

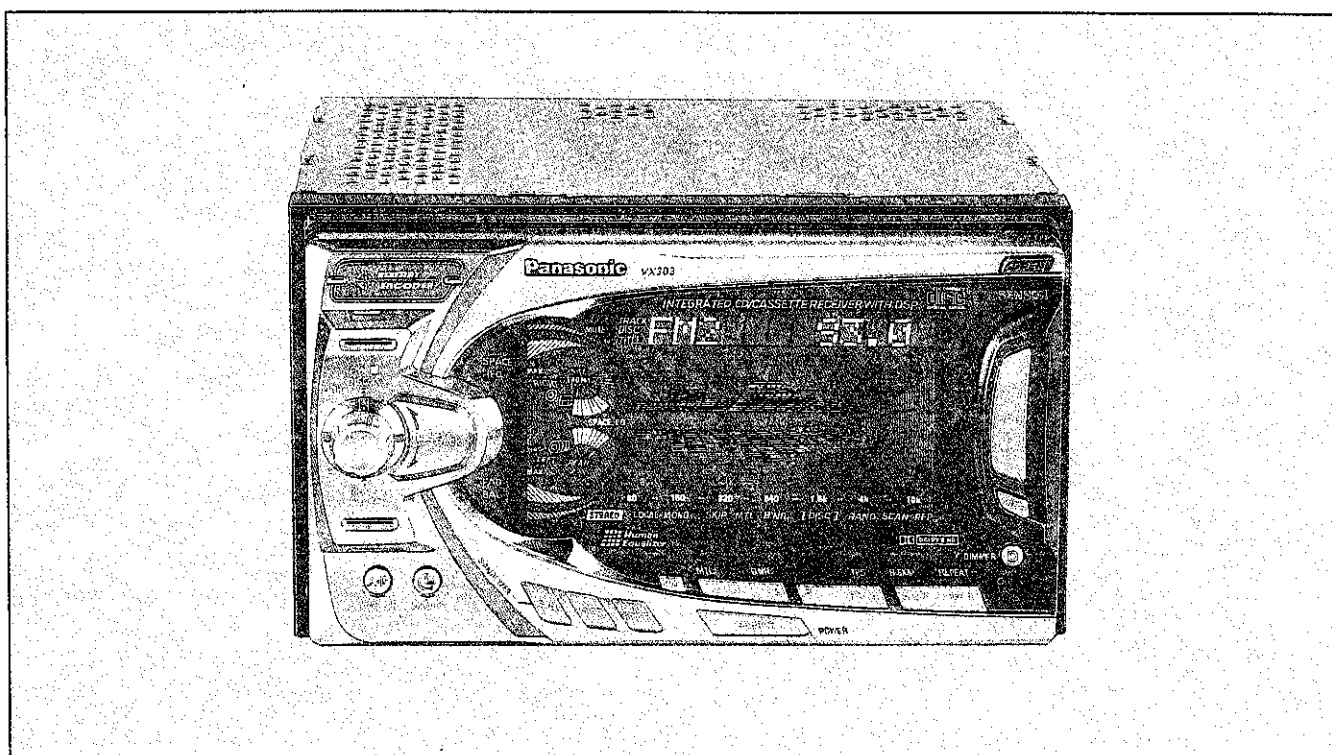
Operating Instructions

操作說明書

Integrated CD/Cassette/Receiver With DSP

集合鐳射唱片，錄音帶，收音機，並內含 DSP 一體機的汽車音響

CQ-VX303EW



Panasonic®

Before operating this set, please read these instructions completely.

操作本裝置之前，請熟讀這些說明。

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Panasonic welcomes you to their constantly growing family of electronic products owners. We endeavor to give you the advantages of precise electronic and mechanical engineering, manufactured with carefully selected components, and assembled by people who are proud of the reputation their work has built for our company. We know this product will bring you many hours of enjoyment, and after you discover the quality, value, and reliability we have built into it, you too will be proud to be a member of our family.

Precautions

Volume Level

For your driving safety, keep the volume level low enough to be aware of road and traffic conditions.

Car Washing

To avoid electrical shorts which may cause fire or other damage, do not expose this equipment (including the speakers and tape) to water or excessive moisture.

Car Ventilation

If your car is parked for several hours in direct sunlight, the temperature inside the car may become very high. It is advisable to drive the car and give the interior a chance to cool down before switching the unit on.

Power Supply

This equipment is designed to be used in a car having 12-Volt negative ground battery system.

Tape Mechanism

Keep magnets, screwdrivers and other metallic objects away from the tape mechanism and tape head.

Service

This unit is made of precision parts. Do not attempt to disassemble or adjust any parts. For repair, please consult your nearest authorized Panasonic Service Center.

About Preset Memory

The preset memory is cleared to return to the original factory setting when the power connector or battery is disconnected.

Protect the Compact Disc Mechanism

Avoid inserting any foreign matters to the slot of the compact disc. Failure to observe this may cause malfunction due to precise mechanism of this unit.

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Panasonic 歡迎您來到不斷增加的電子產品擁有者的家族中。我們力圖為您提供精密的電子與機械工程的方便性，使用經過認真選擇的零件進行生產，並由對他們的工作已為我公司樹立信譽而感到自豪的人們進行組裝。我們知道這個產品將為您帶來更多享受的時光，當您發現我們的產品所擁有的質量、價值和可靠性之後，您會為自己成為我們家族的一員而感到自豪。

注意事項

音量

為了安全駕駛，請盡量保持低音量，以便注意交通和路面狀況。

洗車時

為了避免電氣短路而引起火災或其它危害，請勿使本設備（包括揚聲器與磁帶）沾水或受潮。

汽車通風

如果您的汽車在直射陽光下停車幾小時之後，汽車內的溫度會升很高。

在打開本機之前，最好開動汽車，降低車內溫度。

供電

本設備的設計是用於備有 12 伏負極接地電池系統的汽車中。

磁帶機構

切勿將磁鐵，螺絲刀和其它金屬物靠近磁帶機構和磁頭。

雷射片機械裝置

勿將任何異物插入 CD 槽內，可能導致無法正常的動作。

維修

本機由精密部件組成。請勿自行嘗試拆卸或調節待何部件。如要維修，請到您附近的公認的 Panasonic 維修中心進行詢問。

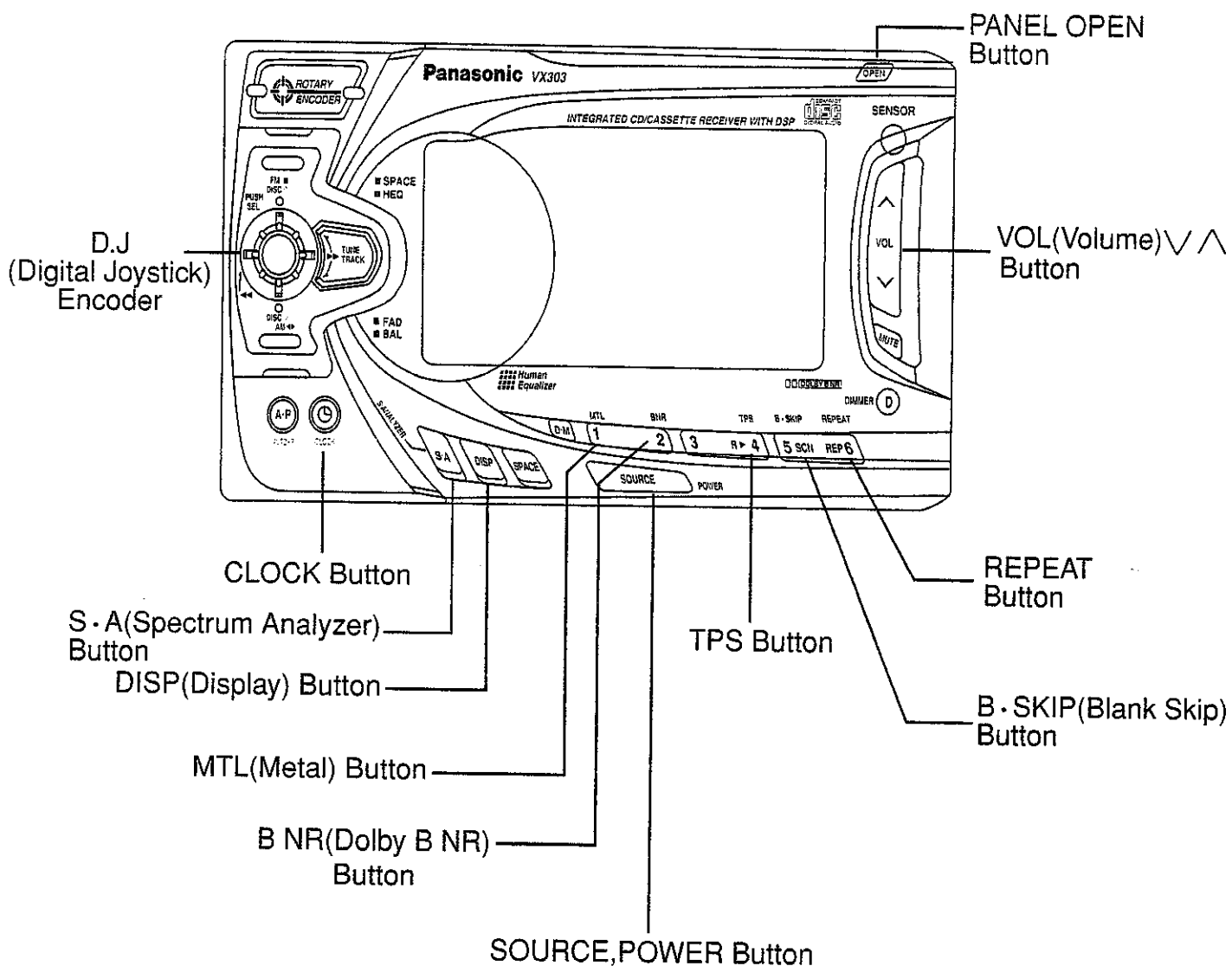
關於預置記憶

當切斷開電源連接器或拆開電瓶時，預置記憶會被消除並回復到出廠時的設定。

Names of Controls






Operating Panel (Front)

Buttons for General, Cassette (Tape) Operating

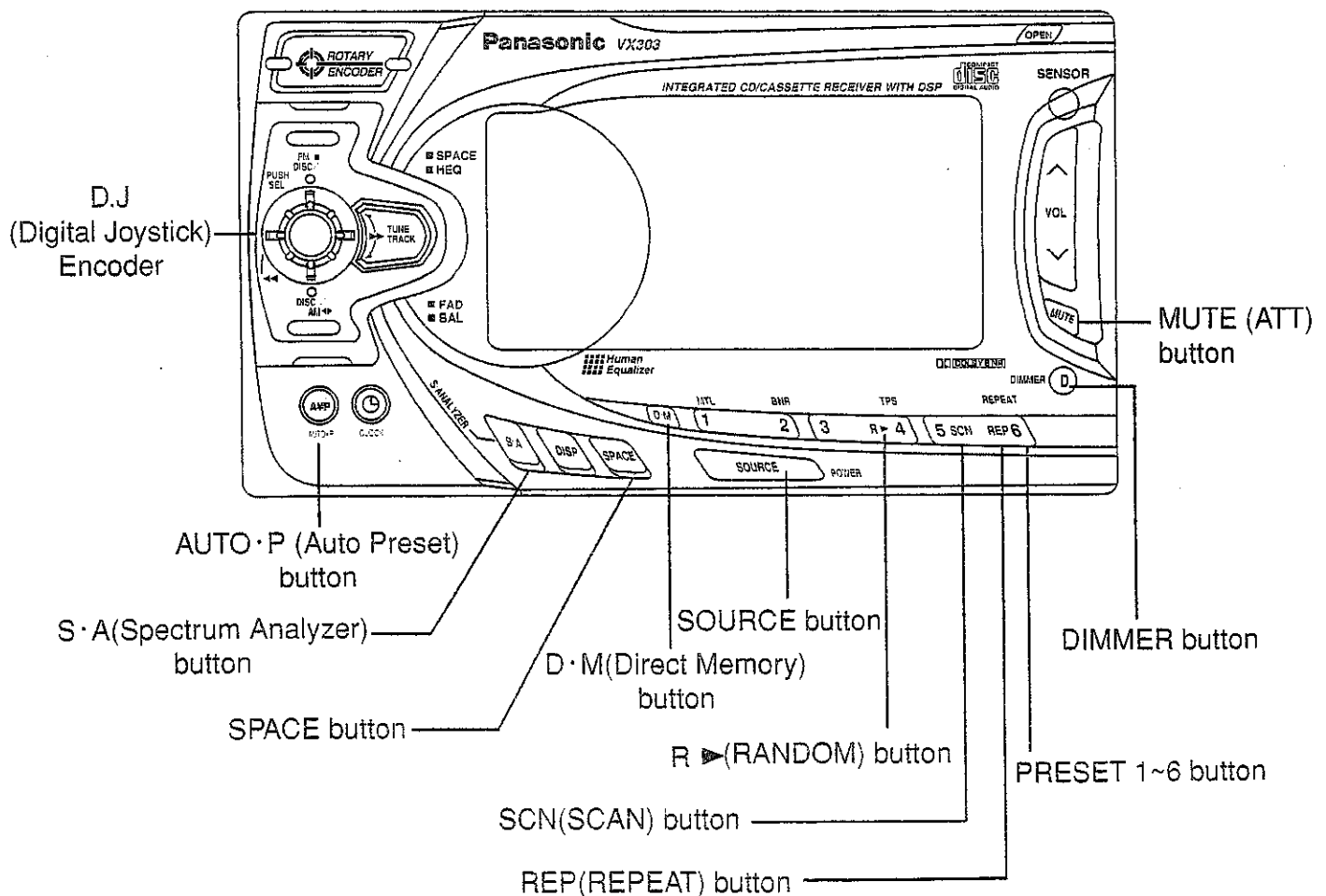


Operation of the D. J (Digital Joystick) encoder

To push, turn, rock the D.J encoder to select and set functions.

