clarion®

Owner's Guide
Mode d'emploi
Guía del usuario

RAX331D
RAX330F

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AM/FM CASSETTE WITH CD CHANGER CONTROL

RADIOCASSETTE AM/FM CON CONTROL DE CAMBIADOR DE CD

ALPHA

Clarion Co., Ltd.

7. FM RECEPTION

FM radio waves are transmitted in the very high frequency (VHF) range and move in straight lines, much like light. Tall buildings, hills or other obstructions may cause "**shadows**" with loss of signal, noted by momentary hissing noise during FM reception. FM signals can also be reflected by obstructions. Direct and reflected radio signals from the same station arriving together at the antenna may cause similar noise (multipath interference).
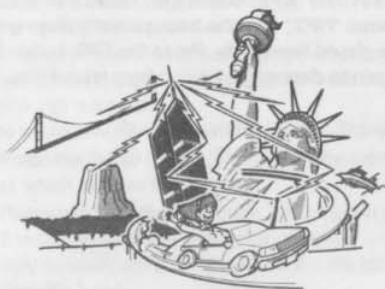
This may occur in any FM car radio.

This unit incorporates advanced technology (**MAGI-TUNE® FM**) to improve FM reception in your car.

WEAK SIGNAL CONDITION As FM signals weaken when the distance to the transmitter increases, the Signal Actuated Stereo Control (SASC) circuit provides optimum low noise reception; stereo separation is gradually changed to monaural with a gradual cut-back on high frequency reproduction (hiss noise). The **Dual Gate FET RF** amplifier has a higher signal-to-noise ratio and improved sensitivity. Automatic DX/LO circuit (**Keyed AGC**) gives full sensitivity.

ANY SIGNAL CONDITION Keyed AGC automatically controls the sensitivity for ideal FM reception. Interference from strong nearby stations is avoided by optimum selectivity. The FM noise canceler (Clean-Z_1) suppresses ignition noise and other pulse interference picked up by the car antenna, giving cleaner FM sound.

STRONG SIGNAL CONDITION The Dual Gate FET plug **Balanced Mixer** in the FM tuner have a wide dynamic range and avoid annoying noise from overload distortion. **Keyed AGC** also eliminates overload distortion by reducing the sensitivity of the RF amplifier. It is more effective and convenient than a manual DX/LO switch. All these circuit refinements add to your listening enjoyment.

8. TROUBLESHOOTING

Problem	Cause	Measure
Power does not turn on. (or no sound is produced.)	Fuse is blown.	Replace with a fuse of the same amperage as the old fuse.
	Connections are improper.	Read the attached "Installation/Wire Connection Guide" once again and wire properly.
Sound quality is poor.	Playback head is dirty.	Use a cleaning tape, etc. to clean the head.
No sound while unit can be operated.	Power ANT lead is shorted to the ground.	Turn the unit off, first. Remove all connecting wires from the power ANT lead, and turn the unit on, then re-connect a wire one by one to the power ANT lead. When sound is muted again, check the unit with a wire connected last.

This unit is equipped with a number of self-diagnosis functions to protect the system. If a problem should occur, the user is warned through various error displays. Eliminate the problem using the procedures shown below.

Error Display	Procedure
Er H	This indicates that playback has been stopped automatically due to a rise in the temperature inside the CD changer or a rise in the surrounding temperature. → The CD changer mechanism is likely damaged. Contact your store of purchase.
Er 2	This indicates that a problem has occurred with the CD changer's mechanism (disc cannot be changed or ejected, etc.). → The CD changer mechanism is likely damaged. Contact your store of purchase.
Er 3	This indicates that the pickup is out of focus during playback due to scratches on the disc, etc.
Er 6	This indicates that the CD's TOC (table of contents) cannot be read, for example because the selected disc is upside-down.

If a display other than one of the displays above appears, press the reset button. If the problem persists, turn the power off and contact your store of purchase.

Presetting Stations

A total of 24 stations can be preset, 6 each for the FM1, FM2, FM3 and AM bands.

Note:
● *When a station is preset, the station previously stored in the memory at that position is cleared.*

Presetting stations manually

1) Press the BAND button 12 to select the band at which to store the station.
2) Use the Left and Right buttons 9 to tune in the station to be preset.
3) Press and hold the corresponding Preset button 20 for at least 2 seconds to store the station into memory.

Auto store function (Automatic Station Store)

1) Press the BAND button 12 to select the band at which to store the stations.
2) Press and hold the AS button 13 for at least 2 seconds. Stations with good reception are automatically stored at preset to the six buttons 20 1 to 6.
   * If there are fewer than 6 stations with good reception, the stations previously stored at the remaining buttons are not cleared.

