



OWNER'S MANUAL

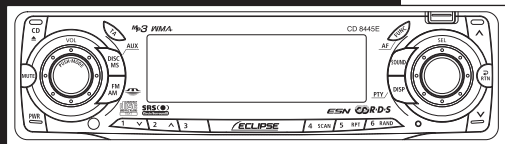
*Excellent Sound Quality CD/Memory Stick
Receiver with MP3/WMA*

We appreciate your purchase of this receiver.

Please read through this manual for correct operation.

We suggest that after reading it you keep this manual
in a safe place for future reference.

English



CD8445E



For your safety in using the CD8445E

Warnings and caution signs, illustrated below, are posted throughout this manual as well as on the CD8445E. They show safe and correct ways to handle the product so as to prevent personal injury to you, others and to avoid property damage.

Before reading through the manual, take time to read through and learn the important information listed in this section.



Warning

This sign indicates a situation in which incorrect handling or disregard of this sign might result in death or serious personal injury.



Caution

This sign indicates a situation in which incorrect handling or disregard of this sign might result in personal injury or may result solely in damage to property.

Please read all materials such as manuals and warranties that have come with the product.

Eclipse will not be liability for unsatisfactory product performance due to failure to follow these instructions.



WARNING

- Do not modify this system for use other than that specified herein. Also, do not deviate from the installation procedures described herein; Eclipse will not be held liable for damages including, but not limited to serious injury, death or property damage resulting from installations that enable unintended operation.
- This equipment requires 12V DC and should only be installed in a vehicle with a 12V negative ground electrical system. Any other installation may cause a fire or other severe damage to the equipment and the vehicle.
- Some equipment uses batteries. Never install equipment where young children can get access to batteries. If a battery is swallowed, seek medical attention immediately.
- When vehicle is moving, never take your eyes off the road to make adjustments to the equipment. You must pay attention to the road to avoid accidents, do not let the operation or adjustment of the equipment distract you from proper vehicle operation.
- The driver should not look at the screen while driving. Accidents may result if you are not paying attention to the forward direction.
- Do not put foreign objects in the loading slot of Memory Stick or disc. Fires or shocks may result.
- Do not disassemble or alter this equipment. Accidents, fires or shocks may result.
- Do not let water, dust or foreign objects enter the internal parts of this equipment. Smoke, fires or shocks may result.
- Pay attention to where the remote control is left. Traffic accidents or problems with driving may result if the remote control makes its way under the foot pedals etc. when the vehicle is stopped or when it goes around a corner.
- Do not use when it is broken (the screen is not lit or no sound comes out). Accidents, fires or shocks may result.

WARNING

- Always replace fuses with fuses of identical capacity and characteristics. Never use a high capacity fuse than the original. Using the wrong type of fuse may cause a fire or severe damage.
- If foreign objects or water enters the equipment, smoke comes out, or there is a strange odor, stop using it immediately, and contact your dealer. Accidents, fires, or shocks may result if you continue to use it in these conditions.
- The driver should not change the Memory Stick or CD while driving. As accidents may result if you are not paying attention to the forward direction, first stop the car at a safe location and then proceed.
- Plastic bags and wrappings may cause suffocation and death. Keep away from babies and children. Never put bag over your head or mouth.

CAUTION

- When changing the installation location for this equipment, please consult the dealer where you bought it for safety reasons. Expertise is necessary for removal and installation.
- Keep volume to a reasonable level so that you can hear sounds from outside the vehicle, including warning sounds, voices, and sirens. Failure to do so may cause an accident.
- Be careful that hands and fingers are not pinched when adjusting the tilting angle or closing display. Injuries may result.
- Do not put your hands or fingers into the loading slot of Memory Stick or disc. Injuries may result.
- Do not touch the heat dissipating part of the amp. Burns may result from the heat of this part.
- Do not recharge dry batteries. Dry batteries may rupture, resulting in injuries.
- Do not use batteries other than those specified. Also, do not mix old and new batteries. Injuries or pollution to the surroundings may result from battery ruptures and leakage.
- When inserting batteries into the equipment, be careful with the polarity (positive/negative), and insert them as indicated. If the battery polarities are incorrect, injuries and pollution to the surroundings may result from battery ruptures and leakage.
- Replace used batteries as soon as possible; they may leak and damage equipment. Battery leakage can burn your skin or your eyes. Wash hands after handling.
- If alkaline solution from alkaline dry batteries makes contact with your skin or clothes, flush with clean water. If any of the solution gets in your eyes, also flush clean with water and then seek medical attention.
- When disposing of lithium dry batteries, affix insulating tape to the positive and negative terminals, and after they are insulated, dispose of them according to the "Local municipal ordinances". Shorts, fires and ruptures may result from disposal when coming contact with other electrically conductive objects such as metal parts, etc.
- Do not short, disassemble or heat the batteries, or place them in fire or water. Fire and injuries may result from battery rupture and leakage.
- Store the remote control in a place away from direct sunlight, high temperatures, and high moisture levels. The case may change shape, and the batteries may rupture and leak.
- Do not use this equipment except for in-vehicle use. Shocks or injuries may result.



CAUTION

- Be careful of the position of the volume when turning the power source ON. Hearing damage may result if very loud noise is emitted when the power is turned ON.
- Do not operate under abnormal conditions such as when the sound is broken or distorted. Fires may result.
- This equipment uses invisible laser light. Do not disassemble or alter this equipment. If trouble occurs, contact the dealer where you bought the equipment. Altering this equipment may cause exposure to laser emissions (worsening eyesight), or result in accidents, fires or shocks.
- If the equipment is dropped or the cosmetics appear broken, turn off the power to the main unit and contact your dealer. If used in this condition, fires or shocks may result.
- A CLASS 1 LASER PRODUCT label is affixed to the top of this unit.



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Operating precautions

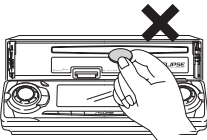
<Your CD8445E will perform well over a long period of time through correct handling and care.>

Notes on operation

- For your safety, play only at volume levels that allow outside sounds to be heard.



- We recommend using with this player a disc with the logo shown to the left.
- You can play music CDs (CD-R/CD-RW) on this player. Be sure to use discs that have been properly processed. Depending on the editing equipment used, some discs may not play properly.



- Do not insert anything other than a CD and a Memory Stick into the head unit. Do not insert any foreign objects, such as coins or credit cards, into the disc slot. Be especially watchful of children's mischief in this regard.



- Avoid severe mechanical shock. When the player is subjected to severe vibration while traveling over a rough surface, playback may be intermittent. When a situation like this occurs, resume playback after returning to a smoother road.



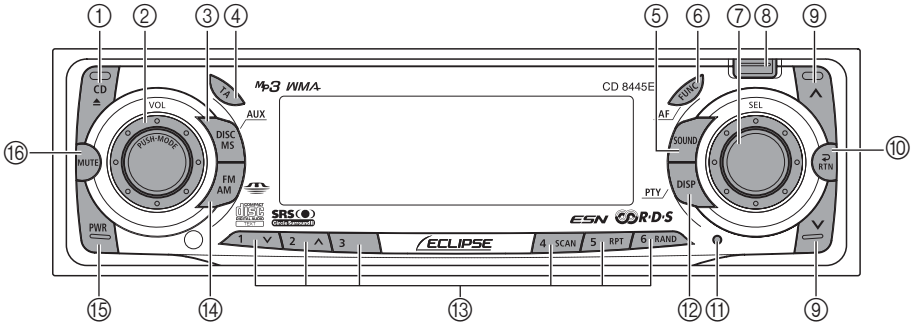
- About dew condensation. In cold or rainy weather, just as the interior glass surface gets fogged, dew (water condensation) may also settle on the deck. When this occurs, disc playback may become intermittent or impossible. Dehumidify the air in the vehicle for a while before resuming playback.
















- Cleaning the disc slot. The disc slot tends to get dusty. Clean it occasionally to prevent accumulated dust from scratching the discs.
- With the front panel open, many functions will not operate, therefore, the front panel will need to be closed during operation.







Names of controls and parts




Front view

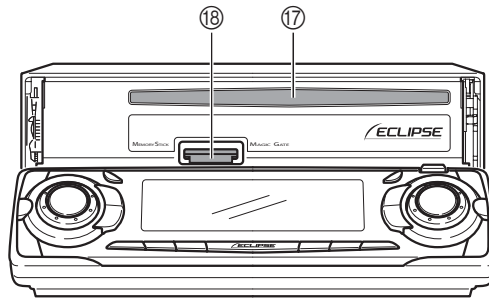


No.	Button	Name/Working
①		[CD ▲ (OPEN / EJECT)] button Opens/closes front panel and ejects CD.
②		[AUDIO CONTROL] button Adjusts volume and performs other functions.
③		[DISC MS] button Switches to disc modes, Memory Stick mode and switches to AUX mode.
④		[TA] button Selects the TP or TA mode.
⑤		[SOUND] button Turns the sound adjustment mode ON/OFF.
⑥		[FUNC / AF] button Turns function mode ON/OFF. Switches to AF mode and REG mode.
⑦		[SEL] button Selects radio stations and CD tracks.

No.	Button	Name/Working
⑧		[Release] button Detach the right end of the front panel from the body of the unit.
⑨		[▲ / ▼] button Automatically finds radio reception or to fast forward/rewind.
		
⑩		[RTN] button Returns to previous screen.
⑪		[RESET] button Reset deck functions to default settings.
⑫		[DISP / PTY] button Turns the display adjustment mode ON/OFF and switches screen display. Switches to PTY mode.

No.	Button	Name/Working
13		Buttons [1] to [6] Selects radio preset channels and performs disc mode functions.
		
		
		
		
		

No.	Button	Name/Working
14		[FM AM] button Switches to radio mode and switches radio bands.
15		[PWR] button Turns deck power ON/OFF.
16		[MUTE] button Activates and deactivates mute.



No.	Name/Working
17	Disc slot Inserts compact discs.
18	Memory Stick slot Inserts and ejects Memory Stick.

CAUTION

Never place an object or rest your hands or the like on the front panel.

Turning the power on and off

When the power is turned on, the state used when the power was turned off such as CD and tuner playback is restored.

When the vehicle has no ACC position on the ignition switch, care is needed when turning off the deck. Follow Step 2 or Step 3 when turning off the power.

1 When power is OFF, press the [PWR] button.

The power will come ON.

ATTENTION

When the deck's power is turned on for the first time or if the battery terminals have been disconnected because of a reason such as vehicle maintenance and the power is then turned back on, the deck will start up in FM1 mode. After this, the broadcast stations will be searched for automatically and stored in buttons [1] to [6].

2 When power is ON, press the [PWR] button for less than two seconds.

The power will go OFF and the deck will be in Standby.

If you press the [PWR] button again for more than one second, the power will go completely off.

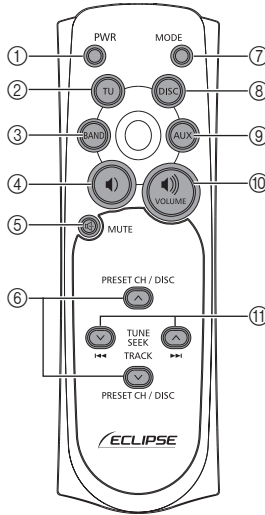
3 When power is ON, press the [PWR] button for more than two seconds.

The power will go completely OFF.

ATTENTION

If a car is not equipped with an ACC position, press the [PWR] button for more than two seconds.

Remote control



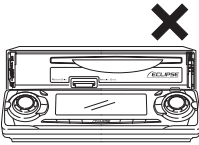
No.	Button	Name/Working
①		[PWR] button Turns deck power ON/OFF.
②		[TU] button Switches to tuner mode.
③		[BAND] button Switches to radio mode and DISC mode.
④		[] button Decreases the volume.
⑤		[MUTE] button Activates and deactivates mute.
⑥		[PRESET CH] buttons [DISC] buttons Selects radio preset channels and performs disc mode functions.

No.	Button	Name/Working
⑦		[MODE] button Switches to playback mode.
⑧		[DISC] button Switches to DISC mode.
⑨		[AUX] button Switches to AUX mode.
⑩		[] button Increases the volume.
⑪		[TUNE-SEEK] buttons [TRACK] buttons Selects radio stations and CD tracks.

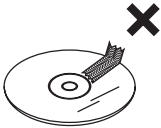
How to operate the CD player

About compact discs

- The signal recorded on a compact disc is read by a laser beam, so nothing touches the disc surface. A scratch on the recorded surface or a badly warped disc may cause deteriorated sound quality or intermittent playback. Observe the following precautions to ensure high quality sound performance:



- Do not leave an ejected disc in the disc slot for very long; the disc may warp. Discs should be stored in their cases and kept away from high temperature and humidity.



- Do not stick a piece of paper or tape. Do not write on or scratch either side of a disc.

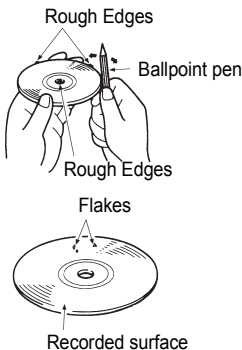


- Discs spin at a high speed inside the deck. Keep cracked or warped discs out of the player to avoid damage it.



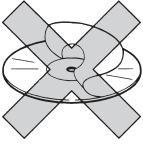
- Avoid touching the recorded surface when handling a disc; handle discs by their edges.

About brand new CDs



- You may notice that some brand new discs are rough around the centre hole or outside edge. Remove the rough edges with the side of a ballpoint pen, etc. Rough edges may prevent proper loading in the deck. Flakes from the rough edges may also stick to the recorded surface and interfere with playback.

About CD accessories



- Do not use accessories (stabilizers, protective seals, laser lens cleaners, etc.) sold for "improving sound performance" or "protecting CDs." The changes in CD thickness or outside dimensions made by these accessories may cause problems in the player.

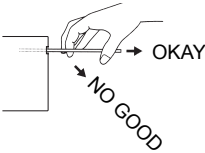


- Please be sure NOT to attach any ring-shape protector (or other accessory) to your discs. Those protectors are commercially available and said to protect disc and to improve sound quality (and antivibration effect), but they can do more harm than good in regular uses. The most common problems are disc insertion, disc ejections, and won't play problems due to the protector ring that came off in the disc mechanism.

About borrowed CDs

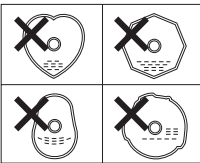
- Do not use a CD with glue or remnants of adhesive tape or labels. They may cause the CD to get stuck inside or damage the deck.

How to remove CDs



- When removing the ejected disc, pull it straight out along the slot. Pressing downward in the process may scratch the recorded surface of the disc.

About irregularly-shaped CDs

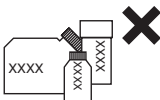


- Specially-shaped CDs, like heart-shaped or octagonal CDs, cannot be played. Do not attempt to play them, even with an adapter, since they may damage the player.

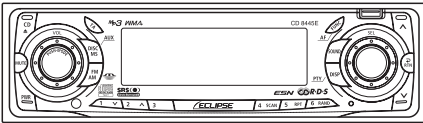
About cleaning a CD



- Use a commercially available compact disc cleaner to clean a CD, wiping gently from the centre to the edge.



- Do not use benzine, thinner, LP record spray or other cleaners on CDs. They may damage a CD's finish.



Listening to CD

- 1 Press the [CD ▲] button for less than one second.

The front panel opens.

If a disc has already been loaded, the disc is ejected by pressing the [CD ▲] button.

- 2 Insert a CD into the disc slot, label side up.

The CD will immediately start playing.



ATTENTION

When a CD is already loaded, press the [DISC MS] button to switch to the CD mode.



CAUTION

Do not press the [CD ▲] button while CD is being inserted. This could cause an injury and damage to the front panel.

- 3 Press the [CD ▲] button for less than one second.

The front panel closes.

Switching to the CD player mode

First press the [DISC MS] button for less than one second to switch to the disc mode. It is assumed here that a CD has already been loaded into the unit.

- 1 Press the [DISC MS] button for less than one second to switch to the CD player mode.

This starts CD play.

Disc mode will switch from CD player → Memory Stick player in order each time the button is pressed.

If an external CD changer is connected, each additional press of the [DISC MS] button will switch modes from CD player → CD changer 1 → CD changer 2 → Memory Stick player → CD player.

A changer or player with no discs loaded will be skipped.



ATTENTION

- Playback may be intermittent when there is a scratch on a CD or when the recorded side is dirty.
- Only two external CD changers may be connected.

Advancing to the next track or returning to the beginning of the track being played

- 1 Turn the [SEL] button to the left or right.

Turn to the right:

Advances to the next track.

Turn to the left:

Returns to the beginning of the track being played. (Repeat turning for previous tracks.)

Fast Forward/Rewind

Fast forward or rewind the song currently being played.

1 Press and hold the [\wedge] or [\vee] button.

[\wedge] button:
Fast forward.

[\vee] button:
Rewind.

Playing the beginning of tracks (SCAN)

1 Press the [4 SCAN] button.

Pressing the button causes the player to move up to the next track and play it for 10 seconds, then move up to the next track and play it for 10 seconds, and so on until the button is pressed again.

ATTENTION

- To continue playing a desired track, press the button again to stop scanning.
- After the entire disc is scanned once, ordinary playback starts from the point where scanning started.

Repeating the same track (REPEAT)

1 Press the [5 RPT] button to repeat the track being played.

To cancel, press the [5 RPT] button again.

Playing tracks in random order (RANDOM)

1 Press the [6 RAND] button to play the tracks in random order.

To cancel, press the [6 RAND] button again.

ATTENTION

- During random playback, press the [5 RPT] button to repeat the track being played. To cancel repeat play (go back to random play), press the [5 RPT] button again.
During playback of a particular track: The track being played is played repeatedly.
While searching: The following track is played repeatedly.
- Occasionally the same track happens to be played (selected) two or more times in a row; this is normal operation and is not a sign of a problem.
- When any of the functions - "Playing the beginning of tracks", "Repeating the same track" and "Playing tracks in random order" - is selected, a message such as [SCAN], [REPEAT] or [RANDOM] appears on the display to verify the current function.

Creating a title for a CD

A CD title may be created, attached and displayed for your discs. If external CD changers are connected, a title for a CD will be created in the same way. It is assumed here that the CD to be titled is playing.



ATTENTION

No CD text disc can be set.

1 Press the [FUNC] button for less than one second while in the disc mode.

The function mode is activated.

2 Turn the [SEL] button to select Title.

The selected item will be highlighted.

3 Press the [SEL] button.

The disc title setting mode is activated.

4 Press the [^] button to select the character type.

Pressing the button will switch types from [ABC] (Upper-case alphabet characters) to, [123] (numeric characters) and then [!&?] (symbols).

5 Press either [SEL] or [V] button to select the position in which to enter the character.

The character will be inserted where the cursor is flashing:

[SEL] button:

Moves the cursor to the right.

[V] button:

Deletes one character to the left.

While the [V] button is held down, the cursor moves to the left.

6 Turn the [SEL] button to the left or right to select characters.

Turn to the right:

Advances the character forward in its type.

Turn to the left:

Moves the character backward in its type.