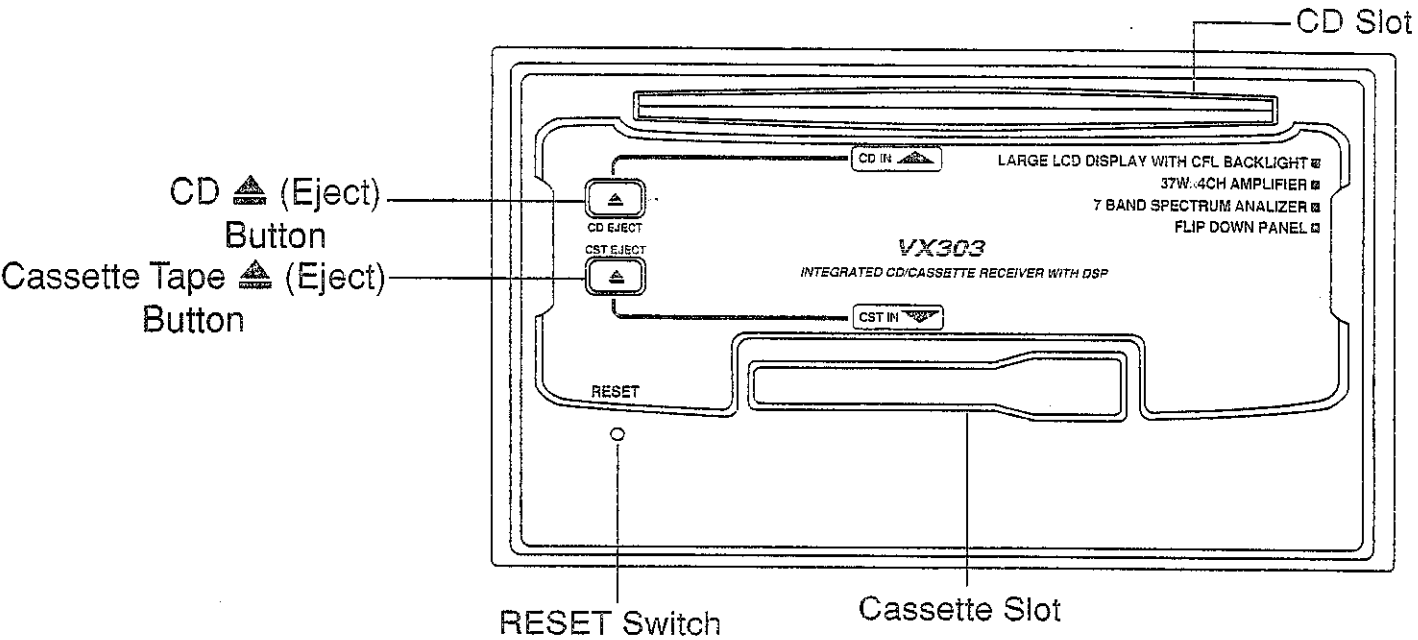
	Operation
	Turn to the left, Turn to the right. (See P.28~44)
	Rock up, down (DISC ^ \)
	•Selecting a band. (See P.14)
	•Changing tape sides playing. ↓ (See P.22)
	•To stop tape rewind / fast forward. ↑ (See P.22)
	Rock to the left, right (TUNE <>, TRACK ◀▶)
	Rock to the left, right, up, down. (See P.11. 29. 32)
	Push (SEL)

Buttons for Radio (TUNER), CD, CHANGER and other setting operating

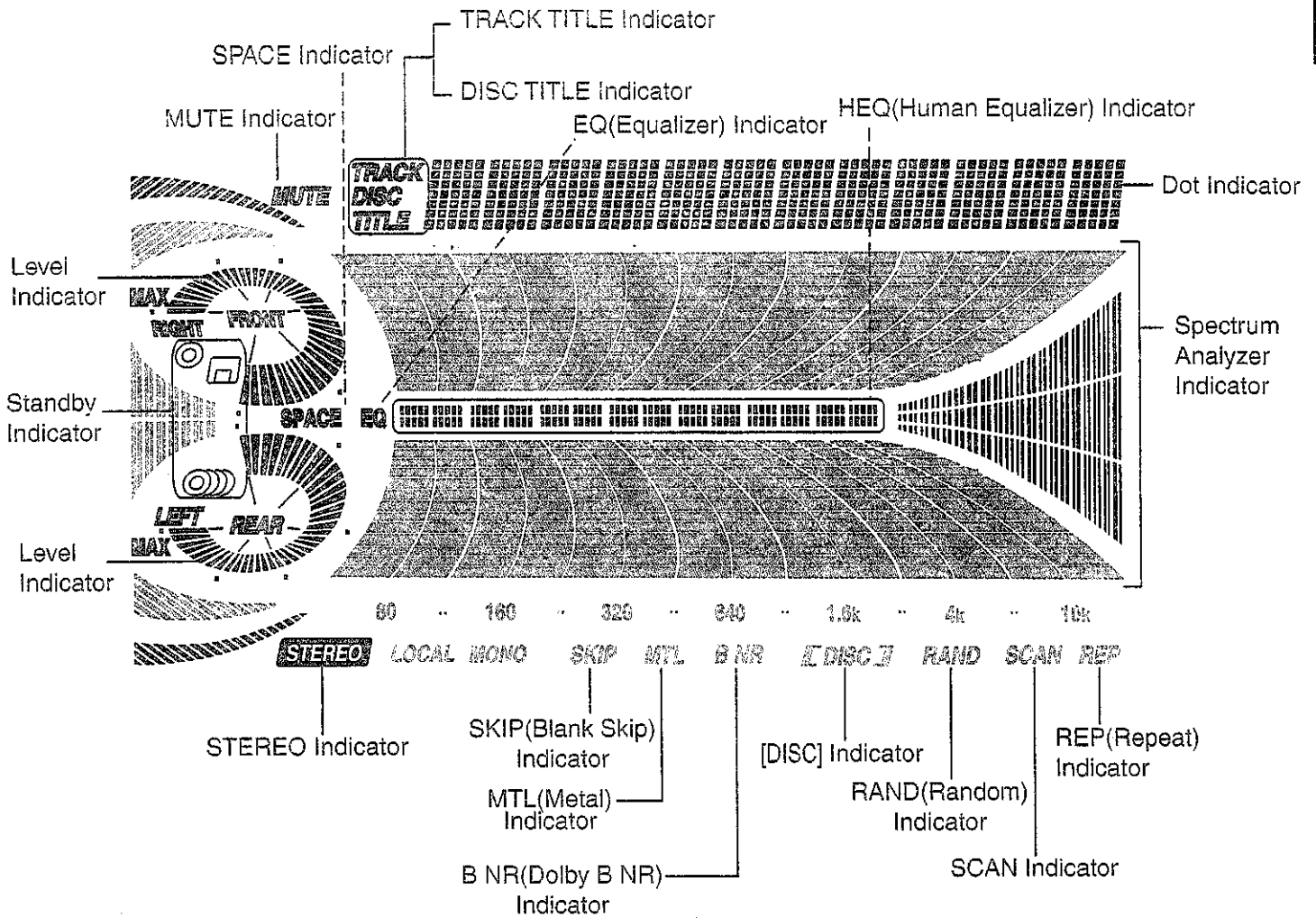


Names of Controls continued

Inner Panel



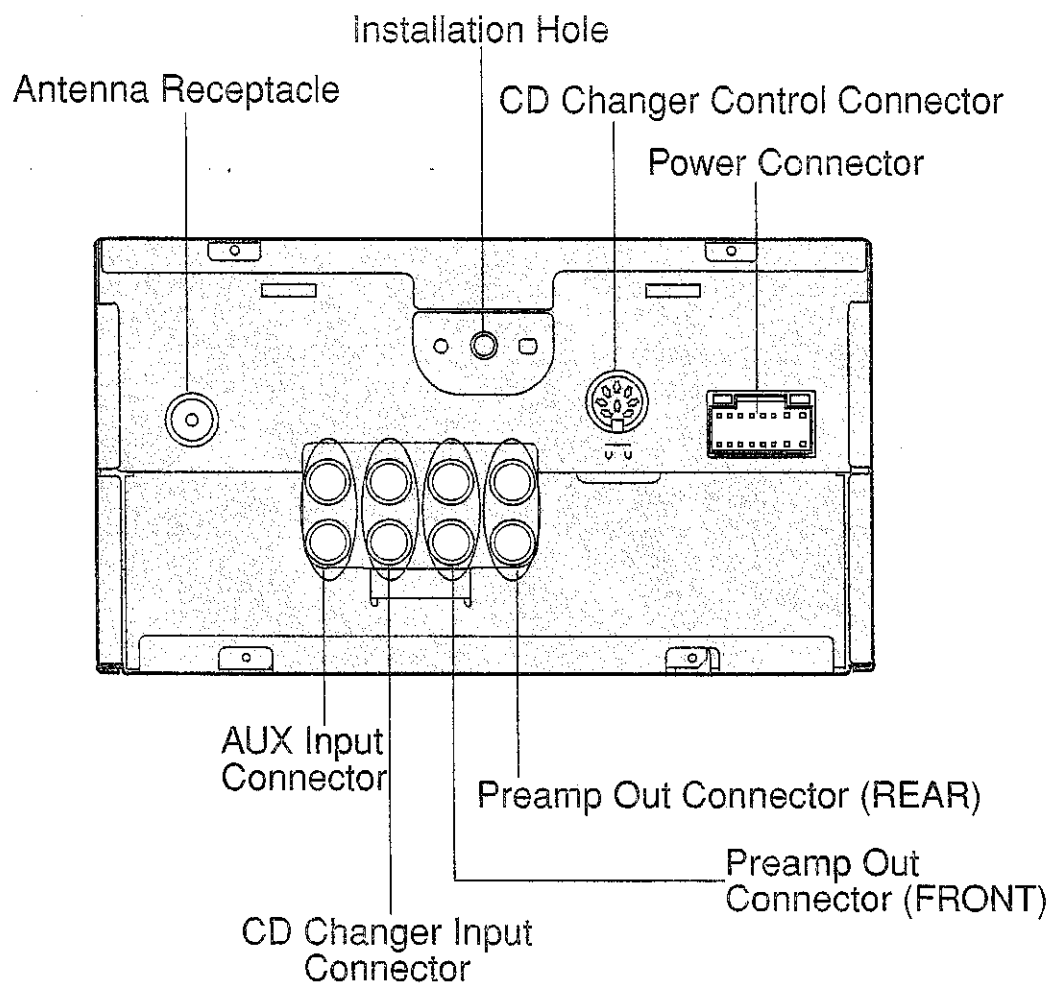
DISPLAY



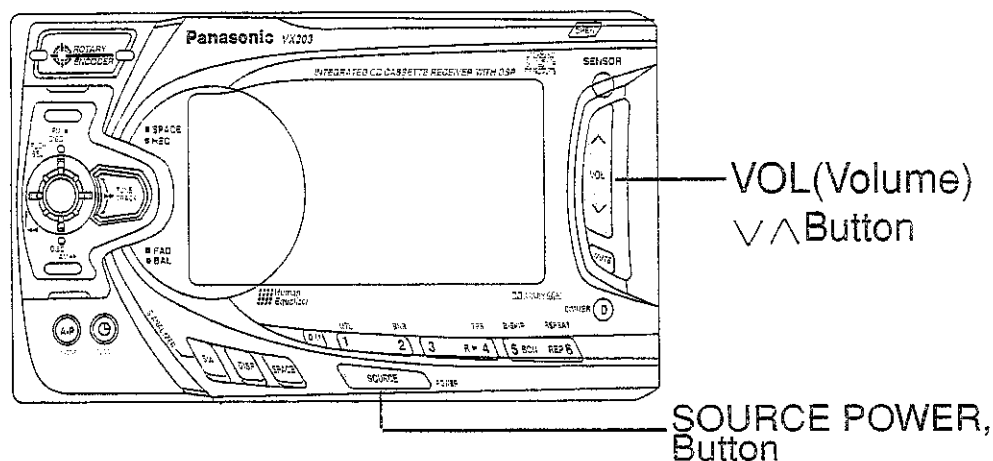
Names of Controls continued

Rear

※ For wiring connection, please see P47~P48



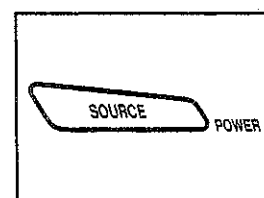
General



Power On

※ Before operate this unit, turn the ignition key on.

Press SOURCE (POWER) to switch the power on, when you operate this unit for the first time, the tuner mode is activated and the DEMO Mode is displayed.

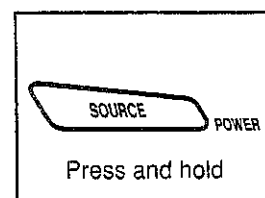


Note:

Because this unit can not be operated at DEMO mode, please change to the other Spectrum Analyzer except for DEMO mode. (See P36)

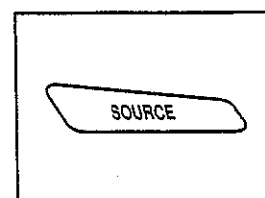
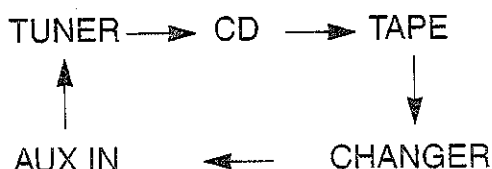
Power Off

Press and hold SOURCE (POWER) more than one second to switch the power off.



Selecting a Sound Source

Press SOURCE to select the sound source as follow.
(Initial Setting: TUNER)



Note:

- If no DISC, no TAPE is inside the unit, CHANGER is disconnected or no magazine in the CHANGER, that source can not be selected.
- If AUX IN is not used, change the SOURCE setting. (See P.43)

General continued

Adjusting the Volume

The adjusted Volume memorized for that sound source will also be changed when changing another Sound source.

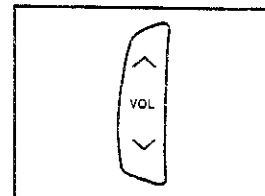
Press VOL \wedge or VOL \vee

VOL \wedge : Increase Volume.

VOL \vee : Decrease Volume.