Preset Scanning (Preset Station Scan)

When the PS button 13 is pressed, the preset memory numbers flash and the stations are tuned in for 7 seconds each in the order in which they were stored. Press the PS button again to cancel the preset scanning mode.

Note:
● *The auto store mode is set if the PS button is pressed for more than 2 seconds.*

Area Change Function

Use this to listen to the radio outside of the United States.

Switchable frequency spacing

This car stereo is initially set to tune in frequency intervals of 10 kHz for AM and 200 kHz for FM, the standard calibrations in the U.S. When using the unit outside the U.S., use the following procedure to switch the frequency steps and frequency range:

1) Turn the power on and set the tuner mode.
2) Keep the BAND button 12 pressed and while pressing the button, press the function button 1 10.
3) Release the buttons.
   This procedure changes the factory setting to 9 kHz steps for AM and 50 kHz steps for FM, the standard calibrations for countries other than the U.S.

To change the AM/FM setting back to the U.S. standard frequencies:

1) Set the tuner mode.
2) While pressing the BAND button 12, press the function button 2 11.
3) Release the buttons.
   Your car stereo will once again be calibrated to receive standard U.S. transmissions.

The chart below lists the frequency specifications for the U.S. and other countries.

		Inital Setting (U.S. standard)	New Setting (outside U.S.)
AM	Frequency spacing	10 kHz	9 kHz
	Frequency range	530 to 1710 kHz	531 to 1629 kHz
FM	Frequency spacing	200 kHz	50 kHz
	Frequency range	87.9 to 107.9 MHz	87.5 to 108 MHz

CD Changer Operation

When a separately sold CD changer (CDC635/CDC1235) is connected, it can be controlled from the RAX331D (RAX330F).
CD-ROMs cannot be played.

Listening to the Disc

Press the FUNC button 6 to select the CD changer mode, then the CD starts playing.

Stopping (pausing) Playback

Press the Play/Pause button 18.
Press the Play/Pause button 18 again to resume playback.

Selection of CDs

Press the Disc Up button 16 or the Disc Down button 19, then select the CD you wish to play.

D-UP: Every time you press the button, the CDs will be selected as:
$1 \rightarrow 2 \rightarrow 3 \rightarrow 4 \rightarrow 5 \rightarrow 6 \rightarrow 1....$

D-DOWN: Every time you press the button, the CDs will be selected as:
$1 \rightarrow 6 \rightarrow 5 \rightarrow 4 \rightarrow 3 \rightarrow 2 \rightarrow 1.....$

Selecting Tracks (songs)

Press the Left and Right buttons 9.
▶▶ : Playback will start from the next track.
◀◀ : Playback will start from the beginning of the track currently playing. When this button is pressed again, the CD will play the previous track.

Fast-Forward and Fast-Backward

Press and hold the Left and Right buttons 9.
▶▶ : To fast-forward
◀◀ : To fast-backward
* Pressing the Left and Right button for 1 second or longer will move forward or backward 5 times faster than normal play, and pressing it for 3 seconds or longer will do the operation 30 times faster.

Scan Play (Intro Music Scan)

Press the SCN button 14, then the display shows "**SCN**," then the CD will play the first 10 seconds of each track of the whole disc. Press the SCN button 14 again to disengage the unit from scan play.

* A scan play will start from the track following the one currently playing.

Repeat Play

Press the RPT button 15, then the display shows "**RPT**," then the track currently playing will be played repeatedly. Press the RPT button 15 again to disengage the unit from repeat play.

6. OPERATION

Basic Operation

⚠ CAUTION

When this unit is turned on, starting and stopping the engine of a car with its volume raised to the maximum level may harm your hearing. Be careful about adjusting the volume.

1) Press the POWER button 6.
   * To turn the power off, press the POWER button for at least 1 second.
2) Press the FUNC button 6 to select another operation mode. The mode switches as follows each time the FUNC button is pressed:
   Radio → Tape → CD changer → Radio
   * If a component is not connected, that operation mode cannot be selected.
   * "CASS" appears when no tape is loaded in the RAX331D (RAX330F), and "DISC" appears when no disc is loaded in the CD changer.
3) Use the Up and Down buttons 8 to adjust the volume.
   ▲ : Increases the volume.
   ▼ : Decreases the volume.