[Upper-case alphabet characters] Initial value [A] [Right direction]

A → B → C → ... X → Y → Z → A...

[Numeric characters] Initial value [1] [Right direction]

1 → 2 → 3 → ... 8 → 9 → 0 → 1...

[Symbol] Initial value [!]

[Right direction]

! → " → # → \$ → % → & → ' → (→) → * → + → , → - → . → / → : → ; → < → = → > → ? → @ → ' → _ → ! ...

7 Press the [SEL] button to select characters.



ATTENTION

- To change the type of character to be entered, repeat steps 3 and 4.
- A maximum of 12 characters may be entered per title.
- 30 titles can be stored.
- If the number of discs that can be memorized is exceeded, the information about the disc whose playing time is oldest is deleted.

8 Press the [RTN] button.

At this time, other adjustments can also be made in function mode.

9 Press the [FUNC] or [RTN] button to exit function mode.

Changing a previously set title

If external CD changers are connected, a previously set title for a CD will be changed in the same way. It is assumed here that the disc mode is selected.

1 Press the [FUNC] button for less than one second while in the disc mode.

The function mode is activated.

2 Turn the [SEL] button to select Title.

The selected item will be highlighted.

3 Press the [SEL] button.

The disc title setting mode is activated.

4 Press either [SEL] or [V] button to move the cursor to the position in the title for inserting or changing characters.

[SEL] button:

Moves the cursor to the right.

[V] button:

Advances the cursor to the left.

Holding the [V] button moves the cursor to the left.

5 Turn the [SEL] button to the left or right to select characters.

Turn to the right:

Advances the character forward in its type.

Turn to the left:

Moves the character backward in its type.

6 Press the [SEL] button.

The selected settings will take effect.

ATTENTION

To leave a space blank, follow these steps.

1. Select and flash the space to be blank.
2. Turn the [SEL] button to make a blank space flashing.
3. Press the [SEL] button to move.

7 Press the [RTN] button.

At this time, other adjustments can also be made in function mode.

8 Press the [FUNC] or [RTN] button to exit function mode.

Deleting a previously created title

If external CD changers are connected, a previously created title for a CD will be deleted in the same way. It is assumed here that the disc mode is selected.

- 1 Press the [FUNC] button for less than one second while in the disc mode.**

The function mode is activated.

- 2 Turn the [SEL] button to select Title.**

The selected item will be highlighted.

- 3 Press the [SEL] button.**

The CD title being played at this point will be deleted.

- 4 Hold the [6] button down for more than two seconds.**

The title has now been deleted.

- 5 Press the [RTN] button.**

At this time, other adjustments can also be made in function mode.

- 6 Press the [FUNC] or [RTN] button to exit function mode.**

Displaying CD text

Only the built-in CD player supports CD TEXT. It can not be displayed with the optional CD changer. If the CD came with a logo shown below, it is recorded with a disc title and track titles. These information will be displayed during playback.



- 1 Press the [DISP] button for more than one second.**

Pressing the [DISP] button while text is displayed scrolls the display in the order DISC title → TRACK title, and then the display stops with the TRACK title.

CD TEXT recorded with characters other than alphanumeric and symbols cannot be displayed.

Ejecting the disc

- 1 Press the [CD▲] button for less than one second.**

The front panel opens and the disc is ejected.

When the front panel is opened, the disc is ejected by pressing the [CD▲] button for more than one second.

- 2 Remove the disc and press the [CD▲] button.**

The front panel closes.

CAUTION

- Do not drive with the front panel open. The panel may cause unexpected personal injury during a panic stop, or the like.
- Do not attempt to close the front panel by hand. Doing so may damage the panel.

How to operate the MP3/WMA player

About MP3/WMA



ATTENTION

The making of MP3/WMA files by recording from sources such as broadcasts, records, recordings, videos and live performances without permission from the copyright holder for uses other than personal enjoyment is prohibited.

What is MP3/WMA?

MP3 (MPEG Audio Layer III) is a standard format for audio compression technology. By using MP3 a file can be compressed to one-tenth the size of the original.

WMA (Windows Media™ Audio) is format for audio compression technology. WMA files can be compressed to a size smaller than MP3 files.

This deck has limitations on MP3/WMA file standards and recorded media and formats that can be used.

Playable MP3 file standards

- Supported standards: MPEG-1 Audio Layer III
- Supported sampling frequencies: 44.1, 48 (kHz)
- Supported bit rate: 64, 80, 96, 112, 128, 160, 192, 224, 256, 288, 320 (kbps)
 - * Supports VBR. (64~320kbps)
 - * Does not support free format.
- Supported channel modes: stereo

Playable WMA file standards

- Supported standards: WMA Ver. 7
WMA Ver. 8
WMA Ver. 9
- Supported sampling frequencies: 32, 44.1, 48 (kHz)
- Supported bit rate: 48, 64, 80, 96, 128, 160, 192, 256, 320 (kbps)
 - * Supports VBR (48~192 kbps).
 - * Does not support lossless compression.
 - * Does not support WMA files recorded at a frequency of 48kHz with a bit rate of 48kbps.

ID3/WMA tags

MP3/WMA files have an "ID3/WMA Tag" that allows input of information so that data such as song title and artist can be saved.

This deck supports ID3v. 1.0, 1.1 and WMA tags.

Media

Media capable of playing MP3/WMA includes CD-R and CD-RW discs. Compared to CD-ROM media commonly used for music discs, CD-R and CD-RW discs are fragile in high temperature/high humidity environments and one section of the CD-R and CD-RW may become incapable of playback. Fingerprints or scratches on the disc may prevent playback or cause skipping during playback. Sections of a CD-R and CD-RW may deteriorate if left inside a vehicle for long periods of time. It is also recommended that CD-R and CD-RW discs be kept in a light-blocking case because the discs are vulnerable to ultra-violet light.

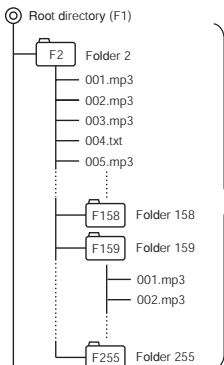
Format of discs

The format of discs to be used must be ISO9660 Level 1 or Level 2.

Control items for this standard are as follows:

- Maximum directory layers: 8 layers
- Maximum characters for folder names/file names: 32 (including "." and 3 letter file extension)
- Allowable characters for folder names/file names: A~Z, 0~9, _ (underscore)
- Number of files/folders possible on a single disc: 999

[Configuration example for CD supporting MP3/WMA]



Number of files/folders possible on a single disc is 999.

Files aside from MP3/WMA files (Example: 004.txt) also count as single files.

- Total number of folders possible on a single disc: 255
- Maximum folders this deck can recognize: 256*

*: A root directory is counted as one folder.

File names

Only files with the MP3/WMA file extension ".mp3", ".wma" can be recognised as MP3/WMA and played. Be sure to save MP3 files with the ".mp3" file extension. Be sure to WMA files with the ".wma" file extension. The "MP" or "WMA" letters of the file extension will be recognised whether entered as uppercase letters or lowercase letters.

CAUTION

If the ".mp3", ".wma" file extension is attached to a file other than an MP3/WMA file, that file will be mistakenly recognised by the deck as an MP3/WMA file and played, resulting in loud noise output that can damage the speakers. Be sure to avoid attaching the ".mp3", ".wma" file extension to files that are not MP3/WMA files.

Multi-sessions

Multi-sessions are supported, and playing of CD-R and CD-RW discs with annotated MP3/WMA files is possible. However, when "Track at once" has been written, close the session or process the warning message. Standardise the format of each session without changing the format.

Playing MP3/WMA

When a disc with recorded MP3/WMA files is inserted, the deck first checks all the files on the disc. No sound is output while the deck is checking the files on the disc. It is recommended that the disc be recorded without files other than MP3/WMA files and without unnecessary folders in order to speed up the checking of disc files by the deck.

MP3/WMA playing time display

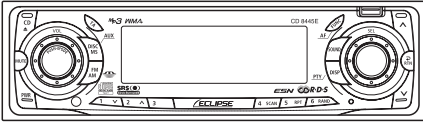
It is possible that playing time will not be correct, depending on the writing condition of the MP3/WMA file.

*It is possible that playing time will not be correct when VBR Fast Up/Down is operated.

Display order of MP3/WMA file/folder names

Names of MP3/WMA folders and files within the same level are displayed in the following order.

- 1.MP3/WMA folders displayed first, by ascending order of numbers, letters.
- 2.Files displayed next, by ascending order of numbers, letters.



Listening to MP3/WMA file

1 Switch to the CD player mode.

CAUTION

- Playback may be intermittent when there is a scratch on a CD or when the recorded side is dirty.
- Only two external CD changers may be connected.

● Note ●

- When music data recorded in the normal way (CD-DA) is present on the same disc with MP3/WMA music files, the normally recorded music data will be played. To listen to the MP3/WMA music files, press button [3] for more than one second.
- When a non-MP3/WMA file is played, "NO SUPPORT" will appear.
- The optional CD changer cannot be used to play MP3/WMA files.
- WMA files protected by license control are skipped. Playback continues after the skipped file. In the event that all files are protected by license control the CD-R will not playback and "PROTECT" will be displayed.

Advancing to the next track (file) or returning to the beginning of the track (file) being played

1 Turn the [SEL] button to the left or right.

Turn to the right:

Advances to the next track (file).

Turn to the left:

Returns to the beginning of the track (file) being played.

Repeat turning for previous tracks (files).

Skipping to the next or previous folder

1 Press button [1 ∨] or [2 ∧].

Button [1 ∨]:

Selects the previous folder

Button [2 ∧]:

Selects the next folder.

Fast Forward/Rewind

Fast forward or rewind the song currently being played.

1 Press and hold the [∨] or [∧] button.

[∧] button:

Fast forward.

[∨] button:

Rewind.

Return to the root directory of the CD

In the root directory, when a file cannot replay, the system will return to the first file that can perform a replay. (In the configuration example, the file is returning to 001.mp3. see page 137.)

1 Press the [RTN] button.

Playing the beginning of files (SCAN)

1 Press the [4 SCAN] button.

Press the button briefly to play just the first 10 seconds of each song for all the files in the same layer of the folder being played.

On pressing the button for longer than 2 seconds, [FOLDER SCAN] is displayed and just the first 10 seconds of the first song in each folder is played.



ATTENTION

- To continue playing a desired file, press the button again to stop scanning.
- After the entire disc is scanned once, ordinary playback starts from the point where scanning started.

Repeating the same file (REPEAT)

1 Press the [5 RPT] button.

Press the button briefly to repeat the file being played.

On pressing the button for longer than 2 seconds, [FOLDER REPEAT] is displayed and all the files in the same layer as the folder being played are repeated.

To cancel, press the [5 RPT] button again.

Playing files in random order (RANDOM)

1 Press the [6 RAND] button.

Press the button briefly to randomly play the files in the same layer as the folder being played.

On pressing the button for longer than 2 seconds, [ALL RANDOM] is displayed and the files in all folders are played randomly.

To cancel, press the [6 RAND] button again.



ATTENTION

- During random playback, press the [5 RPT] button to repeat the file being played. To cancel repeat play (go back to random play), press the [5 RPT] button again.

During playback of a particular file: The file being played is played repeatedly.

While searching: The following file is played repeatedly.

- Occasionally the same file happens to be played (selected) two or more times in a row; this is normal operation and is not a sign of a problem.

Displaying title

1 Press the [DISP] button for more than one second.

Each time the button is pressed, the following will be displayed in order.
Folder Name/File Name* → Folder No. /File No. → Tag

*:The display area shows a maximum of 14 characters and then scrolls to display the remaining characters.

After the folder name is displayed, the file name will be displayed by scrolling. After the file name is scrolled, the display will be fixed.





ATTENTION

Folder name/file name or tag recorded with characters other than alphanumeric and symbols cannot be displayed.

How to operate the Memory Stick player

About Memory Sticks

- Do not store Memory Sticks in places that are subject to static electricity and electrical interference, otherwise the data they contain may become corrupted.
 - In order to protect the player, the player's functions will be stopped automatically if a problem occurs. If the player cannot be operated even after following the instructions that appear on the screen, the unit is malfunctioning, and you should ask the place of purchase for further advice.
 - If using a Memory Stick Duo, you will need to use it with a Memory Stick Duo adapter.
 - Only Memory Sticks with a capacity of up to 128 MB can be used in the unit.
 - Memory Stick PRO types of Memory Stick cannot be used.
 - If MG Memory Stick is not being used for prolonged time, remove it from the unit.
 - MG Memory Sticks bearing one of the marks at the left can be used.
 - Memory Sticks bearing one of the marks at left can be used for writing and reading data other than music data.
- MagicGate Memory Stick  and Memory Stick  are trademarks of Sony Corporation.
- If the write protection switch on a MG Memory Stick or Memory Stick is at the lock position, other data cannot be saved onto it.
 - Do not remove a MG Memory Stick while it is being accessed for playback, otherwise the data on the MG Memory Stick may become corrupted. If the data becomes corrupted, it can no longer be retrieved.
 - Please format the MG Memory Stick on this deck. A MG Memory Stick formatted by another deck may not be playback or record data.
 - When a Memory Stick is formatted, all data on that Memory Stick will be erased. (Includes Memory Stick security recorded data and sound quality data)
 - MG Memory Stick supplied is not formatted. MG Memory Stick must be formatted prior to use. Refer to "Formatting MG Memory Stick (quick format)" on page 146 for instructions on formatting MG Memory Sticks.
 - It may not be possible to use MG Memory Sticks that have just been purchased. If this happens, use the unit to format the MG Memory Stick. Refer to "Formatting MG Memory Stick (quick format)" on page 146 for instructions on formatting MG Memory Sticks.
 - Some recordings and other data may not be played back or written/read, depending on the device that was used to save the data.

MAGICGATE

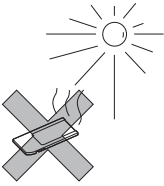


MAGICGATE

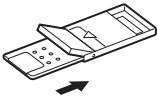




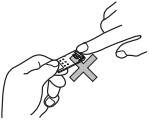
- Do not use Memory Sticks with labels that are peeling off or that have name tags (labels) attached.



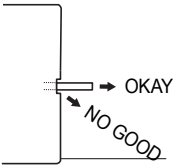
- Store Memory Sticks in places away from direct sunlight and high humidity, otherwise the Memory Sticks may become unusable.



- Place Memory Sticks in their protective cases during transportation and storage.

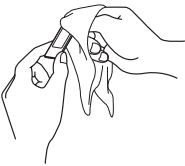


- Do not touch the terminals with your hands or with metallic objects.

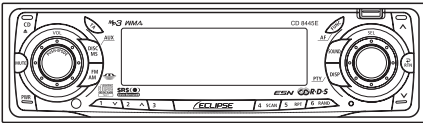


- When removing the ejected Memory Stick, pull it straight out along the slot. Pressing downward in the process may scratch the recorded surface of the Memory Stick.

About cleaning the Memory Sticks



- In order to maintain good audio performance from Memory Sticks, periodically wipe the cartridge clean of any dust and other contamination with a dry cloth.



Listening to MG Memory Stick

1 Press the [CD▲] button for more than one second.

The front panel opens.

2 Insert a MG Memory Stick into the Memory Stick slot.



ATTENTION

- If you press the [CD▲] button less than one second while you are listening to the CD, the disc is ejected. To insert/eject the MG Memory Stick, press the [CD▲] button for more than one second and open the front panel.
- Insert the MG Memory Stick with the mark facing inwards and press MG Memory Stick into place until a clicking sound is heard. Do not press forcefully when the MG Memory Stick makes contact with the internal stopper because it cannot be inserted any further. (The MG Memory Stick should be protruding a few millimeters from the Memory Stick slot.)
- Use a Memory Stick Duo adapter when inserting the Memory Stick Duo. (If the Memory Stick Duo is inserted without the adapter, it will not be ejected from the unit.)
- When the MG Memory Stick is already loaded, press the [DISC MS] button to switch to the Memory Stick mode.



CAUTION

Do not press the [CD▲] button while the MG Memory Stick is being inserted. This could cause an injury and damage to the front panel.

3

Press the [CD▲] button for less than one second.

The front panel closes.

4

Press the [DISC MS] button to switch to the Memory Stick mode.

MG Memory Stick will start playing.

Switching to the Memory Stick player mode

Music data recorded on "MG Memory Stick" with ATRAC3 (an audio compression technology) can be played on this deck. Recording from music CD to the MG Memory Stick is also possible. The following explanation for the operation is made assuming that the MG Memory Stick has already been inserted. First press the [DISC MS] button for less than one second to switch to the disc mode. It is assumed here that a MG Memory Stick has already been loaded into the deck.



ATTENTION

- Artist name and music title (track titles) can be displayed when they are recorded on the MG Memory Stick. A maximum of 10 characters (1 byte alphabets, numeric or symbols) can be displayed.
- Music data recorded with MP3/WMA and ATRAC3 Plus cannot be played.

1

Press the [DISC MS] button for less than one second to switch to the Memory Stick player mode.

Advancing to the next track or returning to the beginning of the track being played

1 Turn the [SEL] button to the left or right.

Turn to the right:
Advances to the next track.

Turn to the left:
Returns to the beginning of the track being played. (Repeat turning for previous tracks.)

Fast Forward/Rewind

Fast forward or rewind the song currently being played.

1 Press and hold the [∧] or [∨] button.

[∧] button:
Fast forward.

[∨] button:
Rewind.

Playing the beginning of tracks (SCAN)

1 Press the [4 SCAN] button.

Pressing the button causes the player to move up to the next track and play it for 10 seconds, then move up to the next track and play it for 10 seconds, and so on until the button is pressed again.



ATTENTION

- To continue playing a desired track, press the button again to stop scanning.
- After the entire disc is scanned once, ordinary playback starts from the point where scanning started.

Repeating the same track (REPEAT)

1 Press the [5 RPT] button to repeat the track being played.

To cancel, press the [5 RPT] button again.

Playing tracks in random order (RANDOM)

- 1 Press the [6 RAND] button to play the tracks in random order.

To cancel, press the [6 RAND] button again.



ATTENTION

- During random playback, press the [5 RPT] button to repeat the track being played. To cancel repeat play (go back to random play), press the [5 RPT] button again.
During playback of a particular track: The track being played is played repeatedly.
While searching: The following track is played repeatedly.
- Occasionally the same track happens to be played (selected) two or more times in a row; this is normal operation and is not a sign of a problem.
- When any of the functions - "Playing the beginning of tracks", "Repeating the same track" and "Playing tracks in random order"- is selected, a message such as [SCAN], [REPEAT] or [RANDOM] appears on the display to verify the current function.

Formatting MG Memory Stick (quick format)

MG Memory Stick can be formatted.

- 1 Press the [FUNC] button for less than one second.

The function mode is activated.

- 2 Turn the [SEL] button to select Memory Stick.

The selection item is highlighted.

- 3 Press the [SEL] button.

The Memory Stick setting mode is activated.

The format mode is activated, then [OK?] message will appear.

- 4 Press the [SEL] button for more than two seconds.