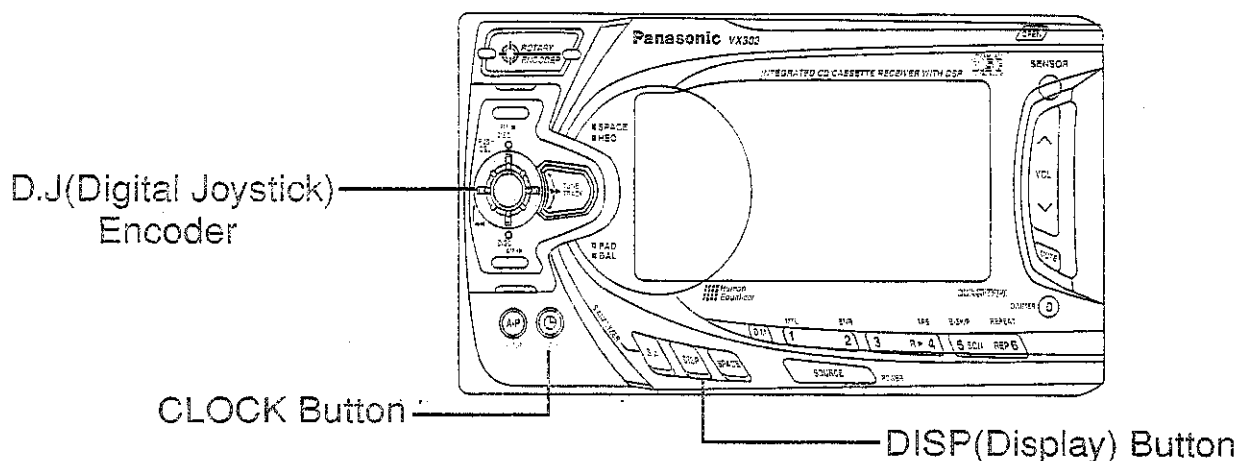
※ Press and hold VOL \wedge or VOL \vee to change volume level continuously.

(Range: 0-40)



Note:

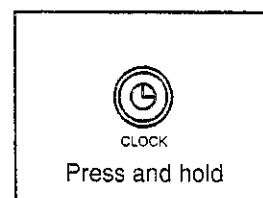
Volume can also be adjusted by rotating the D.J encoder. (See P.41)



Adjusting the time

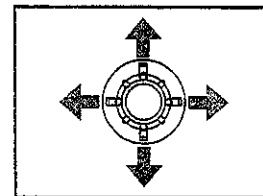
The clock system is 12-hours.

- ① **Press and hold CLOCK for more than 2 seconds, the time setting mode is activated and the time blinks.**
(For initial time setting, "ADJUST" blinks.)

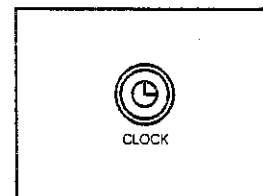


- ② **Rock the D.J encoder to adjust the time as follows:**

- ← : Hour setting • The hour blinks.
- : Minute setting • The minute blinks.
- ↑ : Adjusting hour/minute forward.
- ↓ : Adjusting hour/minute backward.



- ③ **When you have set the time, press CLOCK.**
The current mode resumes and the clock starts running.



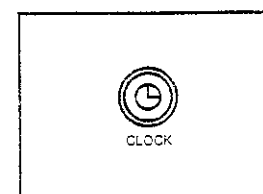
Note:

When the power is off, the clock can not be adjusted.

Selecting the Clock Display

Press CLOCK for clock display.

Press CLOCK once again, the regular display resumes.

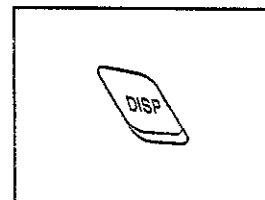


General continued

Switching the Display

Clock can be displayed on the dots display.

Press DISP to switch the following displays on the dots display.



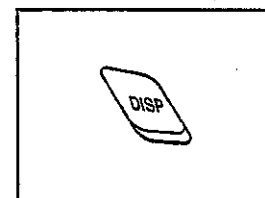
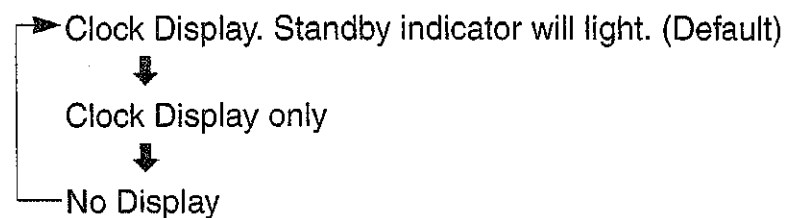
Note:

- If the clock is not set, "ADJUST" will be displayed for the clock display mode.

Clock Display (Power Off)

The clock can be displayed when the power is off.

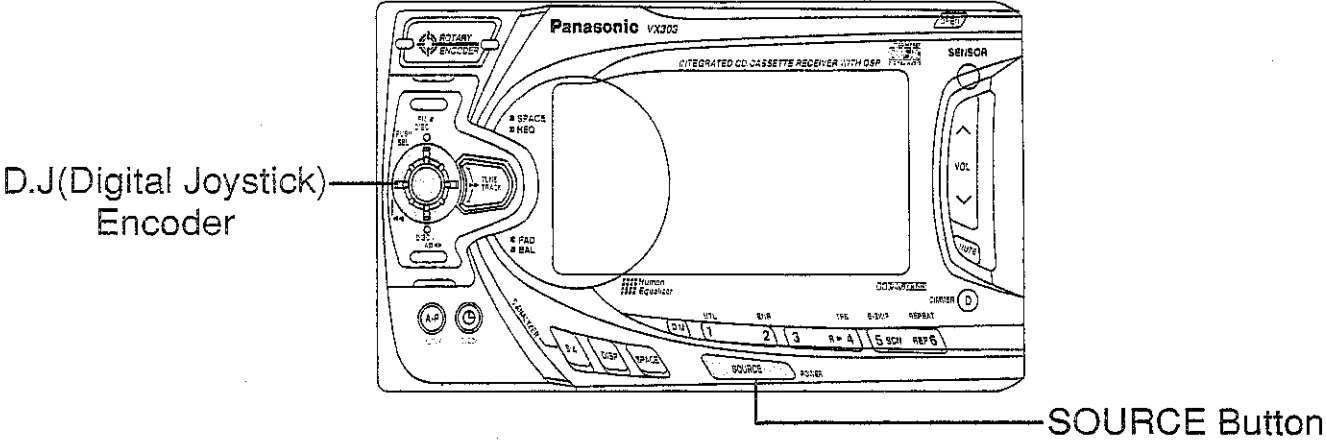
Press DISP when the power is off and press it to change the display as follow.



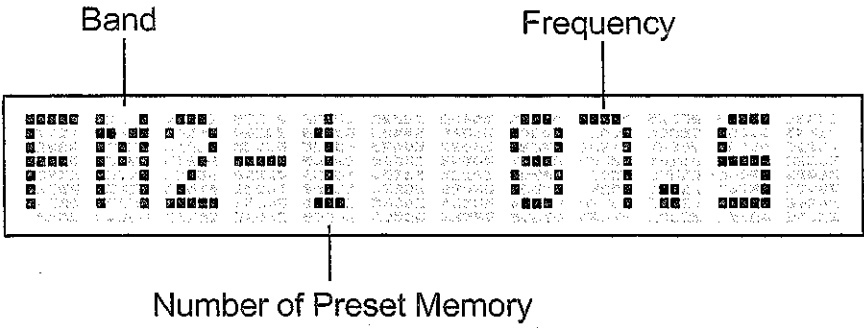
Note:

- "ADJUST" is displayed in the clock display mode if the clock is not set.

Radio Basics



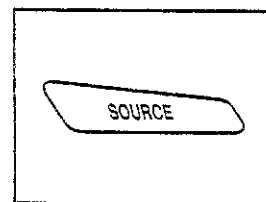
Regular Display in Tuner Mode



Radio Basics continued

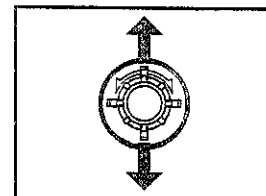
Change to the Tuner Mode

Press SOURCE to switch the Tuner mode.



Selecting a Band

Rock the D.J Encoder up or Down to select the bands as follows;
STEREO Indicator lights if the FM station is broadcasting in stereo.



↑ (FM): Changing FM Bands

FM1 → FM2 → FM3

↓ (AM): Change to AM Band

AM

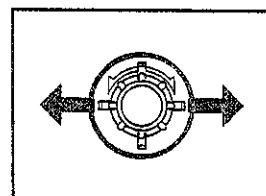
Tuning

Manual Tuning

Rock the D.J Encoder to left or right to tune to lower or higher frequency.

↑ (TUNE <): Tune to lower frequency.

↓ (TUNE >): Tune to higher frequency.



Note:

The frequency can also be tuned by rotating the D.J Encoder. (See P.41)

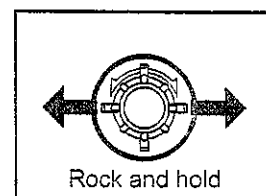
Seek Tuning

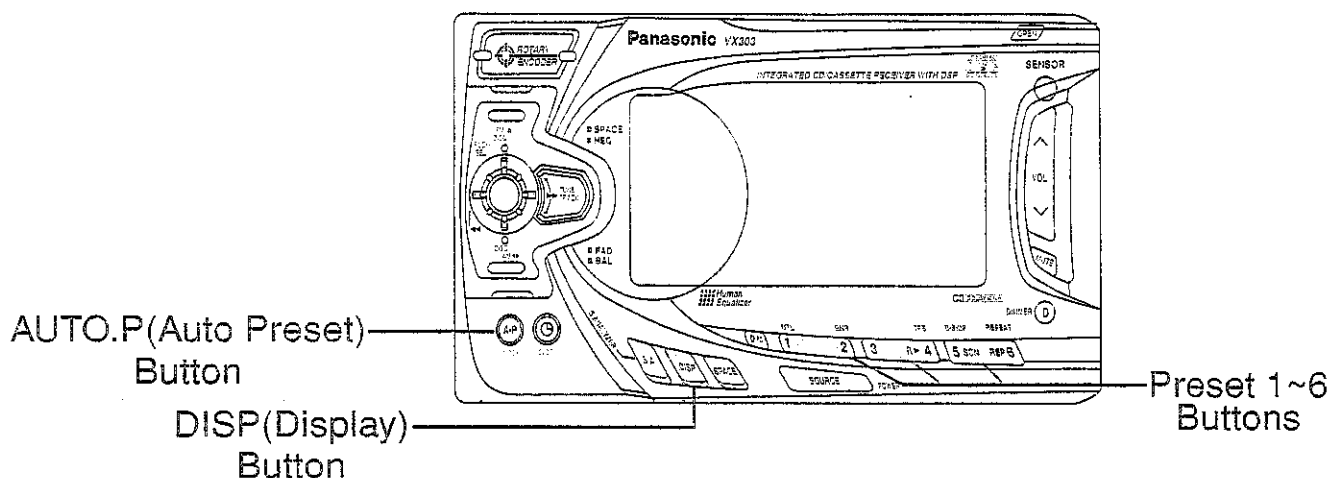
Rock and hold the D.J Encoder to left or right for more than 0.5 second.

← (TUNE <): Tune to lower frequency.

→ (TUNE >): Tune to higher frequency.

The radio automatically stops on the next station.

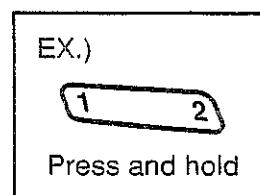




Preset Station Setting

Manual Station Preset

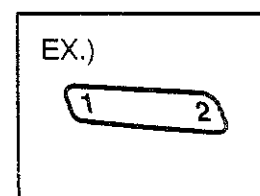
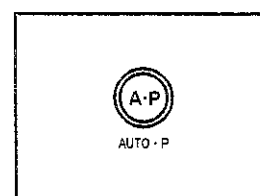
- Use manual or seek tuning to find a station that you want to program into memory.
- Press and hold one of the buttons 1 through 6 for more than 2 seconds until the frequency indicator blinks.



Auto Preset Memory

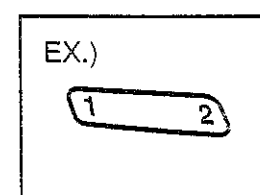
Select a band, and press AUTO.P

- The six strongest available stations will be automatically set in memory on preset buttons 1 through 6.
- Once set, the preset stations are sequentially scanned for 5 seconds.
- Press the appropriate preset button for the station you want to hear.



Tuning in a Preset Station

Press any of the buttons 1 through 6 to tune in the station preset by manual station preset or auto preset memory.



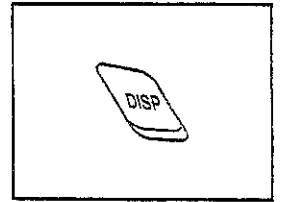
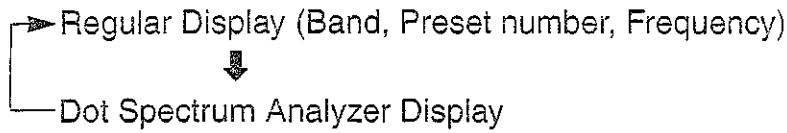
Note:

The former preset station will be erased and replaced by the latest preset station.

