by anyone not authorized by Tristar.
  - e. Any other cause which does not relate to a product defect.

**WHO IS PROTECTED**

This warranty is enforceable only by the original purchaser.

**HOW TO OBTAIN WARRANTY SERVICE**

If your TRISTAR / Kenwood Marine Product ever needs service:

1. Please call 1-800-456-3340 and ask for the service department.
2. Although you must pay any shipping charges if it is necessary to ship the product for warranty service, we will pay the return shipping charges if the repairs are covered by the warranty within the United States.
3. Whenever your units are taken or sent for warranty service, you must include a copy of the original dated sales receipt as proof of warranty coverage.

**LIMITATION OF IMPLIED WARRANTIES**

ALL IMPLIED WARRANTIES, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO THE LENGTH OF THIS WARRANTY.

**EXCLUSION OF DAMAGES**

TRISTAR'S liability for any defective product is limited to the repair or replacement of the product at our discretion. TRISTAR shall not be liable for:

1. Installation or removal, damage to other property caused by any defects in TRISTAR components, damages based upon inconvenience, loss of use of the product; or any other damages, whether incidental, consequential or otherwise.
2. Some states do not allow limitations on how long an implied warranty lasts and/or do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations and exclusions may not apply to you.

This warranty gives you specific rights, and you may also have other rights which may vary from state to state

[If a problem develops during or after the Limited Warranty Period; or if you have any questions regarding the operation of the product, you should contact Tristar Distributing's warranty department.

Tristar Distributing ( a Dehco Company)  
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Elkhart, Indiana 46515-1368  
(574) 534-2119 - (574) 296-9176

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