MG Memory Stick will be formatted.

- 5 Press the [RTN] button.

At this time, other adjustments can also be made in Memory Stick setting mode.

- 6 Press the [RTN] button.

At this time, other adjustments can also be made in function mode.

- 7 Press the [FUNC] or [RTN] button to exit function mode.

**ATTENTION**

- Do not turn off the power or the ignition switch while formatting. The formatting process will be interrupted and the data may be corrupted.
- When a Memory Stick is formatted, all data on that Memory Stick will be erased. (Includes Memory Stick security recorded data and sound quality data)
- New MG Memory Stick may not be used without formatting. The Memory Stick formatted on a deck other than exclusive MG Memory Stick deck may not be usable on this deck.

Ejecting the Memory Stick**1****Press the [CD▲] button for more than one second.**

The front panel opens.

2**Eject the Memory Stick.**

Lightly press the Memory Stick once.

**ATTENTION**

Memory Stick will not eject by itself. Lightly press the Memory Stick to eject.

**CAUTION**

- Do not drive with the front panel open. The panel may cause unexpected personal injury during a panic stop, or the like.
- Do not attempt to close the front panel by hand. Doing so may damage the panel.
- Do not eject the Memory Stick while the Memory Stick access indicator is illuminated.

3**Press the [CD▲] button for less than one second.**

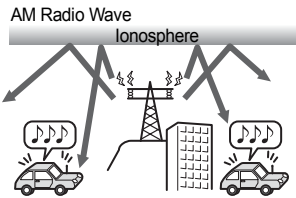
The front panel closes.

How to operate the tuner

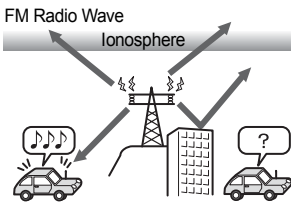
FM reception characteristics

In general, FM has much better tonal quality than AM. However, FM and FM stereo reception encounter several characteristic problems not encountered with AM. FM is more difficult to receive than AM in a moving vehicle. The following are explanatory notes on what to expect from FM reception and on how to get satisfactory performance.

FM reception differs from AM



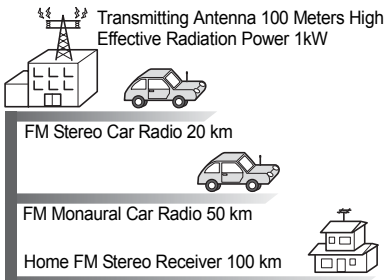
A characteristic of transmitted signals is that lower frequencies travel further. FM frequencies are much higher than AM's (similar to a ray of light): they won't bend but they will reflect. Often, they will be interrupted by tall buildings, mountains, etc., taking direct and indirect paths to your vehicle's antenna. The distance at which FM stations can be received satisfactorily is usually not nearly as far as that which AM stations can be received.



Fading out

In weak signal or "fringe" reception areas, FM stations may fade out completely, or fade in and out. When driving in weak signal areas, such as near hills, through valleys or tunnels, among tall buildings, etc., you may encounter unusual noise interference. THIS IS NOT A TUNER PROBLEM. In this case, you can only wait until you are in a better reception area, tune to a stronger station, or reduce the treble level.

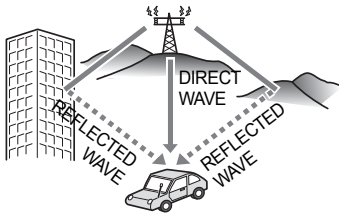
Reception area of FM broadcasts



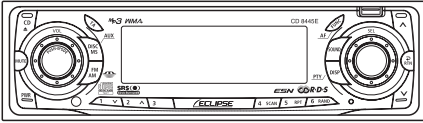
Reception quality varies depending on the power of the FM station, natural and artificial barriers, weather conditions, etc.

A home receiver can catch weak FM stereo signals through the use of a tall, directional or ultra-sensitive antenna. In a moving vehicle, the area for good reception is limited because of varying conditions encountered while driving, including the types and heights of broadcast antenna structures, signal strength, engine noise, etc. For best reception with manual antenna, extend the antenna mast as far as possible.

Multipath



The reflection characteristics of FM waves cause another problem called multipath—FM wave signals reflecting off of buildings, mountains, etc. When the antenna receives direct and reflected waves at the same time, distortion of sound in the treble range often occurs, such as static or harsh-sounding voices. **THIS IS NOT A TUNER PROBLEM.** Only moving to another area with a clearer signal path can remedy the situation.



Tuning to a station

First, press the [FM AM] button to start tuner operation.

There are automatic and manual methods for setting stations in memory. The receiver will accept up to 30 stations in memory: 6 in AM (MW), 6 in LW and 18 in FM (6 each for FM1, FM2 and FM3.) (Initial setting)

- 1 Press the [FM AM] button for less than one second to switch to the desired FM, AM (MW) and LW bands.

Radio bands will switch from FM1 → FM2 → FM3 → AM (MW) → LW in order each time the button is pressed.

- 2 Turn the [SEL] button to the left or right to tune to a station.

Turn to the right:

Tunes to higher frequencies.

Turn to the left:

Tunes to lower frequencies.

- 3 Press the [∧] or [∨] button to start the automatic station [∧] button:

Starts searching toward higher frequencies.

[∨] button:

Starts searching toward lower frequencies.

ATTENTION

At times, it may be difficult to maintain optimum reception because the antenna affixed to your vehicle is in motion constantly (relative to the broadcast antenna), encountering continuous variation in the received radio signals' strength. Other factors affecting reception include interference from natural obstacles, sign posts, etc.

Entering stations into memory automatically (The automatic preset mode: ASM)

- 1 Press the [FM AM] button for less than one second.

You can switch the mode to desired one.

- 2 Press the [SEL] button for more than two seconds until a beep is heard.

The automatic preset mode starts.

The [ASM ON] indicator on the screen flashes, and stations are automatically entered in memory under buttons [1] to [6].

These buttons are called preset buttons.

ATTENTION

- Pressing the preset buttons ([1] to [6]) allows you to make one-touch station selections. The frequency of the selected station is indicated on.
- When a new station is set in memory, the station previously set in memory will be deleted.

- If there are fewer than six receivable stations, the stations set in the remaining buttons will be retained.

CAUTION

If the vehicle's battery is disconnected (for repairs to the vehicle or for removing the receiver), all stations in memory will be lost. In such a case, set stations in the memory again.

Manually setting stations into memory

This section covers the setting of stations in memory under the numbered buttons.

- 1 Press the [FM AM] button for less than one second.**
You can switch the mode to desired one.
- 2 Turn the [SEL] button to the right or left to tune to the station to be entered in memory.**
- 3 Select any button, from [1] to [6], and press it for more than two seconds.**

The tuned station is now memorized and set in the button selected. Repeat the procedure to set additional manually tuned stations in memory, in turn, for buttons [1] to [6]. These buttons are called the preset buttons.

CAUTION

If the vehicle's battery is disconnected (for repairs to the vehicle or for removing the receiver), all stations in memory will be lost. In such a case, set stations in memory again.

Preset station scan

This function enables reception of all the stations in the preset buttons for five seconds each.

- 1 Press the [SEL] button for less than two seconds.**

[P SCAN] will appear on the display, and stations stored under preset buttons [1] through [6] will be played for five seconds each.

- 2 To stop the preset scan mode at a desired station, press the [SEL] button again.**

The receiver will stay tuned to the desired station.

Changing the reception sensitivity for automatic scanning

The deck lets you select the reception sensitivity to be used for automatic scanning of stations. The two sensitivity modes available for this deck are AUTO mode and DX mode.

<p>AUTO Mode</p>	<p>During automatic scanning, the reception sensitivity switches automatically to one of two levels. Initially the reception sensitivity is set to the low level so that only stations with strong signals are received. If no stations could be received, the reception sensitivity is increased so that stations with weaker signals can also be received.</p>
<p>DX Mode</p>	<p>Because the reception sensitivity for automatic scanning is set to the high level from the start, even stations with weaker signals can be received. (Signal crossover may result in some stations being hard to hear.)</p>

1 Check that the deck is in standby mode.

2 Press and hold button [1], then the [FM AM] button, and hold both for more than three seconds.

The mode switches between AUTO mode and DX mode each time the buttons are pressed.

The RDS (radio data system) is a data broadcasting system that makes use of unused FM broadcast channels. It utilizes the subcarrier waves from an FM broadcasting station to provide an information service sending, for example, various kinds of data and traffic information.

This capability can be used in this unit's FM mode.

Receiving RDS data

Setting AF (Alternative Frequency)

When this function is ON, the unit automatically switches to the frequency where the reception status of the station you are currently listening to becomes the best. By default, the AF function is ON.

Setting REG (REGIONAL)

Some stations may broadcast different programs according to the local area. When the REG function is ON, switching to the other station that broadcasts different program is prevented.

1 Press the [AF] button for longer than one second and select an item.

AF-ON/REG-OFF → AF-ON/REG-ON → AF-OFF/REG-OFF → AF-ON/REG-OFF ...

When the AF function is ON:

The [AF] indicator is lit on the display.

When the REG function is ON:

The [REG] indicator is lit on the display.

Receiving traffic information

Setting the TP (traffic program)/the TA (traffic announcement)

1 Press the [TA] button and select an item.

Repeatedly pressing the [TA] button will cycle you through the following options.

TP OFF/TA OFF → TP ON/TA OFF → TP ON/TA ON ...

When TP is set to ON and TA is set to OFF:

When the traffic information station is received, the [TP] indicator is lit on the display.

When the traffic information station becomes unreceivable, the [TP] indicator flashes.

When the [∧] or [∨] button is pressed in the FM mode, the unit

starts to search for the traffic information station.

If the traffic announcement is received in the mode other than "Radio", the mode is automatically switched to radio mode, and you can listen to the traffic announcement.

When the traffic announcement ends, the unit returns to the previous mode.

When both TP and TA are set to ON:

When the traffic announcement is received, the [TA] indicator is lit on the display.

When the traffic announcement becomes unreceivable, the [TA] indicator flashes.


In the FM mode, the sound is muted. Only when the traffic announcement is received, the mute is cancelled and you can listen to the traffic announcement.

If the station you are currently listening to is not a traffic information station, the unit tunes in traffic information station automatically ([TP-SEEK] is displayed).

If the traffic announcement cannot be received, [NOTHING] is displayed.

If the traffic announcement is received in the mode other than radio, the mode is automatically switched to radio mode, and you can listen to the traffic announcement.

When the traffic announcement ends, the unit returns to the previous mode.

 **ATTENTION**

- When the TP is ON, the unit searches only the traffic information station. Moreover, while receiving the traffic information station, if a poor receiving state continues for a certain time, [TP] or [TA] indicator flashes. When the [^] or [v] button is pressed in the FM mode, [TP SEEK] is displayed and the unit starts to search for the traffic information station.
- While receiving the traffic announcement, you can adjust the volume and the changed volume is stored. The next time you receive the traffic announcement, the volume will be switched to the stored level.
- The RDS function is not available in the AM (MW)/LW mode.
- When the unit receives the EON station, [EON] indicator is lit on the display.
If the station you are currently listening to does not broadcast the traffic announcement, the unit searches for other traffic announcement broadcasting automatically and switches to that station.

Setting PTY (program type)

With RDS stations, the name of the broadcasting station and program category information are transmitted and can be displayed on the unit's display. It is also possible to select only those RDS stations that are broadcasting the genre selected by using the PTY function.

1 Press the [PTY] button for more than one second.

The name of the genre of the RDS station currently being received is displayed, and the [PTY] indicator lights on the display. If the PTY signal cannot be received, "NOPTY" is displayed.

Setting PTY SEEK

1 Press the [PTY] button for more than one second while the genre name of the RDS station is displayed.

Repeatedly pressing the [FUNC] button will cycle you through the following options.

NEWS → SPORTS → TALK → POP → CLASSICS → NEWS...



ATTENTION

- When PTY31 is received, [ALARM] is displayed and the unit receives emergency broadcasting.
- While receiving the emergency broadcasting, you can adjust the volume and the changed volume is stored.

2

While the genres above (NEWS, SPORTS, TALK, POP and CLASSICS) are displayed for longer than one second, press the [V] or [^] button.

The SEEK function will start within the selected genre.

During the search for RDS stations conducted by the SEEK function, the [PTY] indicator is displayed on the display.

If an RDS station within the selected genre cannot be found, [NOTHING] will be displayed for two seconds, and then the genre name for which the search was conducted will be displayed for four seconds.

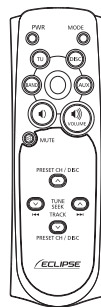
How to use the remote control

Precautions in use of the remote control

- Be careful when handling the control, especially because it is small and light. Dropping or striking it hard may damage it, wear out the battery or cause a malfunction.
- Keep the remote control free of moisture, dust and water. Do not subject it to shock.
- Do not place the remote control unit where it will get hot, such as on the dashboard or near a heater vent. Allowing the remote control unit to overheat may warp its case or cause other problems.
- Do not operate the remote control unit while driving because doing so could cause an accident.
- When using the remote control, point it toward at the remote control light receptor.
- The light receptor may not operate correctly if it is exposed to bright light such as direct sunlight.
- Be sure to press the [PWR] button on the main unit for more than two seconds to shut it down before leaving the car, or the car battery may be run down. When the main unit is shut down, the remote control will not work.
- Remove the batteries from the remote control unit whenever it is not to be used for a long time.

Cleaning the remote control

- Use a dry cloth to keep the unit clean. If the remote control unit gets extremely dirty, clean it with a cloth moistened with diluted liquid detergent. Do not use alcohol or thinner; these compounds may damage the finish.
- In no event should benzine or thinner be used. These substances will damage the case or finish.



Turning the power on/off

When the power is turned on, the state used when the power was turned off such as CD and tuner playing is restored.

1 Press the [PWR] button.

The power turns on or off each time the button is pressed.

ATTENTION

When the main unit is shut down, the remote control will not work.

Adjusting the audio volume

1 Press the [>] or [<] button.

[>] button:
Increases the volume.

[<] button:
Decreases the volume.

Muting the volume

Press the [MUTE] button to cut the volume or restore it instantly.

Switching playback modes

1 Press the [MODE] button.

Press the button to switch modes in the following sequence:

Tuner → Disc → AUX → Tuner ...

ATTENTION

Modes can be switched by pressing the following buttons:

- [TU] button:
The tuner mode is activated.
- [DISC] button:
The disc mode is activated.
- [AUX] button:
The AUX mode is activated.

How to play the tuner

Select the tuner mode first.

Selecting the FM/AM band

1 Press the [BAND] or [TU] button.

Each press will switch tuner modes from FM1 → FM2 → FM3 → AM (MW) → LW.

Selecting a station (manually or automatically)

A short press of the button will allow manual station tuning. Pressing for more than one second will start automatic tuning.

1 Press the [V TUNE • SEEK ^] button.

[^] button:
Tunes to higher frequency stations.

[v] button:
Tunes to lower frequency stations.

Selecting preset stations

A total of six stations may be selected (preset tuning) out of those already set in memory through the main unit. (Refer to "Manually setting stations into memory" on page 151.)

1 Press the [V PRESET CH ^] button.

[^] button:
Select the next higher number preset button.

[v] button:
Select the next lower number preset button.

How to play CDs

Switching disc modes

1 Press the [DISC] button.

The disc mode is activated.

2 Press the [BAND] or [DISC] button.

When one or two CD changers are connected, press the [BAND] or [DISC] button to change modes from CD player → CD changer 1 → CD changer 2.

The indicator will skip a changer or player that has no discs loaded.

Advancing to the next track or returning to the beginning of the track being played

1 Press the [i<< TRACK >>i] button.

[>>i] button:
Advances to the next track.

[i<<i] button:
Returns to the beginning of the track being played. (Press repeatedly to move to previous tracks.)



ATTENTION

Hold the [>>i] button down to fast forward, or the [i<<i] button to rewind through the track being played.

Skipping to the next or previous disc

1 Press the [V DISC ^] button.

[^] button:
Selects the next higher number disc.

[v] button:
Selects the next lower number disc.

How to play MP3/WMA

Switching disc modes

1 Press the [DISC] button.

The disc mode is activated.

2 Press the [BAND] or [DISC] button.

When one or two CD changers are connected, press the [BAND] or [DISC] button to change modes from CD player → CD changer 1 → CD changer 2.

The indicator will skip a changer or player that has no discs loaded.



ATTENTION

- The optional CD changer cannot be used to play MP3 files.
 - If normally recorded music data (CDDA) and MP3 music files are mixed, then normally recorded music data will be played.
-

Advancing to the next file or returning to the beginning of the file being played

1 Press the [◀ TRACK ▶▶] button.

[▶▶] button:

Advances to the next track (file).

[◀◀] button:

Returns to the beginning of the track (file) being played. (Press repeatedly to move to previous tracks (files).)



ATTENTION

Hold the [▶▶] button down to fast forward, or the [◀◀] button to rewind through the track being played.

Skipping to the next or previous folder

1 Press the [∨ DISC ∧] button.

[∧] button:

Selects the next folder.

[∨] button:

Selects the next lower folder.

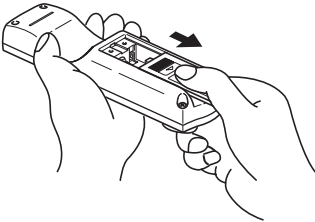
Replacing the battery

WARNING

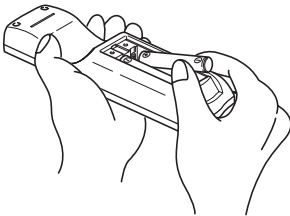
To prevent accidents, store batteries out of the reach of children. If a child has swallowed one, consult a doctor immediately.

Use two AAA size batteries.

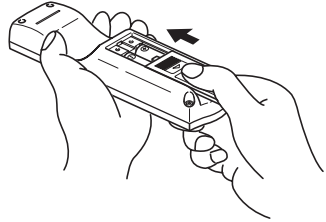
- 1** Remove the back cover of the remote control unit by gently pressing and sliding it in the direction indicated by the arrow.



- 2** Install the two batteries provided into the compartment as illustrated inside the compartment.



- 3** Return the back cover into place by sliding it in the direction indicated by the arrow.



CAUTION

- Be extremely careful not to swallow the battery.
- The battery life is approximately one year. If the remote control unit does not operate correctly or if the button lamp gets dim, replace the batteries.
- Be sure to orient the batteries correctly so that the positive and negative poles match the diagram.
- Do not use one new battery and one old one; use two new batteries.
- Use only two of the same kind of battery.
- If any liquid is seen leaking from the batteries, remove both batteries and dispose of them properly. Thoroughly clean the battery compartment with a dry cloth. Then install new batteries.

ESN security operating procedure

About ESN

This deck is equipped with ESN (Eclipse Security Network). A pre-registered music CD (Key CD), four-digit security code, or a Memory Stick on which all unit functions will not operate, even by turning the ignition switch to the ACC or ON position or reconnecting the battery after turning the ignition switch off or disconnecting the battery during maintenance.