Audio Mode Adjustments

1) Press the A-M button 7 to select the adjustment mode. The mode switches as follows each time the A-M button is pressed:
   BASS/TREB → BAL/FAD → Previous mode
2) Use the Left and Right and the Up and Down buttons 8, 9 to adjust the bass and treble.
   <Adjusting the bass>
   ▶▶ : Bass gets stronger.
   ◀◀ : Bass gets weaker.
   <Adjusting the treble>
   ▲ : Treble gets stronger.
   ▼ : Treble gets weaker.
3) Use the Left and Right and the Up and Down buttons 8, 9 to adjust the balance and fader.
   <Adjusting the balance>
   ▶▶ : Sound from right speakers gets stronger.
   ◀◀ : Sound from left speakers gets stronger.
   <Adjusting the fader>
   ▲ : Sound from front speakers gets stronger.
   ▼ : Sound from rear speakers gets stronger.

Loudness Function

Press and hold the LOUD button 7 for at least 2 seconds to turn the loudness function on and off.

Switching the Display

The display changes as follows each time the DISP button 17 is pressed:
Main display → Clock display → Main display

Setting the Clock

1) While pressing the BAND button 12, press the DISP button 17 to enter the clock display mode.
2) While pressing the BAND button 12, press and hold the DISP button 17 for 2 seconds or more. This enables the clock editing mode.
   * The editable fields will be indicated when the display flashes.
3) To move between the hour and minute fields, use the left (hour) and right (minute) buttons 9.
4) To store the clock setting, press the BAND button 12.

Notes:
• If you select another operation mode before completing the above procedure, the clock setting operation will be canceled.
• Removing the vehicle's battery for a check or repair will cause the clock to reset to 1:00. Set the clock again if this happens.

Tape Operation

Loading Tapes

Insert the cassette tape into the Cassette insertion slot with the side on which the tape is exposed facing the right. Playback starts automatically.
* When the end of the cassette tape is reached, the auto reverse mechanism is activated and the other side of the tape begins playing automatically.

Note:
• Fully insert the cassette tape into the cassette insertion slot.

Listening to a tape which is already loaded
Press the FUNC button 6 to select the tape mode. Playback begins automatically.

Ejecting Cassette Tapes

Press the Eject button 2. The cassette tape is ejected.
* The radio mode is selected automatically 4 seconds after ejecting the tape.

Fast-Forwarding and Rewinding

Use the FF button 4 and REW buttons 3.
   ▶▶ : Press this to fast-forward the tape.
   ◀◀ : Press this to rewind the tape.
* It is possible to listen to the radio during fast-forward, rewind or search operations.
   Once the operation is complete, tape playback resumes (Monitor).

Switching to the Other Side of the Tape

Press the PROG button 5 both the FF button 4 and REW button 3 together at the same time. Playback is switched automatically to the other side of the cassette tape.

Radio Operation

Listening to the Radio

1) Press the FUNC button 6 to select the radio mode. The radio turns on.
2) To tune to a desired preset station, first press the BAND button 12 and select FM1, FM2, FM3 or AM.
   The band changes as follows each time the BAND button is pressed:
   FM1 → FM2 → FM3 → AM → FM1
3) Use the corresponding Preset buttons 20 to select the desired station.

Seek Tuning

1) Press the BAND button 12 and select the desired band.
2) The seek tuning mode is selected when "SRCH" is illuminated on the display.
3) Press the left or right buttons 9 to seek up or down the frequency band. Seek tuning automatically stops when a station is found.

Manual Tuning

1) Press the BAND button 12 and select the desired band.
2) Press and hold the BAND button for more than 2 seconds. "SRCH" turns off and the manual tuning mode is selected.
3) Use the Left and Right buttons 9 to manually tune up or down the desired frequency band.

English

3. CASSETTE PRECAUTIONS AND CARE

1. Tape slack can lead to operating difficulties. Remove tape slack before inserting a cassette, particularly when using C-90 or prerecorded cassettes.

2. Use C-30 to C-90 cassettes. Avoid using C-120 or longer cassettes (The very thin tape may stretch or break).

3. Clean the head periodically with a good commercial head cleaner. Avoid touching the head with magnetic or hard objects.

4. Do not oil the cassette mechanism.

5. Always remove the cassette from the mechanism when not in use. Exposure to direct sunlight, extreme temperatures or high humidity may damage cassettes.

6. The cassette tape will automatically eject from the mechanism if it is damaged. Always ensure that cassette tapes are in good condition prior to use.

4. DCP (Detachable Control Panel)

■ RAX331D Only

The control panel can be detached to prevent theft. When detaching the control panel, store it in the optional DCP case to prevent scratches. We recommend taking the detachable control panel with you when leaving the car.

Removing the DCP

1. Turn off the power.
2. Press the DCP Release button [1].

* The DCP is unlocked.