Radio Basics continued

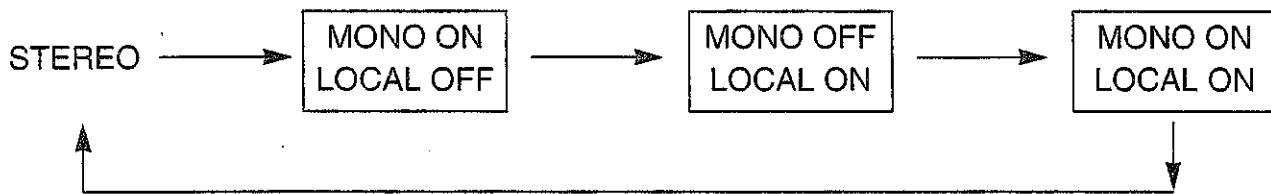
Switching Display

Press DISP to switch display on the dots indicator as follows:

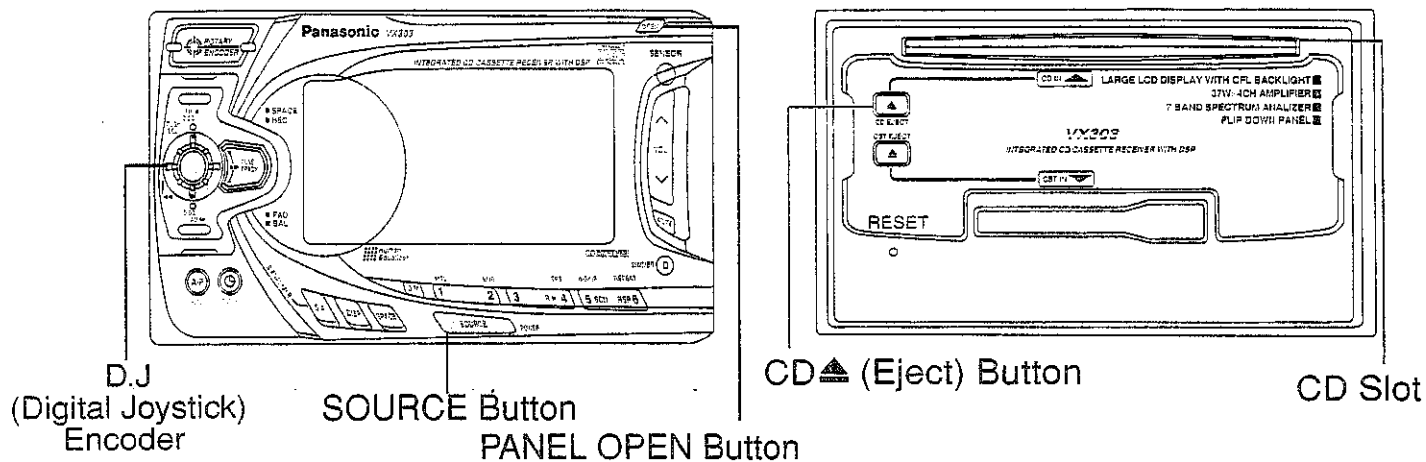


Stereo/Mono/Local selection

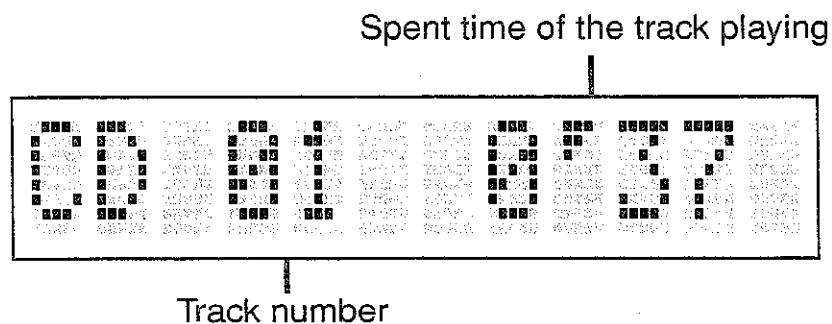
Press and hold MUTE for more than 2 seconds to switch the following modes.



Compact Disc player Basics



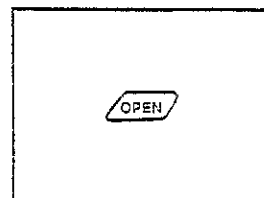
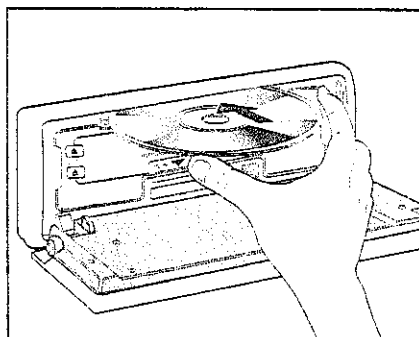
Regular Display in CD Mode



Compact Disc player Basics continued

Inserting a Compact Disc

- ① Press OPEN to open the Front Panel.
- ② Insert a CD with the label facing up into the CD slot, and then begin to play.
- ③ Close the front panel by pushing it back.



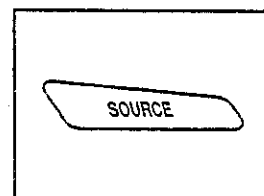
Notes:

- Never use CD accessories such as commercial protect film, stabilizer etc, because they may cause faults or failures.
- Do not operate the front panel when it is not closed.

Change to the CD Mode

Press **SOURCE** to switch the CD mode.

CD playing begins.



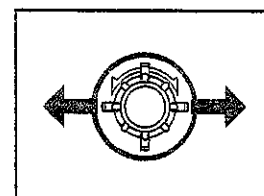
Note:

The CD MODE can not be switched when no CD inserted.

Selecting a Track

Rock the D.J Encoder to the left or right to select tracks.

- ◀ (TRACK ◀◀): Rock it once to play from the beginning of the playing track, rock it twice to play previous track.
- ➡ (TRACK ▶▶): Rock it once to go to the next track.



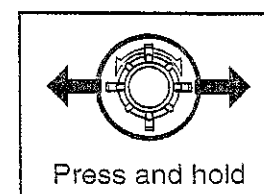
Note:

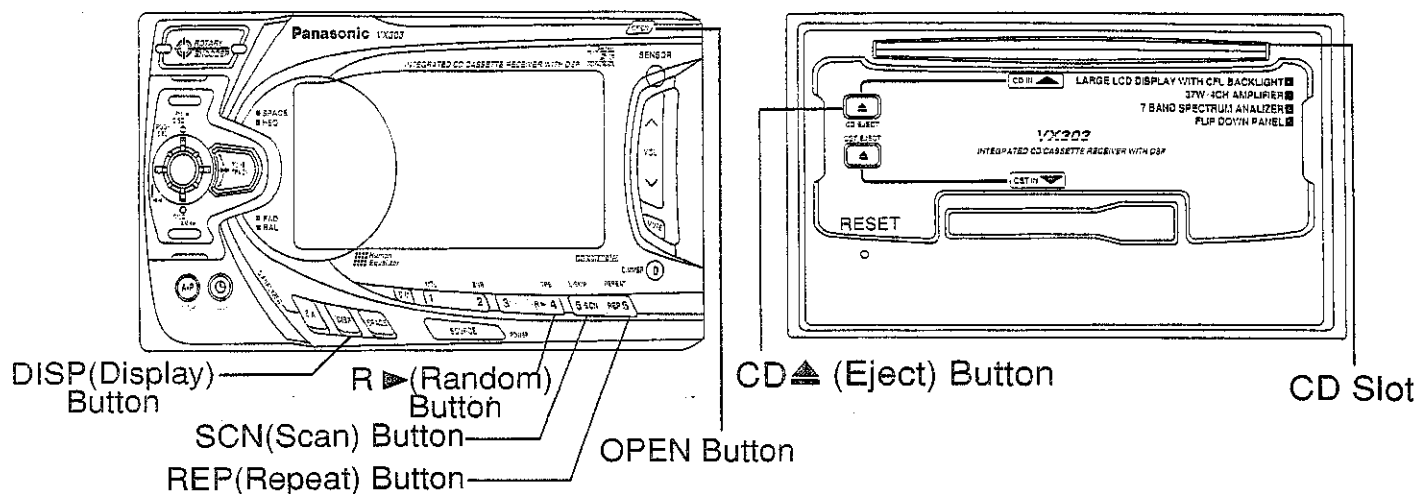
The track can also be selected by rotating the D.J Encoder. (See P.41)

Searching a Track

Rock and hold the D.J Encoder to left or right for more than 0.5 second to activate fast reverse or forward through a TRACK.

- ◀ (TRACK ◀◀): Fast reverse
- ➡ (TRACK ▶▶): Fast forward



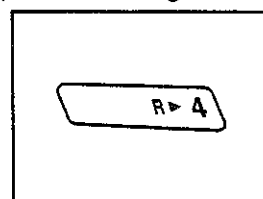


Random Selection

A random selection of music is played from all available tracks on the disc.

- Press R ► to switch Random "ON/OFF".
- When Random is "ON", the RAND indicator lights.

(Initial setting: OFF)

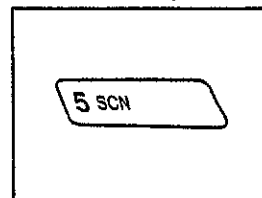


Scanning Tracks

The first 10 seconds of all tracks on the disc play in sequence since the current playing track.

- Press SCN to switch the SCAN "ON/OFF".
- When SCAN in "ON", the SCAN indicator lights.
- Each track on the disc play in sequence for 10 seconds.
- ※ To stop and continue with the current track, press SCN again to switch it "OFF".

(Initial setting: OFF)

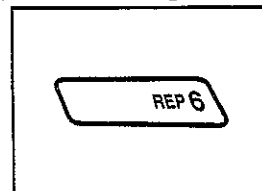


Repeating

The current playing track can play repeatedly.

- Press REP to switch REPEAT "ON/OFF".
- When REPEAT is "ON", the REP indicator lights.

(Initial setting: OFF)

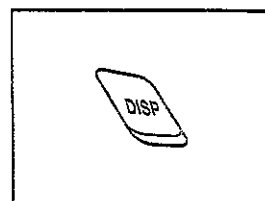


Compact Disc player Basics continued

Switching Display

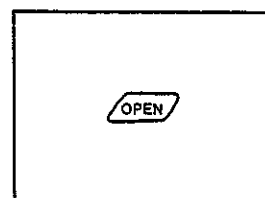
Press DISP to switch display on the dots indicator as follows:

- Regular Display (Track number, spent time of track playing)
- ↓
- Dot spectrum analyzer display



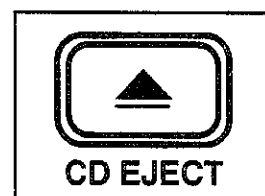
Ejecting a Disc

- ① Press OPEN to open the front panel.

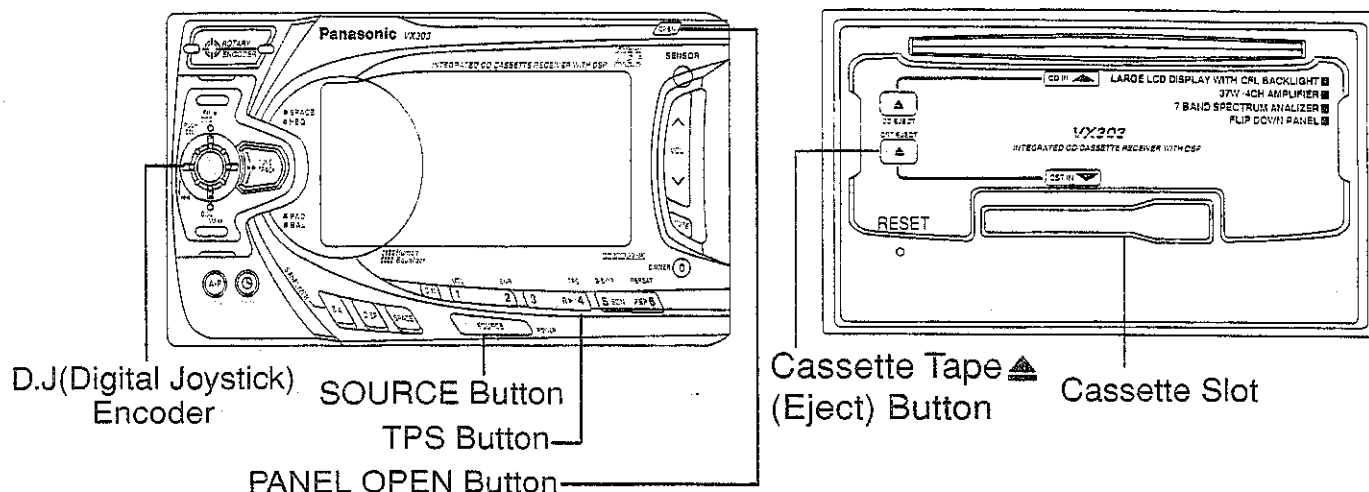


- ② Press CD  to eject the disc.

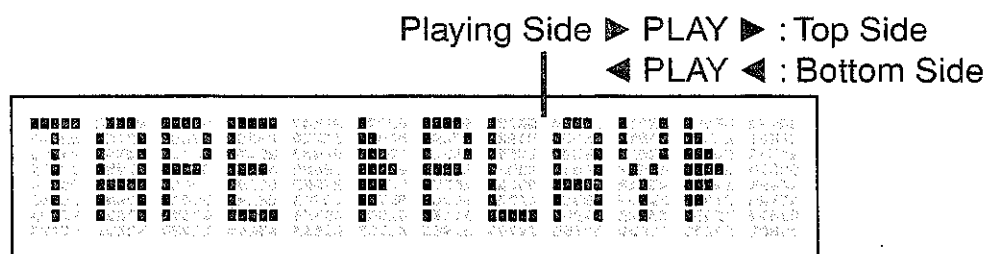
The power will be off after ejected the disc when in CD mode.



Cassette Tape Player Basics

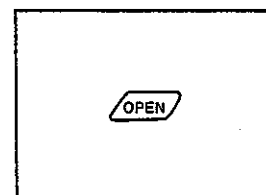


Regular Display of Cassette Tape

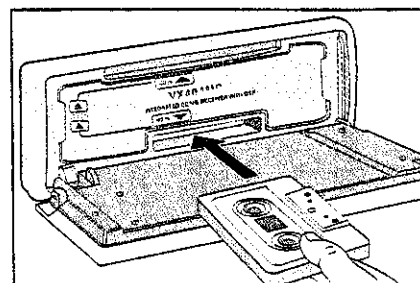


Loading a Cassette

① Press OPEN to open the front panel.



② Gently insert the cassette with the exposed tape facing to the right until the loading begins, and playback starts.

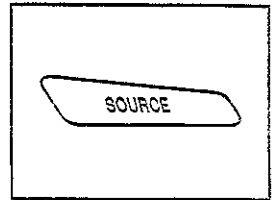


Cassette Tape Player Basics continued

Change to the Cassette Tape Mode

Press **SOURCE** to switch the "TAPE" MODE.