ESN can be set or cancelled using any of the following methods:

Key CD security (See page 161)

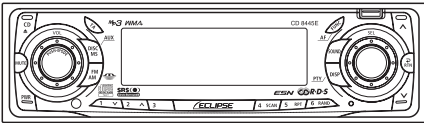
You can record a specific CD that you have as a "Key CD" with the deck, and this CD can then be used to set and cancel the security settings.

Memory Stick security (See page 164)

You can record a Memory Stick and a secret code (security code) with the deck, and this Memory Stick or secret code (security code) can then be matched with the deck to set and cancel the security settings.

ACC security (See page 168)

This method can only be used when Memory Stick security has already been set. When ACC security is set, button operations are disabled when the ignition switch is turned to OFF and then back to ACC.



How to switch the security type (Key CD security/ Memory Stick security)

You can switch the type of security being used (Key CD security or Memory Stick security). The initial setting is for Key CD security to be used.

1 Check that the unit is in standby.

2 Press and hold the [FUNC] button, then button [3], and hold both for the more than two seconds.

Security type will switch from Key CD security (DISC SEC) ↔ Memory Stick security (MS SEC) in order each time the button is pressed.

ATTENTION

If a security is activated, switching the security type is not available.

How to operate the ESN (Key CD) security

How to program the Key CD

1 Check that the unit is in standby.

2 Press and hold the [FUNC] button, then button [6], and hold both for more than one second.

A [SEC] message appears, in two seconds it will change to [DISC].

ATTENTION

- If a CD has already been inserted, a [SEC] message appears, and then the front panel opens and the CD is ejected.
- If a security is activated, programming the Key CD is not available.

3 Press the [CD▲] button.

The front panel opens; The CD8445E is now ready for your Key CD in the CD slot.

4 Insert the CD into the slot.

A [SEC] message appears, then the Key CD is ejected.

5 Press the [CD▲] button.

The front panel closes.

ATTENTION

- If there is a problem with the inserted CD, an [ERR] message will appear for two seconds and the CD will be ejected. Reinsert the ejected CD.
- If a CD causes the [ERR] message to appear twice in a row, a [CHANGE] message will appear for two seconds. Try another CD.
- Copy Protected CD and MP3/WMA CD-ROM cannot be programmed for Key CD security.
- The Security indicator will flash whenever the vehicle's ignition is switched off.

How to cancel the Key CD

1 Check that the unit is in standby.

2 Press and hold the [FUNC] button, then button [6], and hold both for more than one second.

A [SEC] message appears, then in two seconds it will change to [DISC].

3 Press the [CD▲] button.

The front panel opens; The CD8445E is now ready for your Key CD in the CD slot.



ATTENTION

If a CD has already been inserted, a [SEC] message appears, and then the front panel opens and the CD is ejected.

4 Insert your Key CD into the slot.

A [CANCEL] message appears, then the Key CD is ejected.
The Key CD is cancelled.



ATTENTION

- This process cancels the protection for ESN deck.
 - If power to the ESN deck is disconnected, then reconnected, a Key CD will not need to be inserted in order to return the unit to normal operation.
 - Inserting a CD other than the Key CD will not cancel the protection. Instead, the display [ERR] for two seconds, then the normal CD playback mode will activate.
-

5 Press the [CD▲] button.

The front panel closes.

How to change the Key CD

1 First, cancel the existing Key CD.

Refer to "How to cancel the Key CD".

2 Next, program a new Key CD.

Refer to "How to program the Key CD".

How to resume normal operation (ESN security lock out)

If power is disconnected while ESN security is active (a Key CD was programmed), operation is disabled until power is restored and the unit unlocked. Follow this procedure to resume normal operation.

1 When the power is turned on after disconnecting the battery power, a [SEC] message will appear for two seconds. Thereafter, message changes to [DISC] and the press the [CD▲] button, then the CD8445E is ready to accept your Key CD into the slot.

2 Insert your Key CD.

If the correct CD is inserted, an [OK] message will appear for two seconds and the CD will begin playing.

**ATTENTION**

- If the incorrect CD is inserted, an [ERR_] ("ERR" and error number) message will appear for two seconds, after which the CD will be ejected.
- If [ERR5] (the 5th time an error has occurred) appears, [HELP] will appear, after which the CD will be ejected. When [HELP] appears, carry out the operations for an ESN security lock out by following the procedure in "What happens if an incorrect CD is inserted?" on page 163.
- You must be use the same CD used for Key CD programming; a duplicate CD may not work properly.

What happens if an incorrect CD is inserted?**1 After the 5th incorrect attempt, the display reads [HELP] for five seconds.**

After the [HELP] message will appear for five seconds, serial number will appear.

2 Press the [CD▲] button to close the front panel.**3 Press the [FUNC] button, then button [6], and hold them for five seconds.**

After the [SEC] message will appear for two seconds, rolling code (six digit) will appear.

4 Press the [FUNC] button.

[DISC] flashes on the display.

You will have five more attempts the to insert correct disc.

5 Insert the Key CD into the slot.

If the correct CD is inserted, an [OK] message will appear for two seconds and the CD will be ejected.

**ATTENTION**

- If an incorrect CD is inserted, an [ERR_] ("ERR" and error number) message will appear for two seconds, after which the CD will be ejected.
- This process cancels the protection for ESN deck.

● Note ●

If after 5 tries the correct Key CD is not inserted, the display reads [CALL]; the unit must be returned to Eclipse to be reset. In this case, please contact your Eclipse dealer for assistance.

Your Key CD can be easily forgotten. Write the album name in a reminder note (See page 212).

How to operate the ESN (Memory Stick) security

How to record a security code

1 Check that the unit is in standby.

2 Press and hold button [1], then the [FUNC] button, and hold both for more than one second.

A [SEC] message appears, in two seconds it will change to [MS].

ATTENTION

- If a Memory Stick has already been inserted, a [MS EJECT] message appears. In this case, eject the Memory Stick and insert again. (Refer to "Ejecting the Memory Stick" on page 147 for details on ejection of the Memory Stick.)
- If the security is already activated, recording the security code function is not available.

3 Insert the Memory Stick into the slot and close the front panel.

A [- - -] (security code input display) appears.

(Refer to "Listening to MG Memory Stick" on page 43 for details on insertion of the Memory Stick.)

4 Input a security code by pressing buttons [1] to [4].

Enter a four-digit security code using digits 0 to 9, A to F. The number (shown on the display) changes in ascending order between 0 and 9, A and F each time the button is pressed. Each button number (1 to 4)

corresponds to each digit (first to fourth) of the security code.

5 Press the [FUNC] button for more than one second.

The security code is registered in the deck and security is set.

The registered security code is encrypted and then written to Memory Stick.

ATTENTION

When the security code is registered using a Memory Stick that contains several kinds of data, such as music, etc., be careful not to clear the recorded data by formatting the Memory Stick.

6 Eject the Memory Stick.

Refer to "Ejecting the Memory Stick" on page 94.

How to cancel the Memory Stick security

The security function can be cancelled when the security code that has been recorded with the deck is entered and verified.

Cancelling the security function can be done by entering the security code into the deck, or by using the Memory Stick.

Cancelling the security function by entering the security code

1 Check that the unit is in standby.

2 Press and hold button [1], then the [FUNC] button, and hold both for more than one second.

A [SEC] message appears, then in two seconds it will change to [- - -] (Security code input display).

3 A security code is entered by pressing the buttons [1] to [4].

Enter a four-digit security code using digits 0 to 9, A to F. The number (shown on the display) changes in ascending order between 0 and 9, A and F each time the button is pressed. Each button number (1 to 4) corresponds to each digit (first to fourth) of the security code.

4 Press the [FUNC] button for longer than one second.

If a security code is entered and the deck verifies that it is correct, [CANCEL] will appear on the display and the security function will be cancelled.

 **ATTENTION**

If the security code that is entered does not match the code that is recorded by the deck, [ERR] will appear on the display for two seconds and operation will continue as normal without the security function being cancelled.

Cancelling the security function using a Memory Stick**1 Check that the unit is in standby.****2 Press and hold button [1], then the [FUNC] button, and hold both for more than one second.**

A [SEC] message appears, then in two seconds it will change to [- - -] (Security code input display).

3 Press the [DISC MS] button.

A [MS] message will appear.

 **ATTENTION**

If a Memory Stick has already been inserted, a [MS EJECT] message appears. In this case, eject the Memory Stick and insert again. (Refer to "Ejecting the Memory Stick" on page 147 for details on ejection of the Memory Stick.)

4 Insert the Memory Stick and close the front panel.

The recorded data will be read from the Memory Stick.

5 If the contents recorded in the Memory Stick match the information recorded by the deck, [CANCEL] will appear on the display.

The security function will be cancelled.

 **ATTENTION**

- If a reading error occurs or if an incorrect Memory Stick is inserted, [ERR] will appear on the display for two seconds, and then the display will change to [EJECT]. If this happens, eject the Memory Stick and try again.
- Security setting cannot be cancelled by this procedure if the Memory Stick containing the security code is formatted.

6 Eject the Memory Stick.

Refer to "Ejecting the Memory Stick" on page 94.

How to change the Memory Stick

You can change the Memory Stick and security code that have been recorded by the deck to a different Memory Stick and security code.

1 Cancel the security code that has been recorded with the deck.

Refer to "How to cancel the Memory Stick security" on page 98.

2 Re-record the new Memory Stick and security code that you would like to use.

Refer to "How to record a security code" on page 97.

How to resume normal operation (ESN security lock out)

If power is disconnected while ESN security is active (a security code was recorded), operation is disabled until power is restored and the unit unlocked. Follow this procedure to resume normal operation.

ESN security lock can be cancelled by directly entering the security code into the deck, or by using the Memory Stick that was being used when the security code was recorded.

Cancelling ESN security lock out using security code entry

1 When the power is turned on after disconnecting the battery power, a [SEC] message will appear for two seconds. Thereafter, message changes to [- - - -] (Security code input display).

2 A security code is entered by pressing the buttons [1] to [4].

Enter a four-digit security code using digits 0 to 9, A to F. The number (shown on the display) changes in ascending order between 0 and 9, A

and F each time the button is pressed. Each button number (1 to 4) corresponds to each digit (first to fourth) of the security code.

3 Press the [FUNC] button for more than one second.

If the security code matches the code recorded by the deck, [OK] will appear on the display and the security function will be cancelled.

ATTENTION

- If the security code does not match the information recorded by the deck, [ERR_] (ERR and the error number) will appear on the display for two seconds, and then [- - - -] (security code entry display) will appear. If this happens, check the security code and repeat the procedure from step 2.
- If [ERR5] (the 5th time an error has occurred) appears, [HELP] will appear. When [HELP] appears, carry out the operations for an ESN security lock out by following the procedure in "What happens if a Memory Stick or security code is incorrect?" on page 167.

Cancelling ESN security lock using Memory Stick

1 After the battery is connected and the deck's power is turned on, [SEC] will appear on the display for two seconds. After this, [- - -] (security code entry display) will appear.

2 Press the [DISC MS] button.

[MS] will appear on the display. If you press the [DISC MS] button once more, the display will return to [---] (security code entry display).



ATTENTION

If a Memory Stick has already been inserted, a [MS EJECT] message appears. In this case, eject the Memory Stick and insert again. (Refer to "Ejecting the Memory Stick" on page 147 for details on ejection of the Memory Stick.)

3 Insert the Memory Stick that has been recorded, and then close the front panel.

The recorded data will be read from the Memory Stick.

4 If the contents recorded in the Memory Stick match the information recorded by the deck, [OK] will appear on the display for two seconds, and then the deck will return to normal operation.



ATTENTION

- If the contents recorded in the Memory Stick do not match the information recorded by the deck, [ERR_] (ERR and the error number) will appear on the display for two seconds, and then [- - -]

(security code entry display) will appear. If this happens, check the Memory Stick and repeat the procedure from step 2.

- If [ERR5] (the 5th time an error has occurred) appears, [HELP] will appear. When [HELP] appears, carry out the operations for an ESN security lock out by following the procedure in "What happens if a Memory Stick or security code is incorrect?" on page 167.
- ESN security lock cannot be cancelled by this procedure if the Memory Stick containing the security code was formatted.

What happens if a Memory Stick or security code is incorrect?

1 After the 5th incorrect attempt, the display reads [HELP] for five seconds.

After the [HELP] message was displayed for five seconds, serial number will appear.

You will only get 5 unsuccessful unlock code entries. After the 5th attempt, you will be asked to insert the DISC (Key CD). At this point, please contact your local Eclipse dealer for procedure on unlocking the unit.

Your security code and Memory Stick can be easily forgotten. Write the security code and Memory Stick title in a reminder note (See page 212).

How to operate the ACC security

ACC security involves using Memory Stick security to record a security code, and then when the ignition switch is turned to OFF and back to ACC, the operation of all buttons is disabled.

1 Check that the unit is in standby.

2 Once a security code has been recorded, press the [FUNC] button and button [5] simultaneously for more than two seconds.

The ACC security function will be activated. Press the [FUNC] button and button [5] simultaneously for two seconds or more again to cancel the ACC security function.



ATTENTION

- If the vehicle's battery is disconnected at times such as during servicing, ACC security will be cancelled.
- When ignition switch is turned OFF and back to ACC, the operation all button is disabled. If this happen, resume normal operation. (Refer to "How to resume normal operation (ESN security lock out)" on page 166.)

How to turn the security indicator on/off

Once ESN security is activated, the indicator flashes whenever the vehicle's ignition switch is turned off, warning potential thieves that the unit is protected. However, if do not want this visible deterrent, it may be turned off.

1 With the unit in standby, press the [FUNC] button, then button [2] and hold both for more than one second.

2 [IND. FLASH] or [IND.-----] appears on the display.

[IND. FLASH] means the security indicator will flash when the vehicle's ignition switch is off, and [IND.-----] means it will not. Repeat the above steps to reactivate the flash mode.

How to read the Electronic Serial Number

1 Check that the unit is in standby.

2 Press and hold the [FUNC] button, then button [4], and hold both for more than one second.

[ESN] appears on the display, followed by an eight-digit number; this number is your electronic serial number (ESN). You may use this number to identify your Eclipse CD8445E in the event of theft recovery.

Detaching the front panel

Using the detachable panel

The front panel of the unit can be removed. By removing this panel when you leave the vehicle, you can prevent the theft of the unit.

How to remove the detachable panel

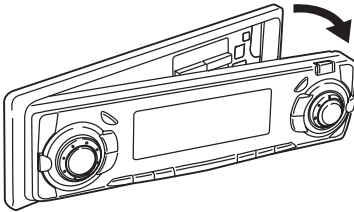
1 Turn off the unit power.

2 Press the [Release] button.

The right end of the front panel detaches from the body of the unit.

3 Remove the front panel.

Hold the front panel and pull it toward you to remove it.



How to fit the detachable panel

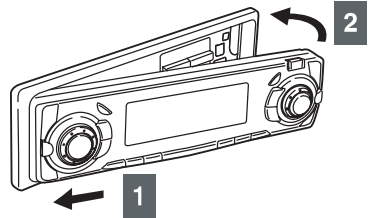
1 Insert the left end of the front panel into the unit.

Engage the catch at the left end of the front panel with the lock on the unit itself.

2 Insert the front panel.

Press the right end of the front panel until it clicks into place.

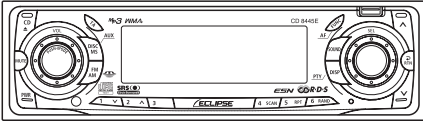
3 Press the [PWR] button to turn the power to the unit ON.



⚠ CAUTION

- If you drop the detachable panel or subject it to impact, it may be damaged or malfunction.
- Do not detach or fit the detachable panel while driving since this could cause an accident.
- Store the panel at a location free from humidity, dust, and water.
- Do not leave the detachable panel in locations that are likely to become hot, like the dashboard and surroundings.

How to operate the AUDIO CONTROL



Adjusting audio volume

- 1 Turn the [AUDIO CONTROL] button to the left or right.

Turn to the right:Increases the volume.

Turn to the left:Decreases the volume.

ATTENTION

Press the [MUTE] button for less than one second to cut the volume or restore it instantly.

WARNING

Do not adjust the volume or other controls while driving the vehicle. Do so only while parked in a safe location.

Enabling the loudness control

The loudness control may be turned on to emphasize low and high frequencies at low volume levels.

Loudness compensates for the apparent weakness of low and high frequencies at low volume by boosting the bass and treble levels.

- 1 Press the [AUDIO CONTROL] button for longer than one second; [LOUD ON] will be displayed on the screen.

ATTENTION

- You can cancel the loudness function by pressing the [AUDIO CONTROL] button for longer than one second while the loudness function is ON.
- Loudness control is not available when CSII is ON. In order to enable loudness control, turn OFF CSII. (For details on turning CSII ON/OFF, see page 173.)

Switching audio control modes

Various audio control modes may be fine-tuned using this procedure.

1 Press the [AUDIO CONTROL] button for less than one second to select the item to be adjusted.

Modes will switch in the order shown below each time the button is pressed.

When the audio control is set to the Normal mode:

VOL → BAL*1 → FAD*1 → NON-F → SVC*2 → VOL...

When the audio control is set to the Pro mode:

VOL → BASS → MID → TREB → SVC*2 → VOL...

*1: Adjustments cannot be made when the position selector or CS II is ON.

*2: Setting cannot be made in FM mode.

Mode	Function	[AUDIO CONTROL] button	
		Turn to the Right	Turn to the Left
VOL (VOLUME)	Adjusts volume.	Increases the volume.	Decreases the volume.
BASS	Adjusts bass level. Bass mode can be adjusted for each source (CDP/CDC, FM, AM (MW) and LW Memory stick player).	Emphasizes low sounds.	Softens low sounds.
MID (MIDDLE)	Adjusts middle level. Mid mode can be adjusted for each source (CDP/CDC, FM, AM (MW) and LW Memory stick player).	Emphasizes medium sounds.	Softens medium sounds.
TREB (TREBLE)	Adjusts treble level. Treble mode can be adjusted for each source (CDP/CDC, FM, AM (MW) and LW Memory stick player).	Emphasizes high sounds.	Softens high sounds.
BAL (BALANCE)	Adjusts left/right speaker balance.	Emphasizes right speakers.	Emphasizes left speakers.
FAD (FADER)	Adjusts front/rear speaker balance.	Emphasizes front speakers.	Emphasizes rear speakers.
NON-F (NON-FADER)	Adjusts non-fader level (for connected sub-woofers, etc.).	Increases level.	Decreases level.
SVC (Source Volume Control)	Adjusts different volume levels for each audio mode. When SVC is set, the volume level can change as shown in the example settings in the table below.	Increases the SVC setting level.	Decreases the SVC setting level.

Setting examples:

The volume for the initial FM mode (default value: 40) is used as a reference for storing the differences in volume that have been set for each audio mode.