3. Remove the DCP.

Attaching the DCP

Insert the DCP into the right side of the source unit and press the left side to lock it.

> **⚠ CAUTION**
>
> Do not insert the DCP from the left side. Doing so may damage it.
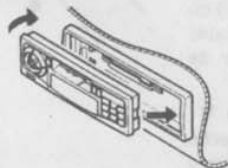
Storing the DCP in the DCP Case

Hold the DCP, in the orientation as shown in the figure below, and put it into the DCP case (available separately). (Ensure the DCP is in the correct orientation.)

> **⚠ CAUTION**
>
> • The DCP can easily be damaged by shocks. After removing it, place it in a protective case and be careful not to drop it or subject it to strong shocks.
>
> • When the release button is pressed and the DCP is unlocked, the car's vibrations may cause it to fall. To prevent damage to the DCP, always store it in a protective case after detaching it.
>
> • The rear connector that connects the source unit and the DCP is an extremely important part. Be careful not to damage it by pressing on it with fingernails, pens, screwdrivers, etc.

DCP Rear Panel   Source Unit Front

DCP connector

Source unit connector
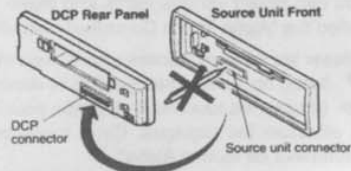
Note:
• If the DCP is dirty, wipe off with a soft, dry cloth only.

5. BUTTON TERMINOLOGY

Note:
• Be sure to read this chapter referring to the front diagrams of chapter 2. CONTROLS on page 3 (unfold).

1. DCP Release Button (RAX331D only)
2. Eject (▲) Button [⬚]
3. REW (◀◀) Button [⬚]
4. FF (▶▶) Button [⬚]
5. PROG (Program) Button [⬚]
6. POWER Button
   FUNC (Function) Button
7. A-M (Audio Mode) Button
   LOUD (Loudness) Button
8. Up and Down (▲ and ▼) Buttons
9. Left and Right (◀◀ and ▶▶) Buttons
10. Function Button 1 [📡]
11. Function Button 2 [📡]
12. BAND (Tuning Mode) Button [📡]
13. PS/AS (Preset Station Scan/Automatic Station Store) Button [📡]
14. SCN (Intro Music Scan) Button [⊙]
15. RPT (Repeat Play) Button [⊙]
16. Disc Up (D-UP) Button [⊙]
17. DISP (Display Selector) Button
18. Play/Pause (▶/Ⅱ) Button [⊙]
19. Disc Down (D-DOWN) Button [⊙]
20. Preset Buttons [📡]

[📡] : In the Radio Mode
[⬚] : In the Tape Mode
[⊙] : In the CD Changer Mode

5

1. FEATURES

Tuner

Electronic Quartz-Locked PLL Tuning
AM/FM Bands–1 AM, 3 FM
18 FM/6 AM Touchbutton Memory
Seek Up/Down Tuning
Preset Station Scan (PS)
Automatic Station Store (AS)
MAGI-TUNE® FM Reception System
Switchable Frequency Spacing

Tape

Auto Reverse
Locking FF/REW
Hard Permalloy Dual Gutter Head

CD Changer Control

6/12-Disc Changer Control Capability
Play/Pause
Intro Music Scan (Track)
Repeat Play (Track)
Track Search
Audible FF/FB

Audio

Electronic Audio Controls
  (Volume/Bass/Treble/Balance/ Fader)
Loudness
4-Way Balance Controls
2-Channel RCA Line Level Output with Fader
  Control (RAX331D only)
120 W (30 W × 4) Maximum Power Output

General

Night Illumination
Digital Quartz Clock
Amp Turn-On Trigger
Full Information LCD Display
Monitor Mode
DIN Chassis with Detachable Control Panel
  (RAX331D only)

Chassis

DIN Chassis with ISO Mounting Capability
Dimensions:
  7″(178mm) Width × 2″ (50mm) Height × 6″
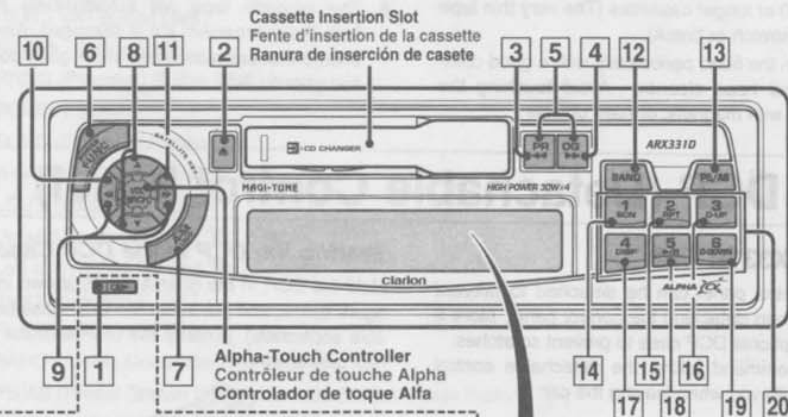 (152mm) Depth