Cassette tape playback starts.



Note:

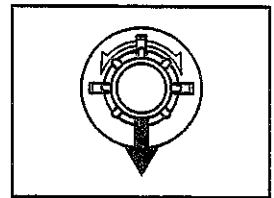
The TAPE mode can not be switched when no tape in the cassette slot.

Changing Sides

- Rock the D.J Encoder down to switch to the program on the other side of the tape.

▶ **PLAY** ▶ Top Side ◀◀ **PLAY** ◀ Bottom Side

- When the tape is playing end at one side, then it will play automatically from the other side. (Auto Reverse System)



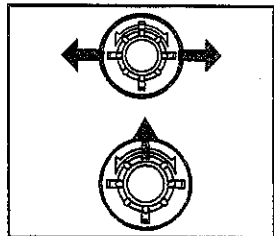
Rewind and Fast Forward

Rock the D.J Encoder to left or right to rewind or fast forward the tape.

◀ (TRACK ◀◀) : Rewind. The tape will start playing when it is rewinded to the beginning.

▶ (TRACK ▶▶) : Fast Forward. The tape will start playing from the other side when it is fast forward to the end.

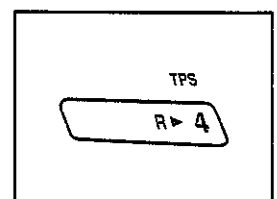
※ Rock the D.J Encoder up to ■ side to stop rewind or fast forward.



TPS Operation (Tape Program Sensor)

When TPS is activated "ON", the interval between programs can be sensed and playback starts from the beginning of a program.

① Press **TPS** to switch TPS "ON/OFF".

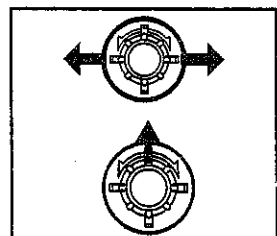


② Rock the D.J Encoder to left or right to select programs.

◀ (TRACK ◀◀) : Rock it once and play starts from the beginning of the current program. Rock it several times to select the backward programs (up to 8 programs).

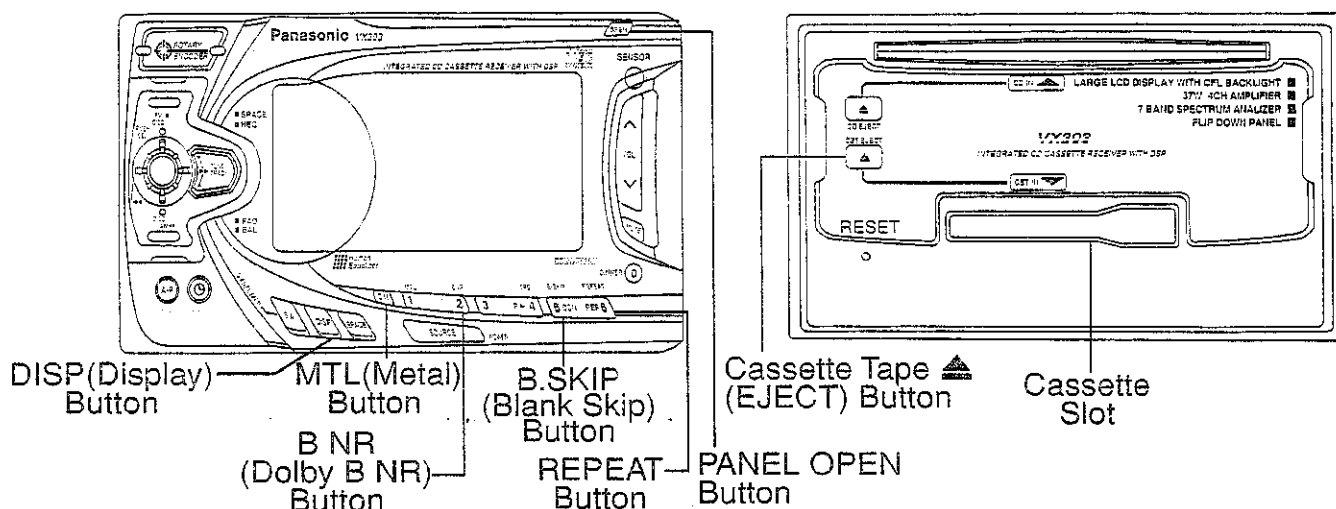
▶ (TRACK ▶▶) : Rock it once and play starts from the beginning of the next program. Rock it several times to select the forward programs (up to 9 programs).

※ Rock the D.J Encoder up to ■ side to stop rewind or fast forward.



Notes:

- The TPS mode may not work correctly in the following cases. This, however, does not mean that the unit is defective.
- There is an interval less than 4 seconds.
- There is particularly low-level passage during the program.

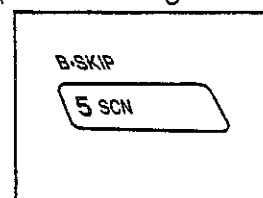


Blank Skip

It can quickly skip the remaining unrecorded portions at the end of the tape and fast forward to the beginning of the first music on the reverse side of the tape.

- Press B.SKIP to switch the Blank Skip function "ON/OFF".
- The SKIP indicator lights when the Blank Skip is "ON".
- The SKIP indicator blinks when the Blank Skip is operating.

(Initial setting: OFF)



Notes:

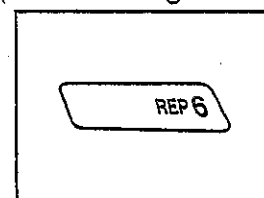
- It will not work when the unrecorded portion of the tape is less than 15 seconds.
- The repeat function has priority over that of the blank skip function when it is ON.

Repeat Play

After finishing the music just listened to, the rewind starts automatically until the beginning of music, and the same music starts playing again.

- Press REPEAT to switch Repeat function, "ON/OFF".
- The REP indicator lights when the repeat function is "ON".
- The REP indicator blinks when the tape is rewinding.

(Initial setting: OFF)

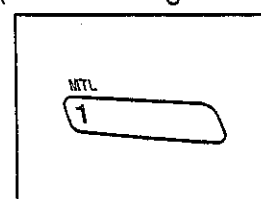


Metal Tape Mode

To Play metal or chromium dioxide (CrO₂) position tapes.

- Press MTL to switch the metal tape playing "ON/OFF".
- The MTL indicator lights when the metal tape playing is "ON".

(Initial setting: OFF)



Note:

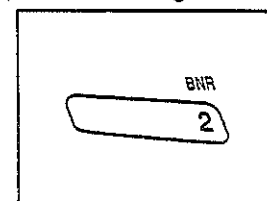
Playing non-metal tapes in MTL mode causes high frequency imbalance, which affects tone quality.

Cassette Tape Player Basics continued

Dolby Noise Reduction

To reduce the high frequency noise when playing the tape recorded with the Dolby B NR.

(Initial setting: OFF)



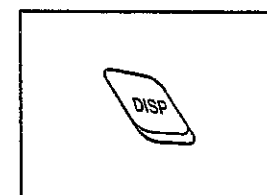
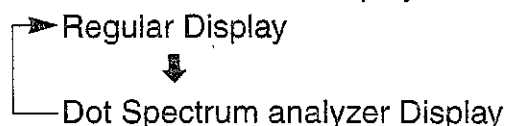
- Press B NR to switch the Dolby B NR "ON/OFF".
- The B NR indicator lights when the Dolby B NR is "ON".

Note:

- Playing without Dolby B NR tape in Dolby B NR mode causes high frequency imbalance, which affects tone quality.

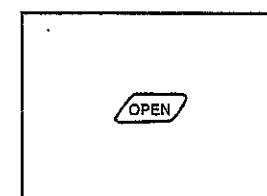
Switching Display

Press DISP to switch display on the dots indicator as follows:



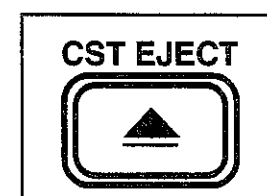
Ejecting the Tape

- ① Press OPEN to open the front Panel.



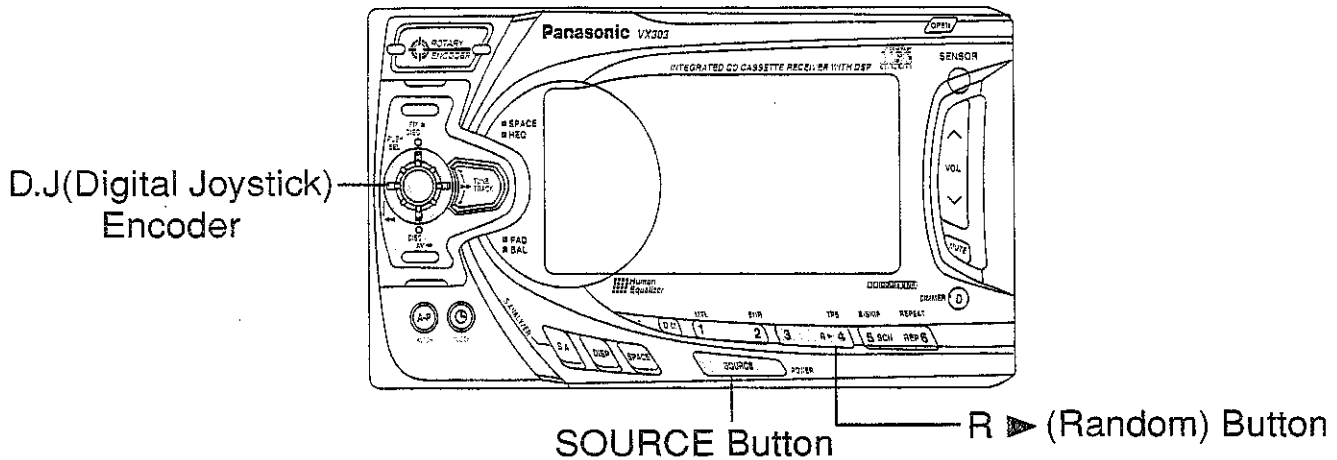
- ② Press CST ▲ to eject the tape.

The power will be off after the tape is ejected when in tape mode.

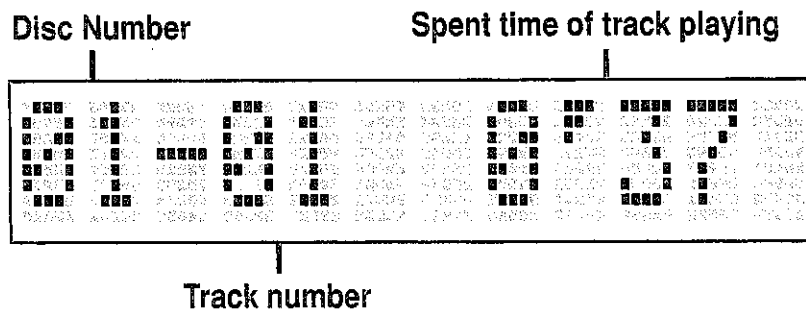


CD Changer Basics

CD Changer functions are applicable to units with optional CD Changer unit, (Sold Separately)

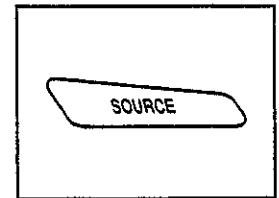


Regular Display of Changer



Change to the Changer Mode

Press SOURCE to switch the changer mode, a disc starts playing.



Notes:

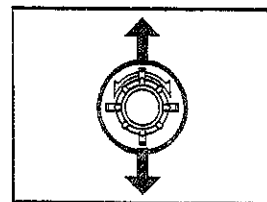
- The CHANGER MODE can not be switched when there is no changer connected or no magazine in the changer.
- "NO DISC" displays when there is no disc in the magazine.
- In the case of the power off, the power will be ON when inserting the magazine into the changer. The playing starts when switching to the CHANGER mode from other modes.

CD Changer Basics continued

Selecting a Disc

Rock the D.J Encoder up or down to switch DISC \wedge or DISC \vee .

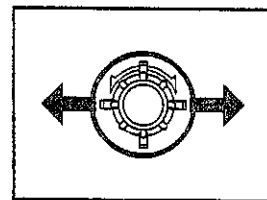
- ↑ (DISC \wedge) : Select discs in ascending order.
- ↓ (DISC \vee) : Select discs in descending order.



Selecting a Track

Rock the D.J Encoder to left or right to switch TRACK \ll or TRACK \gg .

- ← (TRACK \ll) : Rock it once to play the beginning of the current track.
Rock it twice to play the previous track.
- (TRACK \gg) : Rock it once to go to the next track.



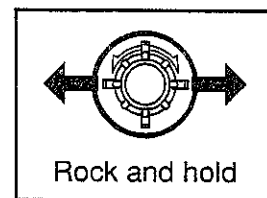
Note:

The tracks can also be selected by rotating the D.J Encoder. (See P. 41)

Searching a Track

Rock and hold the D.J Encoder for more than 0.5 second to switch TRACK \ll or TRACK \gg .

- ← (TRACK \ll) : Reverse
- (TRACK \gg) : Fast forward



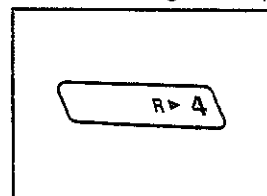
Random Selection

Track Random play

A random selection of music is played from all available tracks of all discs in the changer.

- Press R▶ to switch the TRACK RANDOM selection "ON/OFF".
- The RAND indicator lights when the TRACK RANDOM selection is "ON".

(Initial setting: OFF)

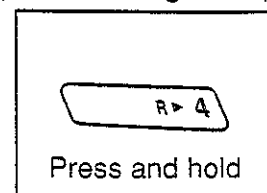


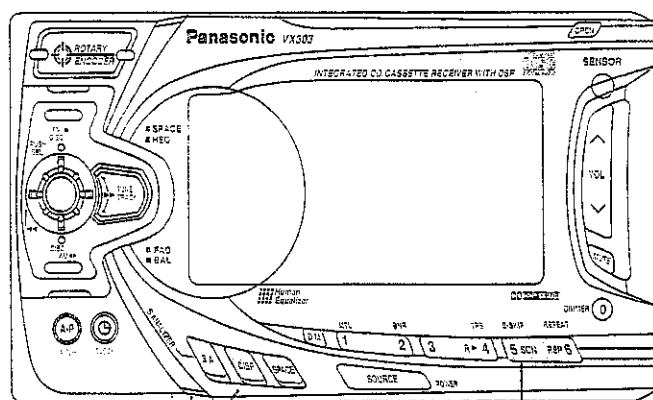
Disc Random Selection

A random selection of music played from all available tracks in the current playing disc.