Audio mode	FM	AM (MW) /LW	CD	Memory Stick
Default value (Volume level)	Reference (40)	0 (40)	0 (40)	0 (40)
SVC setting (Volume level)	Reference (40)	SVC setting value +15 (55)	SVC setting value -10 (30)	SVC setting value +5 (45)
When volume level in FM mode is adjusted from 40 to 45	45	55 → 60	30 → 35	45 → 50
When volume level in CD mode is adjusted from 35 to 60	45 → 70	60 → 80*	60	50 → 75
When volume level in AM (MW) /LW mode is adjusted from 80 to 20	70 → 5	20	60 → 0*	75 → 10
When volume level in Memory Stick mode is adjusted from 10 to 35	5 → 30	20 → 45	0 → 20	35

*:The volume levels can be set to a maximum of 80 and a minimum of 0. If you try to go past the maximum or minimum volume level, the level will not change. For the CD changer, SVC adjusts the volume using the setting value for the CD player.

The volume difference can be set within a range of -10 to +20.



ATTENTION

If the battery terminals have been disconnected because of a reason such as vehicle maintenance, the SVC settings will return to their default values. If this happens, you will need to make the settings again.

How to operate the Sound Adjustment Mode

About Sound Adjustment Mode

This deck is equipped with two different sound adjustment modes: normal mode and Pro mode.

In normal mode, the acoustic characteristics inside the vehicle can be adjusted using comparatively simple settings. In addition, it corresponds to basic sound systems which comprise front speakers, rear speakers, and subwoofer.

In Pro mode, the sound quality characteristics can be adjusted item by item using more sophisticated settings than in normal mode. In addition to the 4 speaker system, the adjustments can be made to suit 3-way speaker system where the front speaker, rear speaker and non-fader output can be set to Hi (treble range) Mid (medium range) or Low (bass range). Refer to the table below and to the operations for each mode for details of each mode.

The following adjustments can be made in normal mode and Pro mode respectively.

	Normal mode	Pro mode
SRS Circle Surround II	○(See page 178)	×
Parametric equaliser	○(See page 179)	○(See page 187)
Time alignment	○(See page 181)	○(See page 191)
Crossover	○(See page 184)	○(See page 192)
Multi-harmonizer	○(See page 184)	○(See page 193)
Non-Fader phase	○(See page 185)	○(See page 193)
Non-Fader output	○(See page 185)	○(See page 194)
Speaker layout	×	○(See page 194)
Custom Mode	×	○(See page 195)
Sound data	○(See page 185)	○(See page 195)

SRS Circle Surround II (CS II)

Surround sound is produced by combining The CS II (SRS Circle Surround II) mode enables 4-speaker surround sound. The system achieves surround sound by combining SRS TruBass, which uses the difference between two different frequencies to boost bass tones, and SRS Circle Surround, which uses 2ch (L/R) correlation to expand the sound.



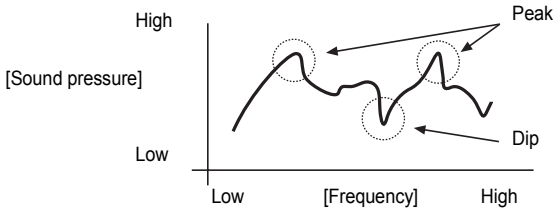
is a trademark of SRS Labs, Inc.

Circle Surround II technology is incorporated under license from SRS Labs, Inc.

Circle Surround II, CSII TruBass, SRS and  symbol are trademarks of SRS Labs, Inc.

Parametric equaliser

A variety of materials are used inside a vehicle to manufacture the seats and windows, and because these materials absorb and reflect sound in different ways, the parametric equaliser lets you adjust the peaks and dips of the frequency characteristics inside the vehicle to compensate for this.

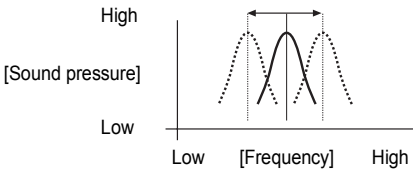


An "equaliser" is a function that corrects these peaks and dips in order to flatten the frequency characteristics. However with a normal graphic equaliser, the median frequency and the Q (sharpness and band width) are fixed, so that when neighboring bands are corrected, there is a limit to the amount by which distortion in the peak and dip characteristics can be corrected.

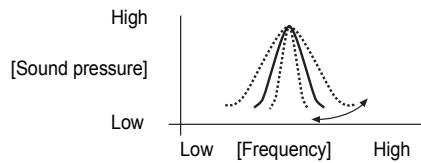
A "parametric equaliser" lets you adjust the median frequency, Q (sharpness and band width) and gain to variable levels, so that you can make fine adjustments to spot areas of the frequency band.

[Parametric equaliser characteristics]

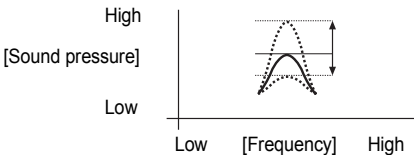
1 Median frequency can be varied.



3 Q (sharpness/band width) can be varied.



2 Gain can be varied.



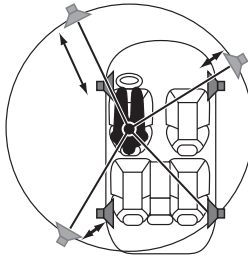
In the deck's normal mode, 7-bands can be adjusted with a parametric equaliser. In the pro mode, 5 bands in the high frequency range and 5 bands in the mid to low-frequency ranges can be adjusted with a parametric equaliser, when using 3-way speakers. When using a four-speaker system, 5 bands for the front and 5 bands for the rear can be adjusted separately.

Time Alignment

With vehicle audio systems, the installation position of the speakers and the position of the listener mean that the distances from the listener to the left and right speakers are almost always different. These differences in the distance from the listener to each speaker in turn means that the time taken for the sound to reach the listener is different for each speaker. The result of this is that the phases of each speaker (biases) become mismatched and the sound becomes unnatural, as though the sound stage is not wide enough.

The "time alignment" function corrects the time taken for the sound waves to reach the listener in order to set the optimum phase for the listening position so that the sound becomes more expansive as though it is being listened to on a sound stage.

The basic adjustment method involves measuring the actual distances to each speaker and calculating the differences in distance relative to the most distant speaker in order to derive the delay time for the sound from each speaker.



When this deck is in normal mode, a simplified time alignment function is available. You can use this function to adjust only four parameters (position selector, vehicle type, tweeter settings and rear speaker position settings), and so you can make basic time alignment settings without measuring the actual distances to each speaker. In addition, in pro mode you can adjust the time delays and levels for each individual speaker based on the actual speaker layout.

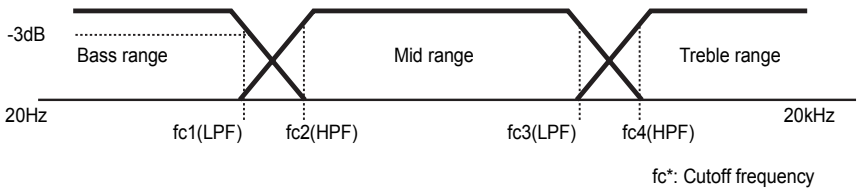
Crossover

The frequency band that is stored by audio media such as CDs is a fairly wide range from 20 Hz to 20 kHz, and it is difficult for a single speaker to be able to play back all frequencies in such a wide range.

Because of this, several speakers can be used, with different frequency bands (such as treble, medium and bass) allotted to each speaker so that wide frequency ranges can be played back.

The "Crossover" function is used to allot the frequency ranges that are to be played back by each speaker in accordance with the installed speaker units and the layout of the speakers, in order to obtain the maximum level of performance from the speakers and to provide the most stable frequency characteristics.

The crossover function includes a high-pass filter (HPF) for playing back treble sounds, and a low-pass filter (LPF) for playing back bass sounds. In addition, the HPF and LPF are used in combination in order to play back sounds in the medium range.



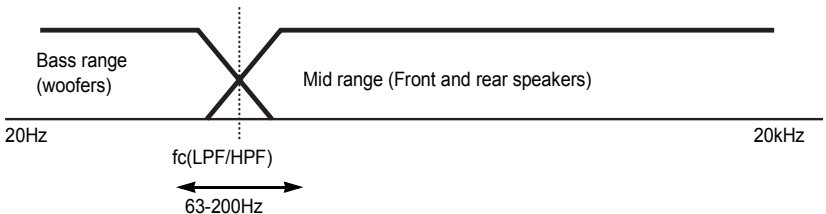
For example, when adjusting the HPF, frequencies that are lower than the specified frequency are progressively dampened, rather than simply not being played back at all. The "slope" adjustment function is the function that is used to adjust these dampening characteristics.

The slope characteristics of a filter are such that with larger slope values (for example 12 dB/oct), the slope becomes steeper, and so the amount of sound mixing in with neighboring bands becomes less so that only the target band is played back. However, it also causes the merging of sound between speakers to become poorer and can result in greater distortion.

- The crossover function is a filter that allocates specified frequency bands.
- A high-pass filter (HPF) is a filter that cuts out frequencies that are lower than the specified frequency (bass range) and allows higher frequencies (treble range) to pass through.
- A low-pass filter (LPF) is a filter that cuts out frequencies that are higher than the specified frequency (treble range) and allows lower frequencies (bass range) to pass through.
- The slope is the signal level at which frequencies that are one octave higher or one octave lower are dampened.

The larger the slope value, the greater the slope. In addition, when "PASS" is selected, the slope is eliminated (sound does not pass through the filters), so that the crossover function has no effect.

When this deck is in normal mode, it corresponds to basic speaker systems which comprise front speakers, rear speakers, and subwoofer. In such cases, the crossover can be used to apply the HPF to the front and rear speakers and the LPF to the sub-woofer so that the sound from all speakers merges properly. In addition to the 4 speaker system, in pro mode, the adjustments can be made to suit speaker system where the front speaker, rear speaker and non-fader output can be switched between Hi, Mid or Low output and the speakers can be combined according to each range (treble range: tweeter, mid range: mid, bass range: woofer) to provide 3-way playback. In this case, the crossover function can be used to adjust the playback ranges so that the HPF is applied to the treble-range speakers, the HPF and LPF is applied to the Mid-range speakers, and the LPF is applied to the bass-range speakers so that the sound from all speakers merges properly.



Multi-harmonizer

When original sounds are converted to MP3/WMA and Memory Stick (ATRAC3) format, frequency ranges that are not normally audible to the human ear are compressed. The multi-harmonizer can be used to play back these compressed sounds at as close to their original form as possible so that clear and powerful sound can be enjoyed.

Non-Fader phase

The sounds that are output from woofers include sounds that are in the same frequency ranges that are output from the front and rear speakers, and under the various conditions that can occur inside vehicle compartments, some of these sounds may cancel each other out. This phenomenon can be eliminated by changing the phase of the woofer.

The phase of the woofer can be set to normal timing (in which the output timing between the front and rear speakers and the woofer is the same) or reverse timing (in which the output timing between the front and rear speakers and the woofer is different), depending on the vehicle compartment conditions.

Non-Fader output

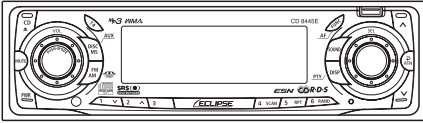
Depending on your external amplifier, non-fader output may be stereo or mono.

Selecting the speaker layout

In the unit's "pro" mode, selecting the layout of the speakers (4 speakers + subwoofer / 3-way speaker system) allows you to make adjustments in accordance with the speaker system connected.

Sound effect customisations

The parametric equaliser, time alignment, and crossover setting can be adjusted using this deck, or through the Eclipse web services. (For details on the operation, please contact your dealer.)



Operations during Normal Mode

1 Press the [SOUND] button.

The mode will change to sound adjustment mode (normal mode). Refer to "Operations during Pro Mode" on page 186 for details on the operating the Pro Mode.



ATTENTION

If you press the [SOUND] button during sound adjustment mode, the adjustment mode is cancelled and the mode returns to normal music mode.



CAUTION

When switching between Normal Mode and Pro Mode, please make sure that the volume level is set to 0.

2 Turn the [SEL] button to select a setting item.

When the button is turned, the setting item changes in the following order and the selected item is highlighted.

CS II ↔ PEQ ↔ Time-Alignment ↔ X-Over ↔ Harmonizer ↔ Non-F Phase ↔ Non-F Output ↔ Sound Data ↔ CS II...

3 Press the [SEL] button.

SRS Circle Surround II (CS II)

The system achieves surround sound by combining SRS TruBass, which uses the difference between two different frequencies to boost bass tones, and SRS Circle Surround, which uses 2ch (L/R) correlation to expand the sound.

Setting CSII modes

1 Turn the [SEL] button to select CSII.

2 Press the [SEL] button.

The mode will change to CSII mode.

3 Turn the [SEL] button.

Turn the [SEL] button to set CSII modes as follows:

...Low ↔ OFF ↔ Hi ↔ Low...

In the Hi and Low settings, Loud and Position can not be changed.

4 Press the [SEL] button.

The selected settings will take effect.

5 Press the [^] button.

When CSII is HI or Low, TruBass can be turned ON/OFF.

6 Press the [RTN] button.

At this time, other adjustments can also be made in normal mode.

7 Press the [SOUND] or [RTN] button to exit sound adjustment mode.



ATTENTION

If the CS II mode has been set (to a setting other than OFF), the BAL (balance) and FAD (fader) settings will be cancelled.

Parametric equaliser adjustment (PEQ)

The parametric equaliser adjusts 7 frequency bands.

1 Turn the [SEL] button to select PEQ.

2 Press the [SEL] button.

The mode will change to parametric equaliser adjustment mode.

3 Press the [SEL] button to select the band to be adjusted.

Each time the button is pressed, the selection changes in the following order.

→ 1 → 2 → 3 → 4 → 5 → 6 → 7
→ 1...

4 Turn the [SEL] button to select the frequency to be adjusted.

When the button is turned, the frequency changes in the following order.

1: 63Hz↔80Hz↔100Hz
2: 125Hz↔160Hz↔200Hz
3: 250Hz↔315Hz↔400Hz↔500Hz
4: 630Hz↔800Hz↔1kHz↔1.25kHz
5: 1.6kHz↔2kHz↔2.5kHz↔3.15kHz
6: 4kHz↔5kHz↔6.3kHz↔8kHz
7: 10kHz↔12.5kHz↔16kHz

5 Press the [^] or [v] button.

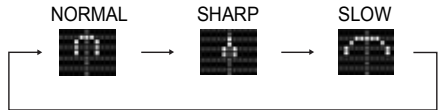
This adjusts the frequency level.

[^] button:
Increases level.

[v] button:
Decreases level.

6 Press the [6] button to select the Q curve pattern.

Each time the button is pressed, the Q curve changes in the following order.



7 Repeat the operations in steps **3** to **6** to change the settings for each band.

8 Hold down a button, [1] to [5], for more than two seconds to preset a value.

The preset value is overwritten by the value set using the above steps.

The time alignment and crossover adjustments will also be stored at this time.

9 Press the [RTN] button.

At this time, other adjustments can also be made in normal mode.

10 Press the [SOUND] or [RTN] button to exit sound adjustment mode.

Selecting an equaliser mode from memory



ATTENTION

For details on the operation, please contact your dealer.

Press a preset button to select the equaliser mode set in memory for the button. The buttons that set equaliser modes in memory are called preset buttons.

1 Turn the [SEL] button to select PEQ.

2 Press the [SEL] button.

3 Select any button, from [1] to [5], and press it for less than two seconds.

The preset pattern stored in memory will be retrieved.

4 Press the [RTN] button.

At this time, other adjustments can also be made in normal mode.

5 Press the [SOUND] or [RTN] button to exit sound adjustment mode.



ATTENTION

When the preset value is changed, the display shows as follows:



1-5 Preset ch No.

Measuring/display frequency characteristic

Frequency characteristics inside the vehicle can be measured and displayed on the display.

The measurement result can be referred to when adjusting parametric equaliser. This result is also necessary to automatically correct parametric equaliser setting using Sound effect customisations.



ATTENTION

- Adjust time alignment (see page 174) and crossover (see page 184) before measuring frequency characteristics.
 - When measuring frequency characteristics, CSII and Loudness settings are automatically cancelled.
-

1 Connect the optional microphone with a RCA connector to the L-CH of the AUX jack of the deck.

2 Turn the [SEL] button to select the PEQ.

Align the microphone with the actual ear position and attach it to the headrest or other appropriate fixture. (Attach the microphone using tape or string.)

3 Press the [SEL] button.

The mode will be change to parametric equaliser adjustment mode.

4 Press the [AUDIO CONTROL] button for less than two seconds.

After pushing the button, a 10-second countdown begins. Leave the vehicle during that time.

Pink noise will be output from the speakers and measurement of the frequency characteristics will start. [Measuring] will appear on the display while measurement is in progress. When measurement is complete, the measurement results

will appear on the display. You can adjust the volume (by turning the [AUDIO CONTROL] button) and restart measurement while measurement is in progress. Press the [AUDIO CONTROL] button once more to cancel measurement.

5 Press the [CD ▲] button for more than one second.

6 Insert a Memory Stick.

7 Press the [AUDIO CONTROL] button for more than two seconds.

Measurements can be written to a Memory Stick and corrected automatically using the website.

 **ATTENTION**

Close all doors and windows while measurement is in progress.

 **CAUTION**

In order to make measurement of frequency characteristics easier, slight errors may occur in the measurement data under some circumstances when this function is used. In addition, it is not equivalent to the precise measurements that can be made by professional measuring devices.

8 Press the [RTN] button.

At this time, other adjustments can also be made in normal mode.

9 Press the [SOUND] or [RTN] button to exit sound adjustment mode.

Time alignment settings (Time Alignment)

This function corrects the position characteristics and frequency characteristics in order to delay the signals being output from the various speakers so that the signals from each speaker reach the listening position at the same time.

 **ATTENTION**

Before selecting a position, make sure that CSII is OFF. (For details about turning CSII ON/OFF, see page 178.)

1 Turn the [SEL] button to select Time Alignment.

2 Press the [SEL] button.

The mode will change to time alignment setting mode.

3 Turn the [SEL] button to select a setting item.

When the button is turned, the setting item changes in the following order and the selected item is highlighted.

Position ↔ Car Type ↔
Tweeter ↔ Rear SP
↔ Position...

4 Press the [SEL] button.

Position selector setting (Position)

When the position of the listener's seat is selected, the time taken for the sound to travel from the speakers to the listener can then be adjusted in order to obtain a more natural sound orientation. This deck allows up to four different positions to be set.

1 Turn the [SEL] button to select Position.

2 Press the [SEL] button.

The mode will change to position selector setting mode.

3 Turn the [SEL] button to select the setting item.

When the button is turned, the setting item changes in the following order and the selected item is highlighted.

OFF ↔ Front L ↔ Front R ↔
Front ↔ Rear ↔ OFF...

4 Press the [SEL] button.

The selected settings will take effect.

5 Press the [RTN] button.

Other time alignment items can be set at this time.

6 Press the [RTN] button.

At this time, other adjustments can also be made in normal mode.

7 Press the [SOUND] or [RTN] button to exit sound adjustment mode.



ATTENTION

If the position selector has been set (to a setting other than OFF), the BAL (balance) and FAD (fader) settings will be cancelled.

Selecting the type of vehicle (Car Type)

You can select the time alignment settings to match your vehicle from a range of preset settings for different types of vehicle, allowing you to select the optimum time alignment settings automatically.