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2. CONTROLS / COMMANDES / CONTROLES

Note: Be sure to unfold this page and refer to the front diagrams as you read each chapter.
Remarque: Veuillez déployer cette page et vous référer aux schémas quand vous lisez chaque chapitre.
Nota: Cuando lea los capítulos, despliegue esta página y consulte los diagramas.

SOURCE UNIT / APPAREIL PILOTE / UNIDAD FUENTE

Cassette Insertion Slot
Fente d'insertion de la cassette
Ranura de inserción de casete

Alpha-Touch Controller
Contrôleur de touche Alpha
Controlador de toque Alfa

* This button is not provided with the model RAX330F. The other but-
  tons are the same as those of model RAX331D.
* Cette touche n'existe pas sur le medèle RAX330F. Les autres
  touches sont les mêmes que sur le modèle RAX331D.
* Este botón no existe en el modelo RAX330F. Los demás botones
  son iguales que los del modelo RAX331D.

DISPLAY / AFFICHEUR / VISUALIZADOR

Alpha-Touch Controller Operation
Fonction de contrôleur de touche Alpha
Función de controlador de toque Alfa

By sliding the Up and Down buttons ⑧ up ▲ , down ▼ , or the
Left and Right buttons ⑨ left ◀◀ , or right ▶▶ , the function buttons,
you can select various items and make settings. This function is
called the "Alpha-Touch Controller" operation.

Glisser les touches ascendante et descendante ⑧ sur ▲ (haut),
▼ (bas), ou les touches gauche et droite ⑨ sur ◀◀ (gauche) ou
▶▶ (droite), les touches de fonction pour sélectionner les rubriques
et effectuer les réglages. Cette fonction s'appelle la fonction de
"contrôleur de touche Alpha".

Deslizando los botones vertical ⑧ hacia arriba ▲ y hacia abajo ▼ ,
o los botones horizontal ⑨ hacia la izquierda ◀◀ , y hacia la derecha
▶▶ , y los botones de función, podrá seleccionar varios ítems y
realizar ajustes. Esta función se denomina "controlador de toque Alfa".

9. SPECIFICATIONS

FM Tuner

Frequency Range......87.9 MHz to 107.9 MHz
Usable Sensitivity......11 dBf
50 dB Quieting Sensitivity......17 dBf
Alternate Channel Selectivity......75 dB
Stereo Separation (1 kHz)......35 dB
Frequency Response (±3 dB)
......30 Hz to 15 kHz

AM Tuner

Frequency Range......530 kHz to 1,710 kHz
Usable Sensitivity......25 μV

Tape

Wow & Flutter (WRMS)......0.1%
Channel Separation (1 kHz)......45 dB
Signal to Noise Ratio......120 μs (normal): 52 dB
Frequency Response (±3 dB)
120 μs (normal)......30 Hz to 16 kHz

Power Amplifier

Maximum Power Output......120 W (30 W × 4ch)
Continuous Average Power Output
......14 W × 4, into 4 Ω, 20 Hz to 20 kHz,
1% THD

Pre-Amplifier

Bass Control Action (100 Hz)......±10 dB
Treble Control Action (10 kHz)......±10 dB
Line Output (with A/C 1 kHz, 10 kΩ)...1.8 V
(RAX331D only)

General

Power Supply Voltage
...... 14.4 V DC (10.8 V to 15.6 V allowable)
Current Consumption...... Less than 10 A
Speaker Impedance
......4 Ω (4 Ω to 8 Ω allowable)
Weight......2.87 lb. (1.3 kg)
Dimensions
......7" (178 mm) Width × 2" (50 mm) Height
× 6" (152 mm) Depth
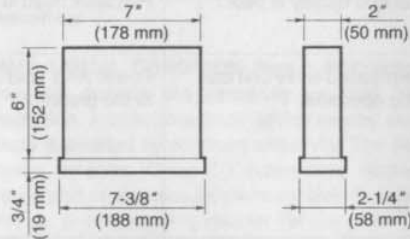
Notes:
- Specifications comply with EIA Standards.
- Specifications and design are subject to change without notice for further improvement.

NOTES:

English

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