- Press and hold R▶ for more than 2 seconds to switch the disc random selection "ON/OFF".
- The [DISC] indicator and the RAND indicator light when the disc random selection is "ON".

(Initial setting: OFF)





DISP(Display) Button

SCN(Scan) Button

REP(Repeat) Button

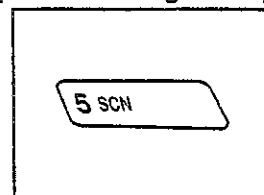
Scanning Tracks/Discs

Scanning Tracks

All tracks descending the current playing track on the discs play in sequence for 10 seconds each.

- Press SCN to switch Track Scan "ON/OFF".
- The SCAN indicator lights when Track Scan is "ON".
- To stop scanning and continue with the current track, press SCAN again to switch Track Scan "OFF".

[Initial setting: OFF]

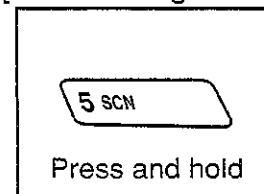


Scanning Discs

The 1st track of all the discs descending the current playing disc in the magazine is played for 10 seconds each.

- Press and hold SCN for more than 2 seconds to switch Disc Scan "ON/OFF".
- The [DISC] indicator and the SCAN indicator light when Disc Scan is "ON".
- To stop the current play of the disc scanning, press SCN again to switch Disc Scan "OFF".

[Initial setting: OFF]

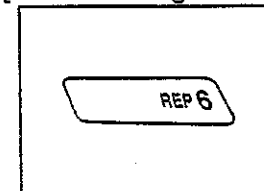


Repeating a Track/Disc

Track Repeat play

- Press REP to switch Track Repeat "ON/OFF".
- The REP indicator lights when Track Repeat is "ON".

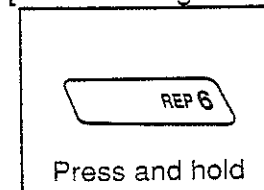
[Initial setting: OFF]



Disc Repeat play

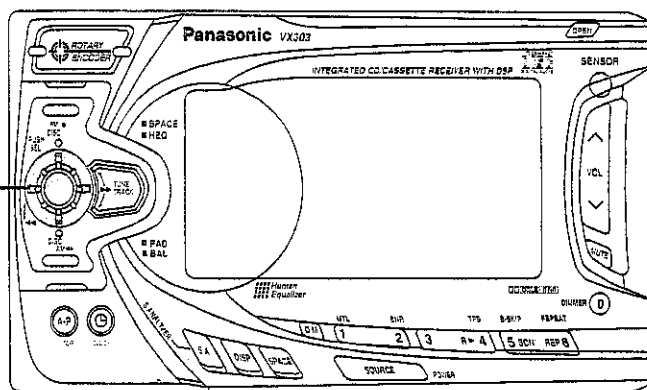
- Press and hold REP for more than 2 seconds to switch Disc Repeat "ON/OFF".
- The [DISC] indicator and the REP indicator light when DISC REP is "ON".

[Initial setting: OFF]



Sound Setting Basics

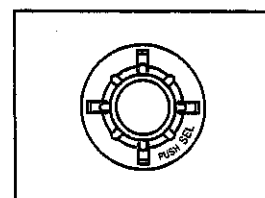
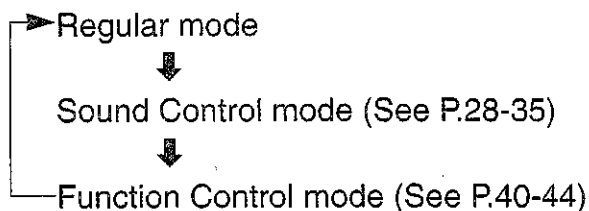
D.J(Digital Joystick)
Encoder



Change the Sound Control mode

Mode Selection

Press the D.J Encoder (SEL Button) to switch modes as follows:



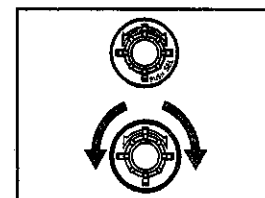
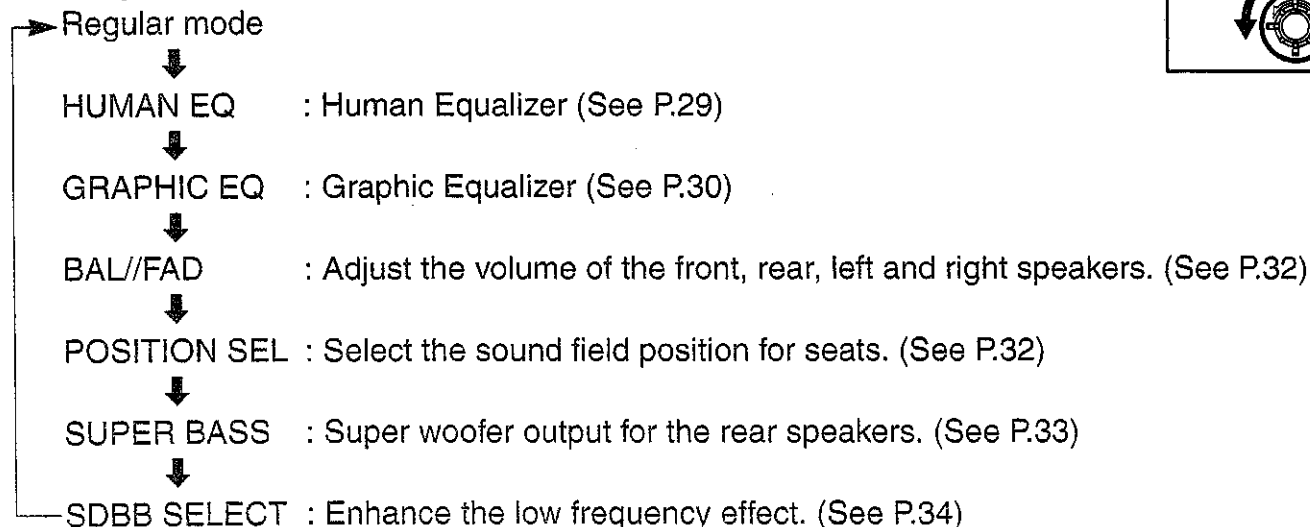
Note:

Those buttons for the regular mode can not be operated when setting, or adjusting.
Please return to the regular mode.

Selecting the Sound Setting function

Sound Control mode

Press the D.J Encoder (SEL Button), and then turn it to the right to switch the following orders. (Turn left: reverse orders)



Note:

When a control mode is selected but no operation is made within 10 seconds, the display will return to the regular mode automatically.

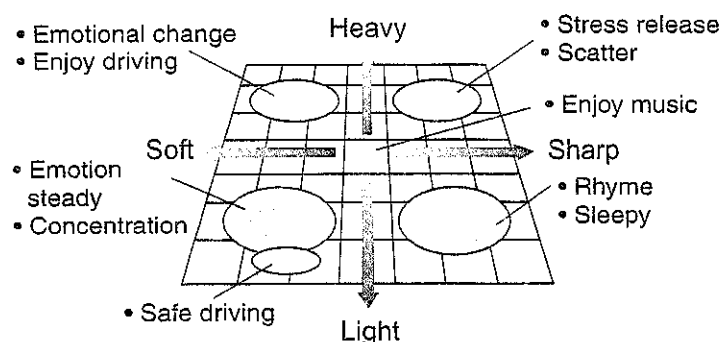
Human Equalizer

HEQ

The are 2 modes for HEQ adjustment, please select one mode of them. (See P.44)

HEQ Normal Mode

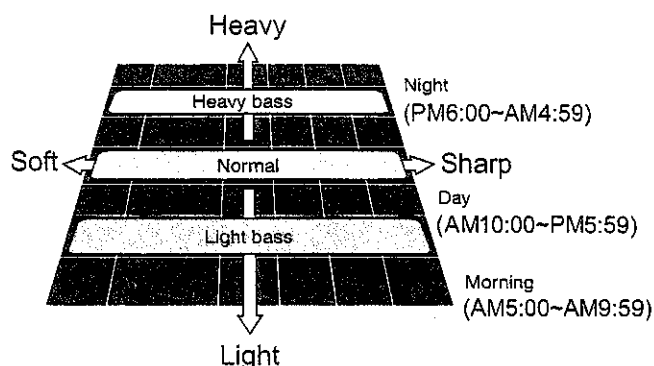
Select the tone quality during 49 patterns, the complex equalizer can be simply adjusted. you can select the tone quality you like.



FLAT(0) at the center, the vertical axle is for bass adjusting and the horizontal axle is for treble adjusting. [Initial setting: FLAT(0)]
[Adjusting range: each 1-3(49 patterns)]

HEQ Day & Night Mode

The tone quality can adjust itself automatically for various time period. The Bass is light in the morning and heavy at night. The tone quality is selected during 7 patterns for every time period.

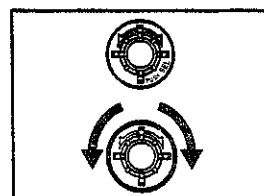


It can only adjust it horizontal axle (treble).

Note:

The DAY & NIGHT mode can not be selected if the clock is not adjusted yet.

① Select "HUMAN EQ". (See P.28)



② Rock the D.J Encoder.

↑ (HEAVY) : Changing to heavy bass.

↓ (LIGHT) : Changing to light bass.

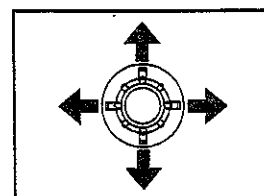
← (SOFT) : Changing to soft treble.

→ (SHARP): Changing to sharp treble.

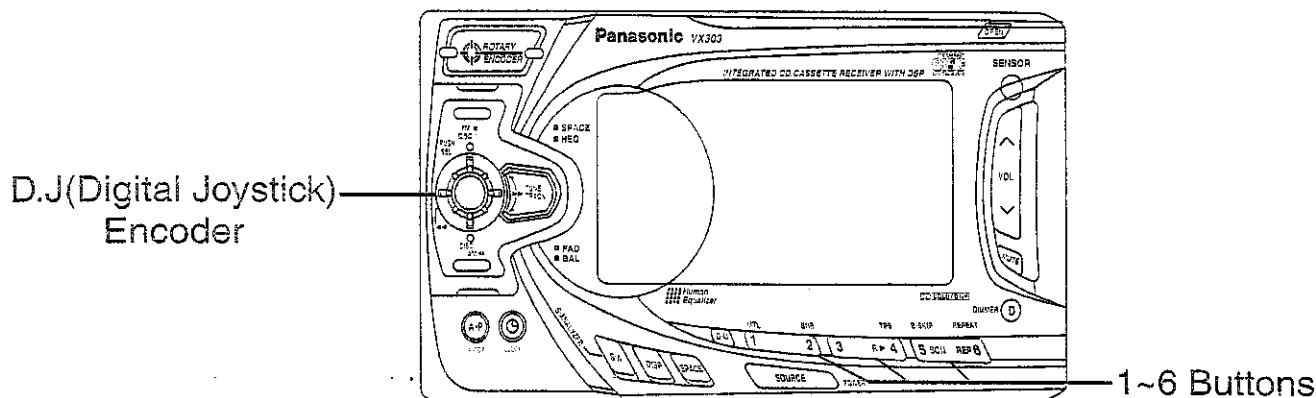
※For setting DAY & Night Mode, adjust the horizontal axle only.

• The cursor moves on the HEQ display, the adjusted position blinks.

• The EQ indicator blinks when adjusting and lights after adjusted.



Sound Setting Basics continued



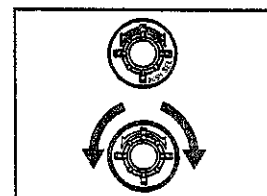
Graphic Equalizer (GEQ)

GEQ

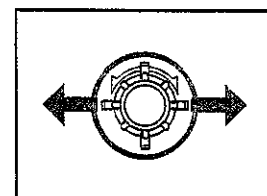
Adjusting the Frequency to adjust the Tone Quality

To adjust the level of the frequency range to set the tone quality you like.
(Initial setting: 0 dB for all frequencies, adjustable range: -12dB~+12dB)

① Select "GRAPHIC EQ". (See P.28)



② Rock the D.J Encoder to left or right to select the frequency.



- Rock it to right to change the following frequencies. (Rock it to left: reverse frequencies)

80 ⇒ 160 ⇒ 320 ⇒ 640 ⇒ 1.6k ⇒ 4k ⇒ 10k(Hz)



- The cursor moves to the left and the right directions, the selected frequency blinks.

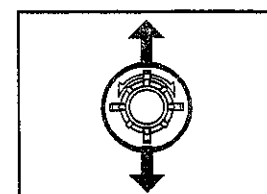
③ Rock the D.J Encoder up or down to adjust the level.

↑ : Level up

↓ : Level down

※ Repeat ② ③ above to set each frequency level.

The EQ indicator blinks when adjusting and lights after set.



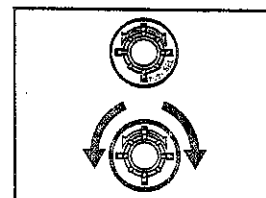
The cursor moves upward or downward and the selected level blinks.

Memorized the Adjusted Tone Quality

GEQ Memorized

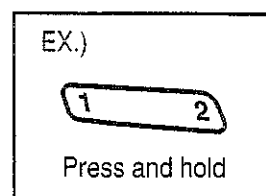
The adjusted GEQ tone quality can be memorized for 1 through 6 buttons.

① Select "GRAPHIC EQ". (See P.28)



② Press and hold one of the buttons 1-6 for more than 2 seconds.