1 Turn the [SEL] button to select Car Type.

2 Press the [SEL] button.

The mode will change to car type selection mode.

3 Turn the [SEL] button to select the setting item.

When the button is turned, the setting item changes in the following order and the selected item is highlighted.

Compact ↔ Sedan ↔ Wagon
↔ Mini Van ↔ SUV ↔ Truck
↔ Compact...

4 Press the [SEL] button.

The selected settings will take effect.

5 Press the [RTN] button.

Other time alignment items can be set at this time.

6 Press the [RTN] button.

At this time, other adjustments can also be made in normal mode.

7 Press the [SOUND] or [RTN] button to exit sound adjustment mode.

Tweeter settings (Tweeter)

You can select the tweeter installation location and whether or not a tweeter is being used or not, allowing you to select the optimum time alignment settings automatically.

1 Turn the [SEL] button to select Tweeter.

2 Press the [SEL] button.

The mode will change to tweeter setting mode.

3 Turn the [SEL] button to select the setting item.

When the button is turned, the setting item changes in the following order and the selected item is highlighted.

NO ↔ Dash ↔ Door ↔ NO...

4 Press the [SEL] button.

The selected settings will take effect.

5 Press the [RTN] button.

Other time alignment items can be set at this time.

6 Press the [RTN] button.

At this time, other adjustments can also be made in normal mode.

7 Press the [SOUND] or [RTN] button to exit sound adjustment mode.



ATTENTION

If the front speakers have been installed to the dash panel, you can set the tweeter setting to "Dash" even if no tweeter has been installed.

Rear speaker position selection (Rear SP)

You can select the rear speaker installation location, allowing you to select the optimum time alignment settings automatically.

1 Turn the [SEL] button to select Rear SP.

2 Press the [SEL] button.

The mode will change to rear speaker position setting mode.

3 Turn the [SEL] button to select the setting item.

When the button is turned, the setting item changes in the following order and the selected item is highlighted.

Door ↔ Others

4 Press the [SEL] button.

The selected settings will take effect.

5 Press the [RTN] button.

Other time alignment items can be set at this time.

6 Press the [RTN] button.

At this time, other adjustments can also be made in normal mode.

7 Press the [SOUND] or [RTN] button to exit sound adjustment mode.

Crossover adjustment (X-Over)

The frequencies for the front and rear speaker high-pass filter (HPF) and woofer low-pass filter (LPF) can be set within a range of 63 to 200 Hz. (This is the same as the HPF and LPF cutoff frequencies.)

1 Turn the [SEL] button to select X-Over.

2 Press the [SEL] button.

The mode will change to crossover setting mode.

3 Turn the [SEL] button to select the cut-off frequency.

When the button is turned, the frequency changes in the following order.
63Hz ↔ 80Hz ↔ 100Hz ↔ 125Hz
↔ 160Hz ↔ 200Hz

4 Press the [SEL] button.

The selected settings will take effect.

5 Press the [∧] or [∨] buttons to set the slope.

[∧] button:
Increases level.

[∨] button:
Decreases level.

The slope can be set to "PASS", "6dB/oct", "12dB/oct", "18dB/oct" or "24dB/oct".



ATTENTION

If no woofer has been connected, set the slope adjustment to "PASS". (If slope is set to a setting other than PASS, the low frequency range will not be output from the speakers.)

6 Press the [RTN] button.

At this time, other adjustments can also be made in normal mode.

7 Press the [SOUND] or [RTN] button to exit sound adjustment mode.

Multi-harmonizer settings (Harmonizer)

This function uses harmonic synthesis to restore the high-frequency component that is lost as a result of the compression process so that better sound can be obtained during MP3 / WMA or Memory Stick (ATRAC3) playback.

1 Turn the [SEL] button to select Harmonizer.

2 Press the [SEL] button.

The mode will change to multi-harmonizer setting mode.

3 Turn the [SEL] button to select the setting item.

When the button is turned, the setting item changes in the following order and the selected item is highlighted.

... OFF ↔ Hi ↔ Low
↔ OFF...

Hi:
High effectiveness

Low:
Low effectiveness

4 Press the [SEL] button.

The selected settings will take effect.

5 Press the [RTN] button.

At this time, other adjustments can also be made in normal mode.

6 Press the [SOUND] or [RTN] button to exit sound adjustment mode.

Non-Fader phase selection (Non-F Phase)

The merging of sound between the front and rear speakers and the woofer can be improved by selecting the phase.

Switch to a phase which lets the speakers combine without any disharmony.

1 Turn the [SEL] button to select Non-F Phase.

2 Press the [SEL] button.

The mode will change to phase selection mode.

3 Turn the [SEL] button to select NORMAL or REVERSE.

NORMAL:

Normal phase

REVERSE:

Reverse phase

4 Press the [SEL] button.

The selected settings will take effect.

5 Press the [RTN] button.

At this time, other adjustments can also be made in normal mode.

6 Press the [SOUND] or [RTN] button to exit sound adjustment mode.

Non-Fader Output

Non-Fader Output can be stereo or mono. Select the method that matches the output method for the sub-woofer system that is connected to the deck.

1 Turn the [SEL] button to select Non-F Output.

2 Press the [SEL] button.

The mode will change to Non-F Output.

3 Turn the [SEL] button to select Stereo or Monaural.

4 Press the [SEL] button.

5 Press the [RTN] button.

At this time, other adjustments can also be made in normal mode.

6 Press the [SOUND] or [RTN] button to exit sound adjustment mode.

Importing Sound Data

Sound data adjusted by the website can be downloaded to a CD-R or a Memory Stick and imported into the deck.



ATTENTION

For details on the operation, please contact your dealer.

1 Turn the [SEL] button to select Sound Data.

2 Press the [SEL] button.

The mode will change to Sound Data mode.

3 Turn the [SEL] switch to select media types.

When the button is turned, the setting item changes in the following order.

Disc ↔ Memory Stick

4 Press the [SEL] button.

The front panel automatically opens.

5 Insert a CD-R or a Memory Stick.

6 Turn the [SEL] button to select the file.

The selected item will be highlighted.

7 Press the [SEL] button.

8 Select from buttons [1] through [5], and press and hold for 2 seconds or more to save to the unit.

The selected file is written to the selected button.

When using a CD-R, the CD-R will eject automatically when writing is complete.

The display will return to the file selection screen.

9 Press the [RTN] button.

At this time, other adjustments can also be made in normal mode.

10 Press the [SOUND] or [RTN] button to exit sound adjustment mode.

Operations during Pro Mode

1 Press the [SOUND] button for more than five seconds.

The mode switches between normal mode and pro mode each time the button is pressed. During pro mode, "PRO MODE ON" and the scroll display appear in the display.



ATTENTION

If you press the [SOUND] button during sound adjustment mode, the adjustment mode is cancelled and the mode returns to normal music mode.



CAUTION

When switching between Normal Mode and Pro Mode, please make sure that the volume level is set to 0.

2 Turn the [SEL] button to select a setting item.

When the button is turned, the setting item changes in the following order and the selected item is highlighted.

PEQ ↔ Time-Alignment ↔ X-Over ↔ Harmonizer ↔ Non-F Phase ↔ Non-F Output ↔ SP Layout ↔ Custom Mode ↔ Sound Data ↔ PEQ...

3 Press the [SEL] button.

Parametric equaliser adjustment (PEQ)

The parametric equalizer can be set for a both 3-way speaker system or a 4-speaker system. (For details about speaker layout, see page 194.)

4 speakers + subwoofer speaker layout

When the speaker layout is set to 4SP + SW, the parametric equaliser can be set with five bands each for the front channel and rear channel (a total of ten bands). The frequencies that can be set for each band are indicated below.

For the speaker layout settings, refer to "Selecting the Speaker Layout (SP Layout)" (See page 194).

Channel	Bands	Settable Frequencies (Hz)
Front	Front1 Front2 Front3	63, 80, 100, 125, 160, 200, 250, 315, 400, 500, 630, 800, 1k, 1.25k, 1.6k, 2.0k, 2.5k, 3.15k, 4.0k, 5.0k, 6.3k, 8.0k, 10k, 12.5k, 16k (25 Frequencies)
	Front4 Front5	200, 250, 315, 400, 500, 630, 800, 1k, 1.25k, 1.6k, 2.0k, 2.5k, 3.15k, 4.0k, 5.0k, 6.3k, 8.0k, 10k, 12.5k, 16k (20 Frequencies)
Rear	Rear1 Rear2 Rear3	63, 80, 100, 125, 160, 200, 250, 315, 400, 500, 630, 800, 1k, 1.25k, 1.6k, 2.0k, 2.5k, 3.15k, 4.0k, 5.0k, 6.3k, 8.0k, 10k, 12.5k, 16k (25 Frequencies)
	Rear4 Rear5	200, 250, 315, 400, 500, 630, 800, 1k, 1.25k, 1.6k, 2.0k, 2.5k, 3.15k, 4.0k, 5.0k, 6.3k, 8.0k, 10k, 12.5k, 16k (20 Frequencies)

ATTENTION

Identical frequencies within the front channel (bands F1 to F5) cannot be adjusted.

There are 10 Rear & Front-Frequency locations (5 + 5) available for the parametric equalizer. The Parametric Equalizer is divided into two channels Front & Rear.

Any frequency assigned is highlighted in White, and is unavailable for use elsewhere (See page 188).

Bands selected are grayed out in the diagram to show how they are in use and otherwise unavailable for reuse.

Bands in black are unused (available) and can be assigned to within their respective bands (Rear or Front parametric locations).

Example:

If you want the Front channel F1 location to have a parametric frequency of 3.15 kHz.

Because this frequency is in use by F2 you must first assign F2 a new frequency, this will release the band for use in the Front Group F1 at 3.15 kHz.

1 Turn the [SEL] button to select PEQ.

2 Press the [SEL] button.

The mode will change to parametric equaliser adjustment mode.

3 Press the [SEL] button to select the band to be adjusted.

Each time the button is pressed, the selection changes in the following order.

Front1 → Front2 → Front3 → Front4
→ Front5 → Rear1 → Rear2 →
Rear3 → Rear4 → Rear5 → Front1...

4 Turn the [SEL] button to select the frequency to be adjusted.

When the button is turned, the frequency changes in the following order.

Front1, Front2, Front3, Rear1, Rear2, Rear3	63Hz ↔ 80Hz ↔ 100Hz ↔ 125Hz ↔ 160Hz ↔ 200Hz ↔ 250Hz ↔ 315Hz ↔ 400Hz ↔ 500Hz ↔ 630Hz ↔ 800Hz ↔ 1kHz ↔ 1.25kHz ↔ 1.6kHz ↔ 2kHz ↔ 2.5kHz ↔ 3.15kHz ↔ 4kHz ↔ 5kHz ↔ 6.3kHz ↔ 8kHz ↔ 10kHz ↔ 12.5kHz ↔ 16kHz
Front4, Front5, Rear4, Rear5	200Hz ↔ 250Hz ↔ 315Hz ↔ 400Hz ↔ 500Hz ↔ 630Hz ↔ 800Hz ↔ 1kHz ↔ 1.25kHz ↔ 1.6kHz ↔ 2kHz ↔ 2.5kHz ↔ 3.15kHz ↔ 4kHz ↔ 5kHz ↔ 6.3kHz ↔ 8kHz ↔ 10kHz ↔ 12.5kHz ↔ 16kHz

5 Press the [▲] or [▼] button.

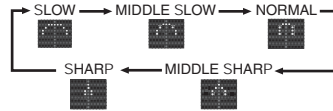
This adjusts the frequency level.

[▲] button:
Increases level

[▼] button:
Decreases level

6 Press the [6] button to select the Q curve pattern.

Each time the button is pressed, the Q curve changes in the following order.



7 Repeat the operations in steps 3 to 6 to change the settings for each band.

The frequencies that have been adjusted for either the channel or band cannot be selected.

8 Hold down a button, [1] to [5], for more than two seconds to preset a value.

The preset value is overwritten by the value set using the above steps.

The time alignment and crossover adjustments will also be stored at this time.

Rear Group

R 1	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1.0k Hz	1.25k Hz	1.6k Hz	2.0k Hz	2.5k Hz	3.15k Hz	4.0k Hz	5.0k Hz	6.3k Hz	8.0k Hz	10k Hz	12.5k Hz	16k Hz
R 2	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1.0k Hz	1.25k Hz	1.6k Hz	2.0k Hz	2.5k Hz	3.15k Hz	4.0k Hz	5.0k Hz	6.3k Hz	8.0k Hz	10k Hz	12.5k Hz	16k Hz
R 3	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1.0k Hz	1.25k Hz	1.6k Hz	2.0k Hz	2.5k Hz	3.15k Hz	4.0k Hz	5.0k Hz	6.3k Hz	8.0k Hz	10k Hz	12.5k Hz	16k Hz
R 4						R 200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1.0k Hz	1.25k Hz	1.6k Hz	2.0k Hz	2.5k Hz	3.15k Hz	4.0k Hz	5.0k Hz	6.3k Hz	8.0k Hz	10k Hz	12.5k Hz	16k Hz
R 5						R 200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1.0k Hz	1.25k Hz	1.6k Hz	2.0k Hz	2.5k Hz	3.15k Hz	4.0k Hz	5.0k Hz	6.3k Hz	8.0k Hz	10k Hz	12.5k Hz	16k Hz

F 1	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1.0k Hz	1.25k Hz	1.6k Hz	2.0k Hz	2.5k Hz	3.15k Hz	4.0k Hz	5.0k Hz	6.3k Hz	8.0k Hz	10k Hz	12.5k Hz	16k Hz
F 2	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1.0k Hz	1.25k Hz	1.6k Hz	2.0k Hz	2.5k Hz	3.15k Hz	4.0k Hz	5.0k Hz	6.3k Hz	8.0k Hz	10k Hz	12.5k Hz	16k Hz
F 3	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1.0k Hz	1.25k Hz	1.6k Hz	2.0k Hz	2.5k Hz	3.15k Hz	4.0k Hz	5.0k Hz	6.3k Hz	8.0k Hz	10k Hz	12.5k Hz	16k Hz
F 4						F 200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1.0k Hz	1.25k Hz	1.6k Hz	2.0k Hz	2.5k Hz	3.15k Hz	4.0k Hz	5.0k Hz	6.3k Hz	8.0k Hz	10k Hz	12.5k Hz	16k Hz
F 5						F 200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1.0k Hz	1.25k Hz	1.6k Hz	2.0k Hz	2.5k Hz	3.15k Hz	4.0k Hz	5.0k Hz	6.3k Hz	8.0k Hz	10k Hz	12.5k Hz	16k Hz

Front Group

9 Press the [RTN] button.

At this time, other adjustments can also be made in pro mode.

10 Press the [SOUND] or [RTN] button to exit sound adjustment mode.**ATTENTION**

When updating software, press the [AUDIO CONTROL] button to measure and display the frequency characteristics.

3WAY setting for speaker layout

Mid-Band (Group-1) Parametric adjustment in 5-Bands of 25 Frequencies.

Hi-Band (Group-2) Parametric adjustment in 5-Bands of 20 Frequencies.

Eclipse has by default assigned arbitrary frequencies for each of the 5-Bands (Hi/Mid for 10 parametric bands total).

**ATTENTION**

Identical frequencies within the Hi group (bands H1 to H5) cannot be adjusted. Release a frequency from its location, before it can be reassigned (available again for use in another band).

Example: If you want the Hi-Group H1 location to have a parametric frequency of 3.15kHz.

Because this frequency is in use by H2 you must first assign H2 a new frequency, this will release the band for use in the Hi-Group H1 at 3.15kHz.

There are 10 Mid & Hi-Frequency locations (5 + 5) available for the parametric equalizer.

The Parametric Equalizer is divided into two groups Mid & Hi.

Any frequency assigned is highlighted in White, and is unavailable for use elsewhere (See page 190).

Bands selected are grayed out in the diagram to show how they are in use and otherwise unavailable for reuse.

Bands in black are unused (available) and can be assigned to within their respective bands (Mid or Hi parametric locations).

1 Turn the [SEL] button to select PEQ.**2 Press the [SEL] button.**

The mode will change to parametric equaliser adjustment mode.

3 Press the [SEL] button to select the band to be adjusted.

Each time the button is pressed, the selection changes in the following order.

Hi1 → Hi2 → Hi3 → Hi4 → Hi5 → Mid1
→ Mid2 → Mid3 → Mid4 → Mid5
→ Hi1 ...

4 Turn the [SEL] button to select the frequency to be adjusted.

When the button is turned, the frequency changes in the following order.

Mid:	63Hz → 80Hz → 100Hz → 125Hz → 160Hz → 200Hz → 250Hz → 315Hz → 400Hz → 500Hz → 630Hz → 800Hz → 1kHz → 1.25kHz → 1.6kHz → 2kHz → 2.5kHz → 3.15kHz → 4kHz → 5kHz → 6.3kHz → 8kHz → 10kHz → 12.5kHz → 16kHz
Hi:	200Hz → 250Hz → 315Hz → 400Hz → 500Hz → 630Hz → 800Hz → 1kHz → 1.25kHz → 1.6kHz → 2kHz → 2.5kHz → 3.15kHz → 4kHz → 5kHz → 6.3kHz → 8kHz → 10kHz → 12.5kHz → 16kHz

5 Press the [∧] or [∨] button.

This adjusts the frequency level.

[∧] button:

Increases level

[∨] button:

Decreases level

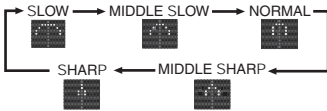


ATTENTION

- If the levels of adjacent frequencies are both raised to the maximum, this will cause distortion of the sound.
- Adjust PEQ to make the various frequency levels uniform. It is most effective if the gain is adjusted so that the ranges with high sound pressure (peaks) are matched to the ranges with low sound pressure.

6 Press the [6] button to select the Q curve pattern.

Each time the button is pressed, the Q curve changes in the following order.



7 Repeat the operations in steps 3 to 6 change the settings for each band.

8

Hold down a button, [1] to [5], for more than two seconds to preset a value.

The preset value is overwritten by the value set using the above steps.

The time alignment and crossover adjustments will also be stored at this time.

9

Press the [RTN] button.

At this time, other adjustments can also be made in pro mode.

10

Press the [SOUND] or [RTN] button to exit sound adjustment mode.



ATTENTION

When updating software, press and hold the [AUDIO CONTROL] button to measure and display the frequency characteristics.

Mid Group

M 1	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1.0k Hz	1.25k Hz	1.6k Hz	2.0k Hz	2.5k Hz	3.15k Hz	4.0k Hz	5.0k Hz	6.3k Hz	8.0k Hz	10k Hz	12.5k Hz	16k Hz
M 2	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1.0k Hz	1.25k Hz	1.6k Hz	2.0k Hz	2.5k Hz	3.15k Hz	4.0k Hz	5.0k Hz	6.3k Hz	8.0k Hz	10k Hz	12.5k Hz	16k Hz
M 3	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1.0k Hz	1.25k Hz	1.6k Hz	2.0k Hz	2.5k Hz	3.15k Hz	4.0k Hz	5.0k Hz	6.3k Hz	8.0k Hz	10k Hz	12.5k Hz	16k Hz
M 4	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1.0k Hz	1.25k Hz	1.6k Hz	2.0k Hz	2.5k Hz	3.15k Hz	4.0k Hz	5.0k Hz	6.3k Hz	8.0k Hz	10k Hz	12.5k Hz	16k Hz
M 5	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1.0k Hz	1.25k Hz	1.6k Hz	2.0k Hz	2.5k Hz	3.15k Hz	4.0k Hz	5.0k Hz	6.3k Hz	8.0k Hz	10k Hz	12.5k Hz	16k Hz

H 1	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1.0k Hz	1.25k Hz	1.6k Hz	2.0k Hz	2.5k Hz	3.15k Hz	4.0k Hz	5.0k Hz	6.3k Hz	8.0k Hz	10k Hz	12.5k Hz	16k Hz
H 2	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1.0k Hz	1.25k Hz	1.6k Hz	2.0k Hz	2.5k Hz	3.15k Hz	4.0k Hz	5.0k Hz	6.3k Hz	8.0k Hz	10k Hz	12.5k Hz	16k Hz
H 3	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1.0k Hz	1.25k Hz	1.6k Hz	2.0k Hz	2.5k Hz	3.15k Hz	4.0k Hz	5.0k Hz	6.3k Hz	8.0k Hz	10k Hz	12.5k Hz	16k Hz
H 4	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1.0k Hz	1.25k Hz	1.6k Hz	2.0k Hz	2.5k Hz	3.15k Hz	4.0k Hz	5.0k Hz	6.3k Hz	8.0k Hz	10k Hz	12.5k Hz	16k Hz
H 5	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1.0k Hz	1.25k Hz	1.6k Hz	2.0k Hz	2.5k Hz	3.15k Hz	4.0k Hz	5.0k Hz	6.3k Hz	8.0k Hz	10k Hz	12.5k Hz	16k Hz

Hi-Group

Selecting an equaliser mode from memory

See page 180 (operation procedure in Normal mode).

Measuring/display frequency characteristic

See page 180 (operation procedure in Normal mode).

Time alignment settings (Time Alignment)

By adjusting the sound lag time and level for each speaker, it is possible to offset the positional discrepancies in the speaker sounds for any listening position.

1 Turn the [SEL] button to select Time Alignment.

2 Press the [SEL] button.

The mode will change to time alignment setting mode.

3 Press the [SEL] button to select a setting item.

When the button is turned, the setting item changes in the following order and the selected item is highlighted.

When the speaker layout setting is 4SP + SW:

FL → FR → RL → RR → SW → FL ...

When the speaker layout setting is 3WAY:

HL → HR → ML → MR → LL → LR → HL ...

4 Turn the [SEL] button to select a setting item.

The lag time can be adjusted in the range 0.0 to 10.0 ms, in 0.1 ms increments.

Turn to the right ...Time is increased

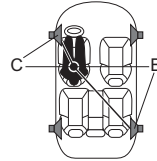
Turn to the left ...Time is decreased

The formula for calculating the lag time is:

$$A = (B-C)/34$$

A = Lag time (ms)

B = Distance to the farthest speaker from the listening position (cm)



C = Distance (cm) from the listening position to each speaker to be adjusted.

Example: The listening position is the driver's seat (right)

B:200(cm)

C:50(cm)

Lag time = $200(\text{cm}) - 50(\text{cm}) / 34 \approx 4.4(\text{ms})$

5 Adjust the level of the speaker by pressing the [^] or [v] buttons.

The level for each speaker can be adjusted in the range 0~-30 dB, -∞.

[^]button:
Increases the level

[v]button:
Decreases the level

6 Repeat steps **3** through **5** to adjust the other speakers.

7 Press the [RTN] button.

At this time, other adjustments can also be made in pro mode.

Crossover adjustment (X-Over)

With the 4-speaker system, the frequencies of the front speaker HPF (High Pass Filter) and woofer LPF (Low Pass Filter) can be adjusted. With the 3-way speaker system (a speaker system combining a high range tweeter, a mid range speaker and a low range woofer), the integration between the sound of the speakers is improved by adjusting playback zones using tweeter HPF, midrange HPF and LPF and woofer LPF.

1 Turn the [SEL] button to select X-Over.

2 Press the [SEL] button.

The mode will change to crossover setting mode.

3 Press the [SEL] button to select a setting item.

When the button is turned, the setting item changes in the following order and the selected item is highlighted.

When the speaker layout setting is 4SP + SW:
F(Front) → R(Rear) → W(Woofer) → F(Front)...

When the speaker layout setting is 3WAY:
Hi → M-L(M-LPF) → M-H(M-HPF) → Low → Hi...

4 Turn the [SEL] button to select the cut-off frequency.

When the button is turned, the frequency changes in the following order.

When the speaker layout setting is 4SP + SW: Front/Rear	63Hz → 80Hz → 100Hz → 125Hz → 160Hz → 200Hz → 250Hz → 315Hz → 400Hz → 500Hz → 630Hz → 800Hz → 1kHz → 1.25kHz → 1.6kHz → 2kHz → 2.5kHz → 3.15kHz → 4kHz → 5kHz → 6.3kHz → 8kHz → 10kHz
Woofer	63Hz → 80Hz → 100Hz → 125Hz → 160Hz → 200Hz
When the speaker layout setting is 3WAY: Hi/M-LPS	200Hz → 250Hz → 315Hz → 400Hz → 500Hz → 630Hz → 800Hz → 1kHz → 1.25kHz → 1.6kHz → 2kHz → 2.5kHz → 3.15kHz → 4kHz → 5kHz → 6.3kHz → 8kHz → 10kHz
Low/M-HPS	63Hz → 80Hz → 100Hz → 125Hz → 160Hz → 200Hz

5 Press the [∧] or [∨] buttons to set the slope.

[∧] button :

The slope becomes more gentle.

[∨] button :

The slope becomes steeper.

The slope can be set to "PASS", "6dB/oct", "12dB/oct", "18dB/oct" or "24dB/oct".

ATTENTION

If no woofer has been connected, set the slope adjustment to "PASS". (If slope is set to a setting other than PASS, the low frequency range will not be output from the speakers.)

6 Repeat the operations in steps 3 to 5 to change the settings for each channel.

7 Press the [RTN] button.

At this time, other adjustments can also be made in pro mode.

- 8** Press the [SOUND] or [RTN] button to exit sound adjustment mode.

Multi-harmonizer settings (Harmonizer)

This function uses harmonic synthesis to restore the high-frequency component that is lost as a result of the compression process so that fresher sound can be obtained during MP3/WMA, Memory Stick (ATRAC3) playback.

- 1** Turn the [SEL] button to select Harmonizer.

- 2** Press the [SEL] button.

The mode will change to multi-harmonizer setting mode.

- 3** Turn the [SEL] button to select the setting item.

When the button is turned, the setting item changes in the following order and the selected item is highlighted.

... OFF ↔ Hi ↔ Low ...

Hi:

High effectiveness

Low:

Low effectiveness

- 4** Press the [SEL] button.

The selected settings will take effect.

- 5** Press the [RTN] button.

At this time, other adjustments can also be made in pro mode.

- 6** Press the [SOUND] or [RTN] button to exit sound adjustment mode.

Non-Fader phase selection (Non-F Phase)

The merging of sound between the front and rear speakers and the woofer can be improved by selecting the phase.

Switch the phase to a phase which lets the speakers combine without any disharmony.

- 1** Turn the [SEL] button to select Non-F Phase.

- 2** Press the [SEL] button.

The mode will change to phase selection mode.

- 3** Turn the [SEL] button to select NORMAL or REVERSE.

NORMAL:

Normal phase

REVERSE:

Reverse phase

- 4** Press the [SEL] button.

The selected settings will take effect.

- 5** Press the [RTN] button.

At this time, other adjustments can also be made in pro mode.

- 6** Press the [SOUND] or [RTN] button to exit sound adjustment mode.

Non-Fader Output

Non-Fader Output can be stereo or mono. Select the method that matches the output method for the sub-woofer system that is connected to the deck.

1 Turn the [SEL] button to select Non-F Output.

2 Press the [SEL] button.

The mode will change to Non-F Output.

3 Turn the [SEL] button to select Stereo or Monaural.

4 Press the [SEL] button.

The selected settings will take effect.

5 Press the [RTN] button.

At this time, other adjustments can also be made in pro mode.

6 Press the [SOUND] or [RTN] button to exit sound adjustment mode.

Selecting the speaker layout (SP Layout)

Depending on the type of the speakers connected, you can select a 4-speaker system or a 3WAY speaker system. (Make this selection before performing PEQ, time alignment, and crossover adjustments.)

1 Turn the [SEL] button to select SP Layout.

2 Press the [SEL] button.

The mode will change to speaker layout mode.

3 Turn the [SEL] button to select a setting item.

3WAY:

3WAY speaker system

4SP + SW:

4 speaker and a sub-woofer

4 Hold down the [SEL] button for longer than 5 seconds.

5 The speaker layout confirmation message will be displayed. If the layout is OK, press [SEL].

Press the [RTN] button to return the speaker layout selection screen.

6 Press the [RTN] button.

At this time, other adjustments can also be made in pro mode.

7 Press the [SOUND] or [RTN] button to exit sound adjustment mode.



ATTENTION

If the vehicle is equipped with the 3-way speaker system, do not change from pro mode to normal mode.
Doing so may cause damage to the speakers.



CAUTION

When switching between 3WAY mode and 4SP + SW mode, please make sure that the volume level is set to 0.

Importing Sound Data

See page 185.



ATTENTION

For details on the operation, please contact your dealer.

Selecting the Custom Mode

Values (PEQ, time alignment, cross over value) can be adjusted using the custom mode on the website. Adjust values following the instructions provided on the operation procedure screen, and download the data to a Memory Stick.

1

Turn the [SEL] button to select Custom Mode.

2

Press the [SEL] button.

The mode will change to custom mode.

Insert a memory stick containing data.

3

Turn the [SEL] button to select ON or OFF.

If a Memory Stick is not inserted, a caution appears instead of ON/OFF.

4

Press the [SEL] button.

5

Press the [RTN] button.

At this time, other adjustments can also be made in pro mode.

6

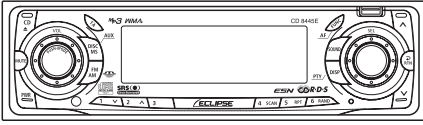
Press the [SOUND] or [RTN] button to exit sound adjustment mode.



ATTENTION

PEQ, time alignment, and cross over values cannot be adjusted while the custom mode is on. To adjust values, turn the custom mode off.

Making changes with Display Adjustment



This mode lets you adjust the display brightness, change the button illumination colour and turn the display on and off.

1 Press the [DISP] button for less than one second.

Enters display adjustment mode.



ATTENTION

If you press the [DISP] button during display adjustment mode, the display adjustment mode is cancelled and the mode returns to normal music mode.

2 Turn the [SEL] button in either direction to display setting items for selection.

When the button is turned, the setting item changes in the following order and the selected item is highlighted.

… Motion Picture ↔ Bright ↔
ILL ↔ Disp ON/OFF ↔ Disp
Data ↔ Motion Picture…

Switching the motion picture

You can select a moving picture screen that is already available in the deck and show it on the display. The deck has three types of motion picture available.

In addition, moving picture screens provided by the Eclipse web services can be downloaded, imported into the deck and displayed. Applications can also be downloaded and your own images can be converted into moving pictures. (For details, see page 198.)

1 Turn the [SEL] button to select the Motion Picture.

2 Press the [SEL] button.

The Motion picture selection mode is activated.

3 Turn the [SEL] button to select the Motion Picture Type A, B, C and OFF.

The selection item will be highlighted.

4 Press the [SEL] button.

The selected settings will take effect.

5 Press the [RTN] button.

At this time, other adjustments can also be made in display adjustment mode.

6 Press the [DISP] or [RTN] button to exit display adjustment mode.

Switching the brightness

Adjust the display brightness to the best level.

1 Turn the [SEL] button to select Bright.

2 Press the [SEL] button.

The mode will change to luminance adjustment mode.

3 Turn the [SEL] button to adjust brightness.

When the button is turned, the brightness level changes in the following order.

(Level) 1 ↔ 2 ↔ 3 ↔ 4 ↔ 5

4 Press the [SEL] button.

The selected settings will take effect.

5 Press the [RTN] button.

At this time, other adjustments can also be made in display adjustment mode.

6 Press the [DISP] or [RTN] button to exit display adjustment mode.**Changing illumination colour**

You can change the button illumination colour in the following way.

1 Turn the [SEL] button to select ILL.**2 Press the [SEL] button.**

The screen for changing the illumination colour will appear.

3 Turn the [SEL] button to adjust the illumination colour.

When the button is turned, the illumination colour changes in the following order.

… All Green ↔ Blue/Red ↔
Blue/Green ↔ Blue/Amber ↔
All Red ↔ All Green…

4 Press the [SEL] button.

The selected settings will take effect.

5 Press the [RTN] button.

At this time, other adjustments can also be made in display adjustment mode.

6 Press the [DISP] or [RTN] button to exit display adjustment mode.**Disabling the display**

You can turn the display on and off in the following way.

1 Turn the [SEL] button to select DISP ON/OFF.**2 Press the [SEL] button.**

The screen for turning the screen display on and off will appear.

3 Turn the [SEL] button to select ON or OFF.

The selected item will be highlighted.

4 Press the [SEL] button.

The selected settings will take effect.

5 Press the [RTN] button.

At this time, other adjustments can also be made in display adjustment mode.

6 Press the [DISP] or [RTN] button to exit display adjustment mode.

The screen for turning the screen display on and off will appear.

 **ATTENTION**

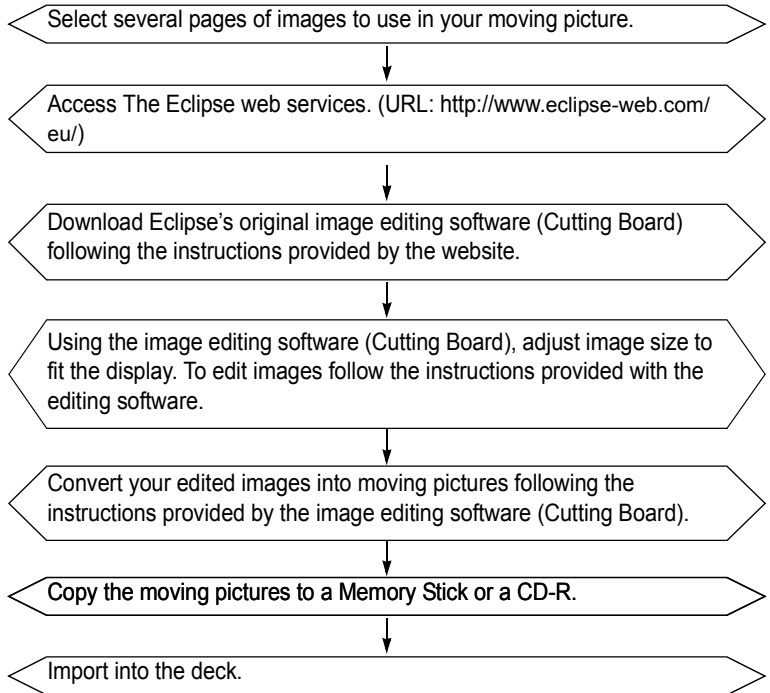
- When the display is OFF, when one of the buttons is activated, the screen display will come on within 6 seconds.
- When the OFF function is selected, the screen display will turn off. However, it is possible to adjust the display adjustment mode.

Importing DISP screens

Motion picture screens provided by the Eclipse web services can be downloaded and used instead of pre-set motion pictures. To download motion picture screens follow the Eclipse web services. After downloading the data to your PC, copy the data to a Memory Stick or CD-R and import the data into the deck.

(URL: <http://www.eclipse-web.com/eu/>)

Applications for creating moving picture screens can be downloaded, allowing you to create your own original moving picture screens. Screens can be created by following the steps shown below:



1 Turn the [SEL] button to select Disp Data.

2 Press the [SEL] button.

The Disp Data mode is activated.

3 Turn the [SEL] button to select media types.

4 Press the [SEL] button.

- When using a CD-R:
The front panel opens automatically and, if a CD has already been loaded into the deck, it will automatically eject.
- When using a Memory Stick:
If the Memory Stick containing the images is not inserted, the front panel opens automatically.

5 Insert the CD or Memory Stick and read the media.

6 Press the [CD▲] button to close the front panel.

7 Turn the [SEL] button to select files.

The selected item will be highlighted.

8 Press the [SEL] button.

The moving picture screen will be displayed.

9 Turn the [SEL] button to select from the locations to which you want to import the data: [Type A] – [Type C].

When the button is turned, the setting item changes in the following order and the selected item is highlighted.

Type A ↔ Type B ↔ Type C
↔ Type A···

10 Press the [SEL] button.

[OK?] appears on the display.

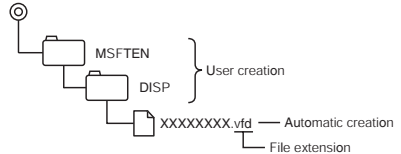
11 Press the [SEL] button.

This begins importing the data into the deck. If the data has already been imported, the data will be overwritten. When importing has completed, [Completed] will appear and the front panel opens automatically, and CD-Rs will automatically eject. Press the [CD▲] button to close the panel.

ATTENTION

When using a Memory Stick:

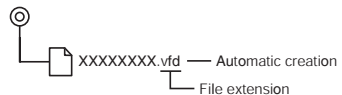
- Data downloaded from the Eclipse web services can be saved in folders on the Memory Stick as follows:



- Files that can be imported into the deck are created automatically when downloaded from the website.
- The file name can be changed using 8 alphanumeric characters (space cannot be used).

When using a CD-R:

- The deck can only import files from CD-R that have been written in root directories.



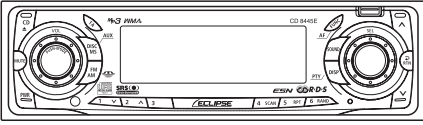
- Disc formats that may be used are as follows:
 - CD-ROM (MODE 1)
 - CD-ROM (MODE2_FORM 1)
 - *CD-ROMs written in MODE2_FORM2 cannot be read.
 - The file name can be changed using 8 alphanumeric characters (space cannot be used).
 - Do not turn ON/OFF the power is this deck or ignition switch while the importing. The importing will be interrupted and the data may be damaged.
 - When data is imported from a CD-R, the importing process will take a long time if a lot of data other than the import data has also been saved to the CD-R.
-

12 Press the [RTN] button.

At this time, other adjustments can also be made in display adjustment mode.

13 Press the [DISP] or [RTN] button to exit display adjustment mode.

Making changes with Function Mode



A variety of settings can be changed.

1 Press the [FUNC] button for less than one second.

The function mode is activated.



ATTENTION

If you press the [FUNC] button during function mode, the adjustment mode is cancelled and the mode returns to normal music mode.