- The current GEQ curve characteristic is memorized for that button you pressed.
- The preset memory number blinks when the memory is finished.



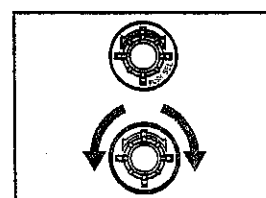
Note:

The former memorized GEQ curve characteristic will be replaced by a new one.

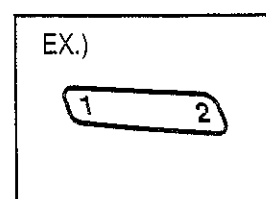
Call the Tone Quality Memory

The memorized GEQ curve characteristic can be called by operating a button.

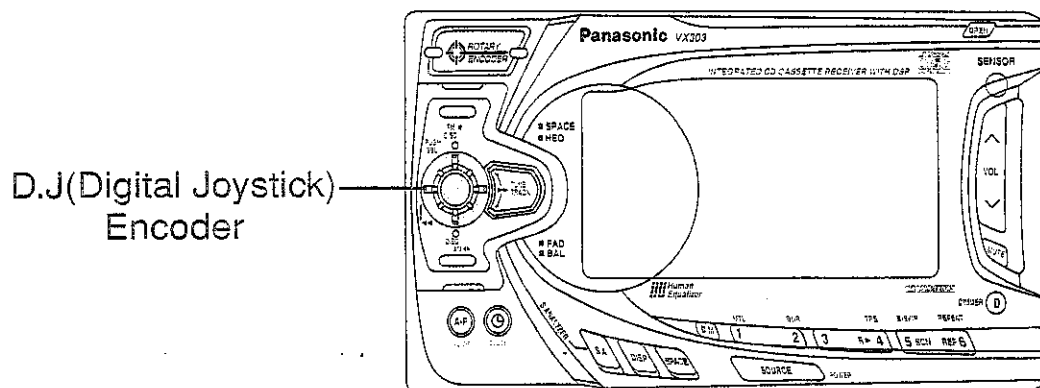
① Select "GRAPHIC EQ". (See P.28)



② Press any of the buttons 1-6 to call the GEQ curve characteristic.



Sound Setting Basics continued

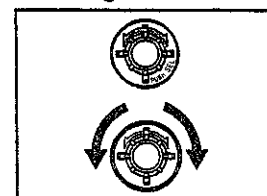


Balance/Fader Adjustment

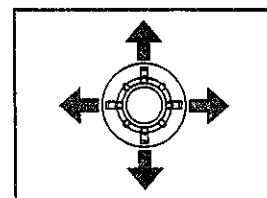
To adjust the volume of the left, the right, the front and the rear speakers.

(Initial setting: CENTER Range: 15 each)

- ① Sel "BAL/FAD". (See P.29)



- ② Rock the D.J Encoder to the left, right, up, down to adjust the volume level.



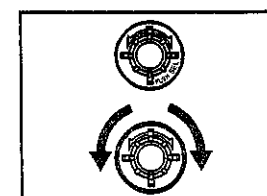
- ↑ (FRONT) : Increase the volume level of the Front speakers.
- ↓ (REAR) : Increase the volume level of the Rear speakers.
- ← (LEFT) : Increase the volume level of the Left speakers.
- (RIGHT) : Increase the volume level of the Right speakers.

Position Selection

To adjust the sound field for passenger on which seat to listen to.

[Initial setting: OFF]

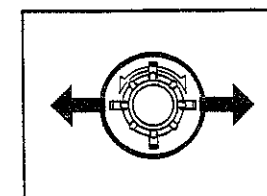
- ① Select "POSITION SEL". (See P.28)



- ② Rock the D.J Encoder to the left or right.

Rock it to the right to switch the following orders.

(Rock it to the left: reverse orders)



Off(all seat) → RIGHT (The front right seat) → LEFT(the front left seat)

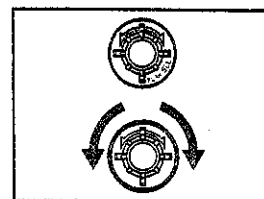
↑
REAR (the rear seat) ← ↓
FRONT (the front seat)

Rear Speaker Exclusive to Sub Woofer Output [Super bass control sub Woofer (SBC-SW)]

You will find it quite easy to enjoy super bass from the rear speakers (built-in amplifier)

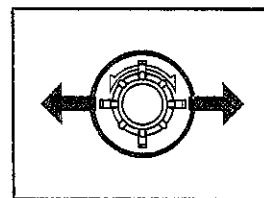
[Initial setting: SBC-SW OFF]

① Select "SUPER BASS". (See P.28)



② Rock the D.J Encoder to the left or right.

Rock it to the right to change the following orders.



➤ SBC-SW OFF : Regular stereo output without high frequency cutting.



SBC-SW FLAT : Regular mono output without high frequency cutting.
(mono output)



SBC-SW 100 : Cut the high frequency for 100 Hz upper. (mono output)



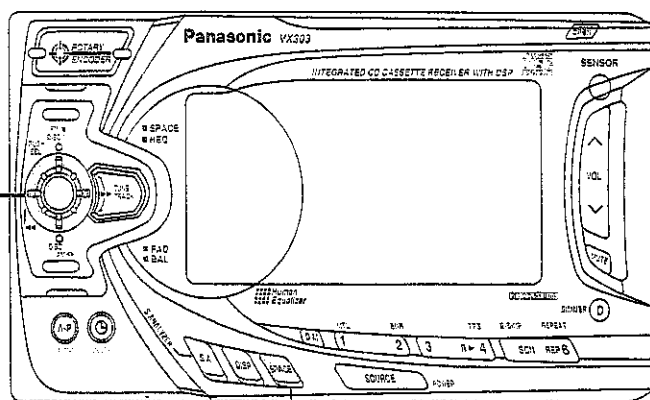
SBC-SW 150 : Cut the high frequency for 150 Hz upper. (mono output)



SBC-SW 200 : Cut the high frequency for 200 Hz upper. (mono output)

Sound Setting Basics continued

D.J(Digital Joystick)
Encoder



SPACE button

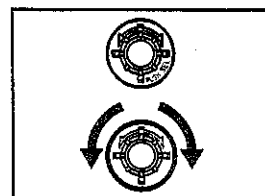
Enhance the low frequency effect

Super Dynamic Bass Booster (SDBB)

You will find it quite easy to enjoy super bass from four speakers by enhancing the bass field (built-in amplifier).

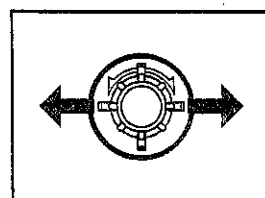
[Initial setting: SDBB OFF]

① Select "SDBB SELECT" (See P.28)

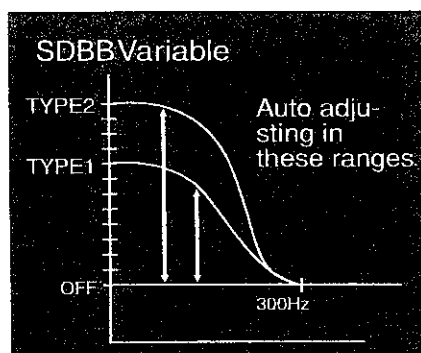


② Rock the D.J Encoder to the left or right.

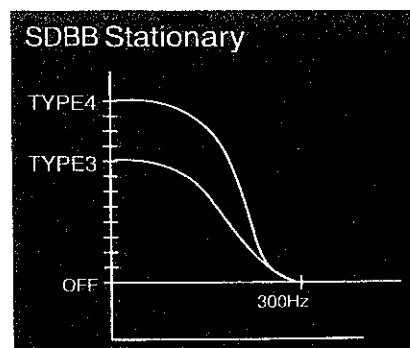
Rock it to the right to change the following orders.



- ➔ SDBB OFF : Regular stereo output (Do not enhance the low frequency effect.)
- ↓
- SDBB TYPE 1 : Variable, Weak
- ↓
- SDBB TYPE 2 : Variable, Strong
- ↓
- SDBB TYPE 3 : Stationary, Weak
- ↓
- SDBB TYPE 4 : Stationary, strong



To adjust the balance well for the bass input level, the proper level of the super bass output automatically.



To use the bass with shaking effect. It can select strong/weak.

SPACE

The SPACE likes as in the concert stage reappears in the car.

(Initial setting: SPACE OFF)

Press DSP and then turn the D.J Encoder.

- Turn it to the right to change the following orders.

(Turn to the left; reverse orders.)

SPACE OFF ➡ LIVE HOUSE ➡ CONCERT HALL



CINEMA

JAZZ CLUB



VOCAL

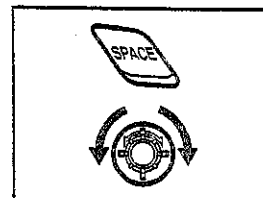


DISCO



STADIUM

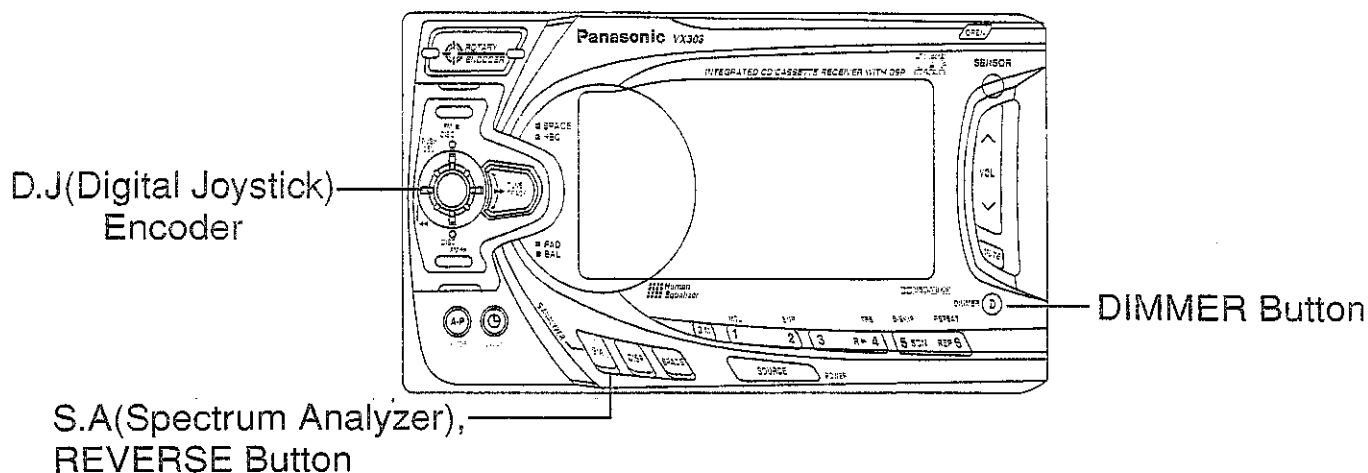
- The SPACE indicator lights when the space is set.



Note:

The space setting is invalid for the radio station set by direct memory. (See P.38)

Convenient Functions



Changing the Spectrum Analyzer Displays

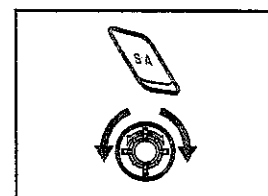
The display pattern can be selected between those 12 kinds.

(Initial setting: DEMO)

Press S.A and then turn the D.J Encoder.

Turn it to the right to change the following orders.

(Turn it to the left: reverse orders)



- ➔ ① DEMO
- ↓
- ② WAVE
- ↓
- ③ AURORA
- ↓
- ④ MILKY WAY
- ↓
- ⑤ TWINKLE STAR
- ↓
- ⑥ SUN
- ↓
- ⑦ METEOR
- ↓
- ⑧ SPACE FEVER
- ↓
- ⑨ SPACE WAVE
- ↓
- ⑩ BIG BANG
- ↓
- ⑪ BLANK SPEANA : The Spectrum Analyzer extinguishes.
- ↓
- ⑫ ALL DISP OFF : Turn off the display and illumination.

The whole display extinguishes. The display lights when operating such as VOL button etc, and extinguishes again after operation for about 5 seconds.

Notes:

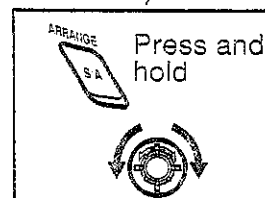
- This unit can not be operated when in DEMO MODE, please change to other modes except for DEMO MODE.
- To display the regular mode from ALL DISP OFF mode, please press S.A button and then turn the D.J Encoder to set the above ①~⑪.

To Arrange the Spectrum Analyzer Display

It can change the spectrum analyzer display orders. (②~⑩ only).

(Initial setting: NORMAL /SPEANA POSL)

Press and hold S.A for more than 2 seconds and then turn the D.J Encoder. Turn it to the right to change the following orders.



- ➔ NORMAL : Regular Spectrum analyzer display (The left and right reverse of REVERSE 3)
- ↓
- REVERSE 1 : The up, down reverse of NORMAL.
- ↓
- REVERSE 2 : The left and right reverse of REVERSE 1.
- ↓
- REVERSE 3 : The up and down reverse of REVERSE 2.

Press and hold S.A for more than 2 seconds and then rock the D.J Encoder up or down to change the display polarity of the spectrum analyzer.

↑: To change the spectrum analyzer to positive polarity.

↓: To change the spectrum analyzer to negative polarity.

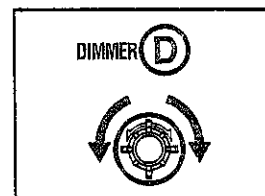
To Set the Display Brightness

The display brightness can be set separately when the small light of a car is "ON" or "OFF".

Press DIMMER and then turn the D.J Encoder.

[Initial setting: When light ON: MID
When light OFF: HIGH]

Turn it to the right to change the following orders. (Turn to the left: reverse orders)



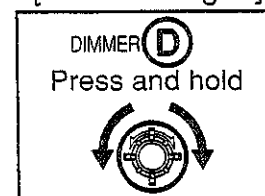
- ➔ DIMMER HIGH: For high brightness.
- ↓
- DIMMER MID : For mid brightness.
- ↓
- DIMMER LOW : For dark brightness.

Contrast

The display contrast can be set separately.