2 Turn the [SEL] button in either direction to display setting items for selection.

When the button is turned, the setting item changes in the following order and the selected item is highlighted.

Title*¹ ↔ Memory Stick*² ↔ Guide Tone ↔ Clock ON/OFF ↔ Clock Adjust ↔ Demo ↔ AUX Sensitivity*³ ↔ Title*¹...

*1: Cannot make settings other than for CD or CD changer operation. (Refer to page 132 for details on CD operation.)

*2: Settings cannot be adjusted during recording.

*3: Refer to page 206 for details on AUX Sensitivity.

Disabling the guide tone feature (for button operation)

The receiver is set at the factory to emit a beep tone in response to button operation. The guide tone feature may be disabled in the following procedure:

1 Turn the [SEL] button to select Guide Tone.

2 Press the [SEL] button.

The guide tone mode will be switched ON/OFF.

3 Turn the [SEL] button to select ON or OFF.

The selected item will be highlighted.

4 Press the [SEL] button.

The selected settings will take effect.

5 Press the [RTN] button.

At this time, other adjustments can also be made in function mode.

6 Press the [FUNC] or [RTN] button to exit function mode.

Clock display on/off

Switches the clock display to ON/OFF.

1 Turn the [SEL] button to select Clock.

2 Press the [SEL] button.

The clock display ON/OFF mode is activated.

- 3 Turn the [SEL] button to select ON or OFF.

The selected item will be highlighted.

- 4 Press the [SEL] button.

The selected settings will take effect.

- 5 Press the [RTN] button.

At this time, other adjustments can also be made in function mode.

- 6 Press the [FUNC] or [RTN] button to exit function mode.



ATTENTION

The clock display can also be turned on and off by pressing the [6] button while the power is turned off.

Setting the time

This receiver uses the 12-hour display notation.

- 1 Turn the [SEL] button to select Clock Adjust.

- 2 Press the [SEL] button.

The clock adjustment mode is activated.

- 3 Press the [SEL] button to display the item to be selected for adjustment.

Hours or minutes will be switched each time the button is pressed.

- 4 Turn the [SEL] button.

Turn to the right:
Turns the time forward.

Turn to the left:
Turns the time back.

- 5 Press the [RTN] button.

At this time, other adjustments can also be made in function mode.

- 6 Press the [FUNC] or [RTN] button to exit function mode.

Switching demonstration screen display

You can set the demonstration screen display to appear or not appear when the power is turned on.

When the power turns on, the various demonstration screens such as the audio operation screens and motion picture screens will appear repeatedly in the following order.

If you press a button while the demonstration screens are being displayed, the demonstration screens will be cancelled and the audio operation screen will be displayed. If you do not operate the status display function within 15 seconds, the display will return automatically to the demo screen.

- 1 Turn the [SEL] button to select the Demo.

- 2 Press the [SEL] button.

The Demo ON/OFF mode is activated.

- 3 Turn the [SEL] button to select ON or OFF.

The selected item will be highlighted.

- 4 Press the [SEL] button.

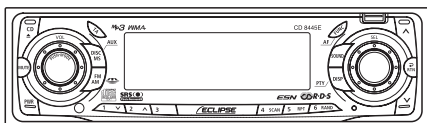
The selected settings will take effect.

- 5 Press the [RTN] button.

At this time, other adjustments can also be made in function mode.

- 6 Press the [FUNC] or [RTN] button to exit function mode.

How to operate the receiver with an optional CD changer connected



This section covers the operation of an optional CD changer that is connected to the receiver. To switch from another mode, press the [DISC MS] button for less than one second.

Listening to a CD

1 Press the [DISC MS] button for less than one second.

Each press of the button switches the mode from CD player → CD Changer 1 → CD Changer 2 → Memory Stick player.

A changer or player with no discs loaded will be skipped.

Advancing to the next track or returning to the beginning of the track being played

1 Turn the [SEL] button to the left or right.

Turn to the right: Advances to the next track.

Turn to the left: Returns to the beginning of the track being played.

(Repeat turning for previous tracks.)

Fast Forward/Rewind

Fast forward or rewind the song currently being played.

1 Press and hold the [^] or [v] button.

[^] button: Fast forward.

[v] button: Rewind.

Playing the beginning of tracks (SCAN)

1 Press the [4 SCAN] button.

Pressing the button for less than one second causes the changer to move up to the next track and play it for 10 seconds, then move up to the next track and play it for 10 seconds, and so on, on one CD, until the button is pressed again.

Press the button for longer than a second to play the first 10 seconds of the first track of every CD loaded.

ATTENTION

- To continue playing a desired track, press the button again to stop scanning.
- After the entire disc is scanned once, ordinary playback starts from the point where scanning started.

Repeating the same track (REPEAT)

1 Press the [5 RPT] button.

Pressing on the button for less than one second causes the changer to repeat the track currently being played, until the button is pressed again.

Press the button for longer than a second to repeat all tracks on the CD being played.

Playing tracks in random order (RANDOM)

1 Press the [6 RAND] button.

Pressing on the button for less than one second causes the changer to play the tracks on the currently playing CD in random order, until the button is pressed again.

Press the button for longer than a second to play tracks from all of CDs loaded in the currently selected changer, in random order.



ATTENTION

- During random playback, press the [5 RPT] button to repeat the track being played. To cancel repeat play (go back to random play), press the [5 RPT] button again.

During playback of a particular track: The track being played is played repeatedly.

While searching: The following track is played repeatedly.

- Occasionally the same track happens to be played (selected) two or more times in a row, but it is not a sign of a problem.
- When any of the functions - "Playing the beginning of tracks", "Repeating the same track" and "Playing tracks in random order" - is selected, a message such as [SCAN], [ALL SCAN], [REPEAT], [ALL REPEAT], [RANDOM] or [ALL RANDOM] appears on the display to verify the current function.
- Random play is not cancelled even if a magazine is ejected.

Skipping to the next or previous CD

1 Press button [1 √] or [2 ^].

Button [1 √]:

Selects the next lower number disc.

Button [2 ^]:

Selects the next higher number disc.

Specifying a CD to play

A CD of your choice is directly selectable out of the loaded discs.

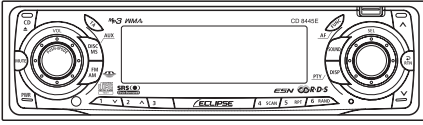
1 Press the [SEL] button for less than one second.

2 Press a button from [1] to [6].

Buttons	1	2	3	4	5	6
CD	1	2	3	4	5	6
	7	8	9	10	11	12

To select a CD from nos. 7 to 12, press the desired button considerably longer.

Others



Connecting portable audio players to the AUX jack

Use a commonly available accessory cord with the RCA connector to connect a portable audio player to the AUX (auxiliary) jack of this system.

- 1** Turn on the portable audio player and start its play function.
- 2** Switch to AUX mode by pressing the [DISC MS] button for more than one second.

Activation of the AUX mode will light the "AUX" indicator and channel audio player output to the system speakers.

ATTENTION

- While the AUX mode is activated, actions such as turning off the audio player or pulling out the connection cord may cause noise spikes that can damage the system speakers. Be sure to avoid this possibility by turning off system power or switching from AUX mode to another mode before shutting off or disconnecting the portable audio player.
- Audio output levels will differ for the various devices that can be connected by this method. Carefully adjust volume until the output level of the connected player is known.
- Before using a portable audio player in a vehicle, read the player's operation manual carefully and confirm problem-free operation in the vehicle before proceeding.

Changing auxiliary input sensitivity

The sensitivity of the auxiliary mode can be changed.

- 1 Press the [FUNC] button for less than one second.

The function mode is activated.

- 2 Turn the [SEL] button to select AUX Sensitivity.

The selected item is highlighted.

- 3 Press the [SEL] button.

The AUX sensitivity mode is activated.

- 4 Turn the [SEL] button to select the sensitivity mode.

Turning the button allows you to toggle through sensitivity modes as follows:

Low → Mid-Low → Mid → Hi
→ Low...

ATTENTION

Input sensitivity modes are roughly as follows:

Low	2 Vrms
Mid-Low	960 mVrms
Mid	480 mVrms
Hi	240 mVrms

- 5 Press the [SEL] button.

The selected settings will take effect.

- 6 Press the [RTN] button.

At this time, other adjustments can also be made in function mode.

- 7 Press the [FUNC] or [RTN] button to exit function mode.

Telephone muting function

When you receive an incoming phone call, the volume of the audio function is reduced to zero. This function is effective when the car telephone is connected to the unit with a cable.

Upon receiving a telephone call, the sounding muting function comes ON.

When the mute function is ON, "MUTE" is displayed.

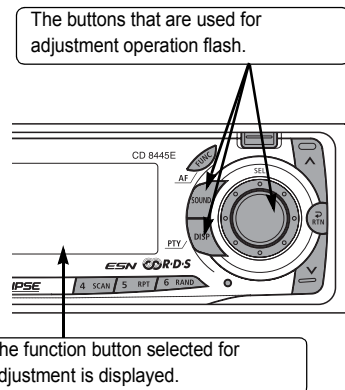
When the telephone call ends, the mute function goes OFF and the volume setting in use immediately before the phone call was received is restored.

WARNING

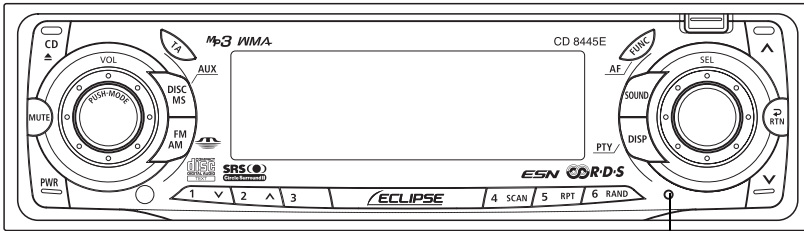
While driving a vehicle, use a hands-free kit for phone calls to avoid dangers.

Operation DISP screens

In display adjustment mode, function mode and sound adjustment mode, the screen displays help to guide you in carrying out operations.



If you have a question:



[RESET] button

First check the item mentioned below before attempting to troubleshoot problems.

CAUTION

If a problem occurs, for instance when the unit does not respond to any button presses, or the display doesn't work correctly, press the [RESET] button using a paper clip or similar item.

Pressing the [RESET] button will delete all the entries from memory. The settings will return to those made at the factory prior to shipment.

Displayed information (for troubleshooting)

The information listed in the chart below is displayed to show the status of the CD, Memory Stick player and CD changer. Refer to the chart for the appropriate action.

Information	Contents	Explanation and remedial action to take
INFO 2	NO DISC LOADED IN THE MAGAZINE	There is no disc in the magazine or player. Load a disc in the magazine. (Load a music disc.)
INFO 3	DISCS ARE DIRTY OR DAMAGED	The loaded disc is dirty or upside down. Check it for proper orientation and verify it is clean.
INFO 5	CD PLAYER AND CD CHANGER FAILS MECHANICALLY	<ul style="list-style-type: none"> The CD player and CD changer is inoperative for some reason. Go through the magazine removal procedure. If a magazine fails to eject, have your dealer fix problem.
INFO 6	WHEN THE CD PLAYER AND CD CHANGER INTERNAL TEMPERATURE IS HIGH (TO PROTECT PICKUP UNIT)	<ul style="list-style-type: none"> The temperature in the CD player and CD changer is too high for operation. Wait till it cools down. Resume playing after the "High temperature sensed and CD stopped" display disappears. If the CD still cannot play, have your dealer repair it.
INFO 7	AN INTERNAL POWER SUPPLY FAILURE IS OCCURRING	<ul style="list-style-type: none"> Turn the ACC off once before turning it on once again to resume the operation. If this condition persists, please contact your dealer.
LOAD		CD changer is in the process of verifying the presence of CDs after a magazine has been inserted into the CD changer.

Other information

MSINFO 1	YOU TRIED TO PLAYBACK AND READING DATA WHEN NO MG MEMORY STICK OR MEMORY STICK WAS INSERTED	Insert MG Memory Stick or Memory Stick.
MSINFO 2	YOU TRIED TO PLAYBACK AN INCORRECTLY FORMATTED MEMORY STICK	Use the deck to format the Memory Stick.
MSINFO 3	THE WRITE PROTECTION SWITCH IS LOCKED.	Unlock the write protection switch.
MSINFO 4	THE MEMORY STICK FULL	Delete some of the data from the Memory Stick before saving.
MSINFO 5	YOU TRIED TO RECORD MORE THAN THE MAXIMUM NUMBER OF TRACKS (400) ONTO A MG MEMORY STICK	Delete some of the MG Memory Stick data or use a different MG Memory Stick for recording.
MSINFO 6	AN INCOMPATIBLE MEMORY STICK HAS BEEN INSERTED	Check that the Memory Stick can be used with this deck.
MSINFO 7	MG MEMORY STICK CONTAINING NO MUSIC DATA HAS BEEN INSERTED	Insert a MG Memory Stick containing music data.
MSINFO 8	YOU TRIED TO PLAYBACK DATA THAT INCLUDES A PLAYBACK GUARD	Data that includes a playback guard can not be played back.
MSINFO 9	MG MEMORY STICK YOU TRIED TO PLAY BACK HAS PLAYBACK LIMITATIONS	Data that includes a playback guard can not be played back.
FILE ERR	A MG MEMORY STICK CONTAINING INCOMPATIBLE FILES HAS BEEN INSERTED	Insert a MG Memory Stick containing compatible files.
LOAD_MAP_D ATA	DAMAGE TO MEMORY STICK DATA	Memory stick data is damaged because the ignition switch has been turned ON/OFF during the data import process.
SIZE_ERR	THE VOLUME OF IMPORT DATA IS LARGE	Confirm the Memory Stick data.

Mode	Problem	Causes	Remedial action to take	Refer to page
Common to all	Dead or weak sound	Is the volume control up sufficiently?	Turn up the volume control.	170
		Is the muting function in effect (MUTE)?	Cancel the muting (MUTE) function.	170
		Is the fader or balance control set far to one side?	Readjust the fader and balance controls to more normal positions.	171
		Other probable causes include broken audio-signal wiring or a faulty speaker.	Have your dealer check the problem.	—
	Power does not turn on.	Are there too electrical items installed, causing a lack of power?	Have your dealer check the problem.	—
		Other probable causes include a run-down car battery, broken power or interconnection wiring.	Have your dealer check the problem.	—
	Frequencies or titles set in memory are deleted.	Has the car battery been disconnected for repair or checked out?	Reenter them into memory.	150, 151
		Are there too electrical items installed and causing lack of available power?	Have your dealer check the problem.	—
		Other probable causes include run-down car battery, broken power or interconnection wiring.	Have your dealer check the problem.	—
	No guide tone sounds.	Is the guide tone disabled?	Enable the guide tone.	201
	The remote control does not work.	Is the battery low?	Replace battery.	159
		Is the battery installed in reverse polarity?	Reinstall the battery in the correct polarity.	159
		Is direct sunlight hitting the remote control light receptor?	Use the remote control close to the receptor.	—
Other probable causes include a malfunctioning remote control.		Have your dealer check the problem.	—	
CD	The disc cannot be inserted. The disc is ejected as soon as it is inserted. Or, the disc cannot be ejected. The disc cannot be changed.	Is an extra label or seal applied to the disc?	Do not apply labels or seals to the disc.	129
		Are there rough edges, deformations or damaged areas on the disc?	Try inserting another disc. Remove any burrs. Do not use a deformed or damaged disc.	129
	Sound skips around. Sound is intermittent. Sound is bad in quality.	Is the disc damaged? (scratched, warped, etc.)	Try another disc. Do not play a damaged disc.	129
		Is the disc clean?	Clean the disc.	130
		Is the player mounted at a proper angle? Is the player mounted loosely?	Have your dealer check it out.	—
		Are you driving over a rough surface?	Avoid playback while driving over rough surfaces.	124
	The disc cannot be ejected.	If unknown	Press the [CD ▲] button for longer than five seconds with the front panel opened.	—

Mode	Problem	Causes	Remedial action to take	Refer to page
Tuner	Receives no stations, or receives static noise.	Is the antenna retracted?	Extend the antenna.	—
		Is the tuner correctly tuned to a station?	Tune to a station.	150
		Are you driving outside the service area of your preset stations?	Tune to a local station. (Please note, there may be no local stations servicing the area where you are currently driving.)	150
		Are you operating other equipment such as computer, or a mobile phone, in your vehicle at the same time as your receiver?	Avoid operating such equipment while using the receiver.	—
		Other problems may include a loose or disconnected antenna cable, a bad antenna cable or a bad wiring.	Have your authorised Eclipse retailer check the problem.	—

Specifications

<GENERAL>

Power Output	MOSFET 50W×4
Line Output Level/Impedance	8V (0dB)/55Ω
Power Supply	14.4V DC (11-16V)
Current Drain	3A
Dimensions (W x H x D)	178 x 50 x 155mm
Tone Control	BASS: ±12db at 80Hz MID: ±12db at 630Hz Treble: ±12db at 10kHz
Loudness	+10dB at 100Hz/+ 6.5dB at 10kHz

<FM TUNER>

Frequency Range	87.5~108.0 MHz (50kHz step)
Usable Sensitivity	13dBf
50dB Quieting Sensitivity	14dBf
Frequency Response	30~15,000Hz
Stereo Separation	38dB (1kHz)

<LW TUNER>

Frequency Range (LW)	153~279kHz (3kHz step)
Usable Sensitivity	30μV

<MW TUNER>

Frequency Range (MW)	522~1611kHz (9kHz step)
Usable Sensitivity	20μV

<CD SECTION>

Frequency Response	20Hz~20,000Hz
Total Harmonic Distortion	0.008%
Wow & Flutter	Below measurable limits
S/N Ratio	100dB
Dynamic Range	98dB
Channel Separation	85dB

<MEMORY STICK PLAYER SECTION>

Frequency Response	20Hz~20,000Hz
S/N Ratio	100dB
Total Harmonic Distortion	0.008%

IMPORTANT

**RECORD YOUR “KEY CD”
OR “MEMORY STICK
(SECURITY CODE)”
HERE...**

**STORE YOUR “KEY CD”
OR “MEMORY STICK
(SECURITY CODE)”
ALONG WITH YOUR
OWNER’S MANUAL.**

KUNDENHINWEIS

Bitte bewahren Sie dieses Handbuch auf und tragen Sie die Seriennummer Ihres CD8445E zur Identifikation ein. Die Seriennummer ist auf dem Gehäuse mittels eines Etiketts oder Aufdrucks angebracht.

Seriennummer

CUSTOMER NOTICE

Please retain this booklet and write in the serial number of your CD8445E for identification. The serial number is labeled or stamped on the chassis.

Serial No.

AVISO AL CONSUMIDOR

Rogamos conserve este manual y anote en él el número de serie de su CD8445E para su posterior identificación. Dicho número de serie aparece en una etiqueta o bien estampado sobre el equipo.

Núm. de serie

FUJITSU TEN LIMITED
Contact: FUJITSU TEN (EUROP) GmbH
Mündelheimer Weg 39, 40472 Düsseldorf
F.R.Germany

www.eclipse-web.com/eu/

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