Press and hold DIMMER for more than 2 seconds and the turn the D.J Encoder.

[Initial setting: 0]

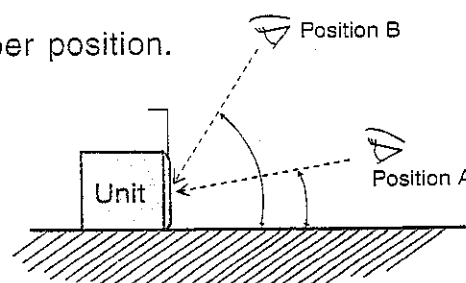


Turn it to the right ➔ To find a proper view angle from the front position (EX.

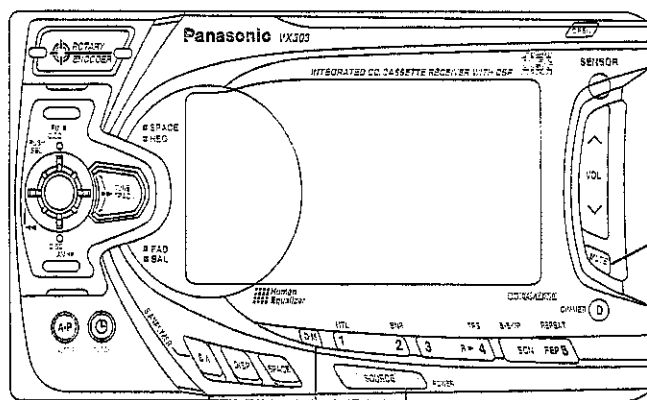
Position A shown at the right diagram)

Turn it to the left ➔ To find a proper view angle from the upper position.

(EX. Position B shown at the right diagram)



Convenient Functions continued



D.M(Direct Memory) button

SOURCE button

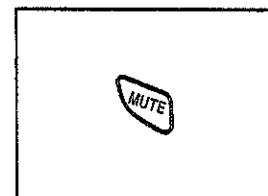
MUTE (ATT: Attenuator) button

MUTE (Attenuator)

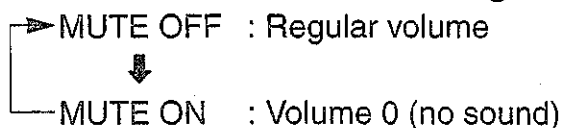
Press MUTE (ATT). Volume will decrease. It is different for setting MUTE or ATT. (See P.42)

[Initial setting: MUTE OFF]

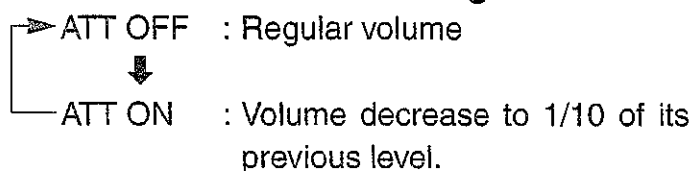
- Press MUTE (ATT) to switch MUTE or ATT "ON/OFF".



For MUTE setting



For ATT setting

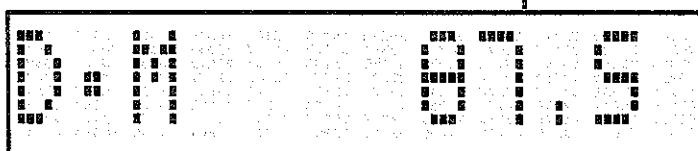


- The MUTE indicator lights when MUTE/ATT is "ON".

Direct Memory (D.M)

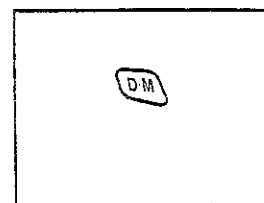
The traffic information or a station you like can be received simply by only pressing a button from any mode and even the power off.

Frequency



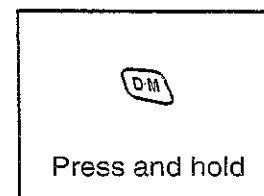
Press D.M to switch modes as follows:

→ D.M : A memorized station.
↓
Regular Mode: The previous mode.



To set a D.M station

- ① Select a station you like in TUNER mode. (See P. 13-16)
- ② Press and hold D.M for more than 2 seconds to memorize this station.

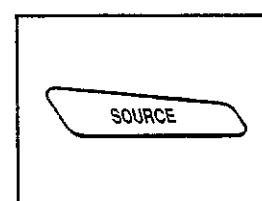


Note:

- The D.M initial setting is FM87.5 MHz
- The Space setting is invalid this time. (See P.36)
- The setting of sound control can not be changed.

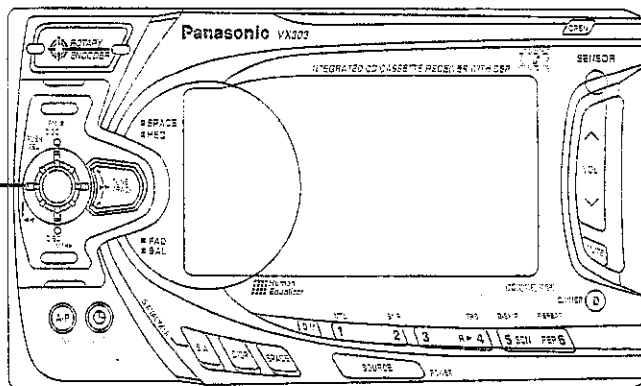
Auxiliary

Connect the auxiliary equipment (any other appropriate equipment) to the AUX IN connector at the rear of this unit. (See P.48)
Press SOURCE to switch to AUX IN mode.



Other Settings

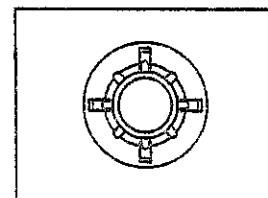
D.J(Digital Joystick)
Encoder



Function Control mode

Press D.J Encoder (SEL button) to switch the following orders.

- Regular Mode
- ↓
- Sound Control Mode (P.28~35)
- ↓
- Function Control Mode (P.40~44)



Note:

The buttons for regular mode can not be operated when setting or adjusting. Please resume the regular mode.

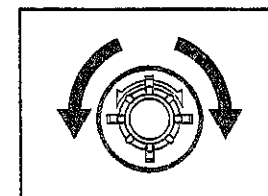
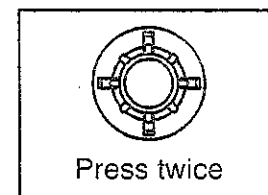
Function Selection

① Press the D.J Encoder (SEL button) twice.

② Turn the D.J Encoder.

Turn it to the right to switch the following orders.
REGULAR MODE

- ROTARY SEL : Function can be set by turning the D.J Encoder. (See P.41)
- ↓
- SPEANA SPEED : Set the display speed of the spectrum analyzer. (See P.42)
- ↓
- MUTE KEY SEL : Set the function of the MUTE (ATT) button. (See P.42)
- ↓
- TITLE SCROLL : (not used)
- ↓
- AUX IN SET : Set AUX IN "ON" or "OFF". (See P.43)
- ↓
- HUMAN EQ SET : Set the tone adjusting mode for HEQ. (See P.44)

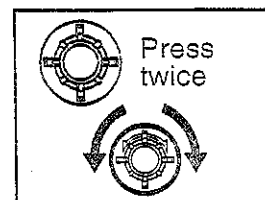


Note:

The regular mode will resume when a control mode is selected but no operation is made within 10 seconds.

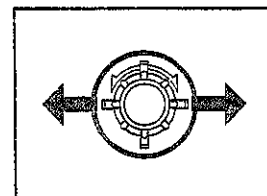
Set Functions by Turning the D.J Encoder

① Select "ROTARY SEL". (See P.41)



② Rock the D.J Encoder to the left or right.

Rock it to the right to switch the following orders.



ROTARY HEQ : Adjust the tone quality of human equalizer. (Right



turn: up/Left turn: Down)

ROTARY VOL : Adjust Volume.



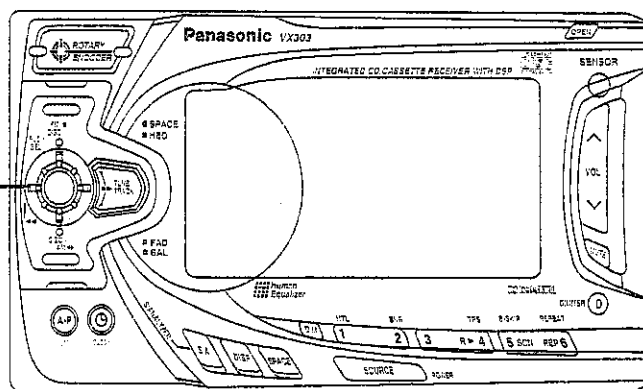
(Right turn: volume up/Left turn: Volume down)

ROTARY UP/DW : Operation of sound source separately.

(TUNER) frequency setting. (CD CHANGER) Track selection, (TAPE) Rewind/Fast forward, TPS (right turn: UP, forward/Left turn: DOWN, backward)

Other Settings continued

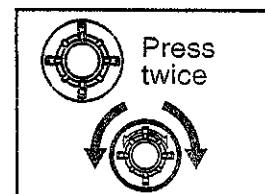
D.J(Digital Joystick)
Encoder



To Set the spectrum Analyzer Display speed

[Initial setting: SPEANA FAST]

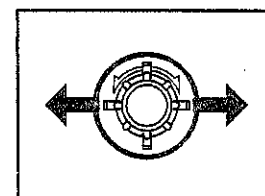
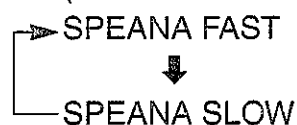
- ① Select "SPEANA SPEED". (See P.40)



- ② Rock the D.J Encoder to the left or right.

Rock it to the right to switch the following orders.

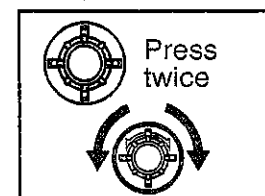
(Left rock: reverse order)



Set the Function of MUTE (ATT) Button

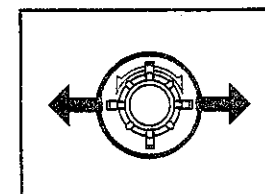
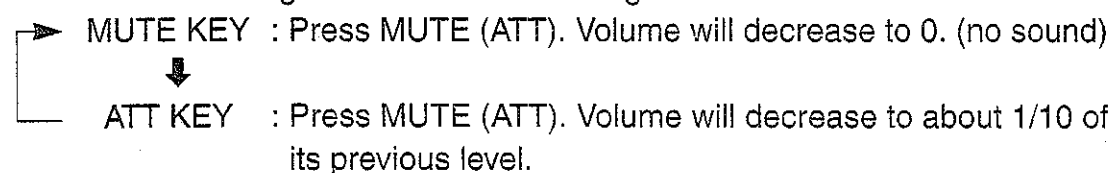
[Initial setting: MUTE KEY]

- ① Select "MUTE KEY SEL". (See P.40)



- ② Rock the D.J Encoder to the left or right.

Rock it to the right to switch the following order.

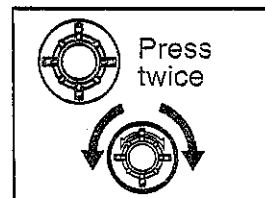


Set Auxiliary In Mode

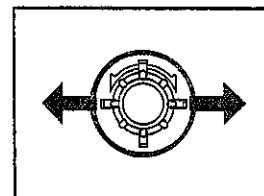
When there is no auxiliary equipment used, the AUX IN mode can be set not to be switched when selecting sound source (See P.40)

[Initial setting: AUX IN...ON]

① Select "AUX IN SET". (See P.40)



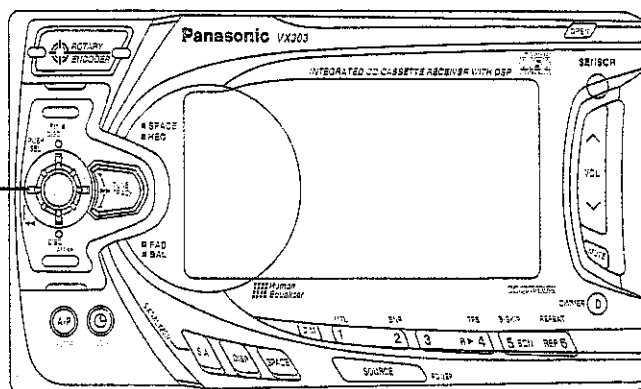
② Rock the D.J Encoder to the left or right to switch AUX IN "ON/OFF", rock it to the right to switch the following order.



- ON: Press SOURCE to change to AUX IN mode.
- ↓
- OFF: Pressing SOURCE can not change to AUX IN mode.

Other Settings continued

D.J(Digital Joystick)
Encoder

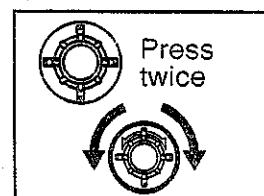


To Set HEQ

HEQ has 2 modes for adjusting tone quality, you can set a mode you like.

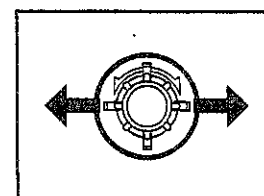
(Initial Setting: HEQ NORMAL)

- ① Select "HUMAN EQ SET". (See P.40)



- ② Rock the D.J Encoder to the left or right.

Rock it to the right to switch the following order.



HEQ NORMAL : Select the tone quality during 49 patterns, the complex equalizer can be simply adjusted.



HEQ DAY&NIGHT : The tone quality can adjust itself automatically for various time period of morning, day and night. The tone quality is selected during 7 patterns for every time period.

Note:

"DAY & NIGHT" can not be selected when the clock is not adjusted.

Installation Guide

Precautions

If possible, this equipment should be professionally installed. In case of difficulty, please consult with your nearest professional installer.

1. This unit only operates in a 12-volt DC negative ground system.
2. Before performing installation and wiring, remove the negative (–) terminal of the battery.
(See Note below.)

Note:

Do not disconnect the negative battery terminal in vehicles equipped with trip or navigational computers. All electronic memory settings previously registered will be lost. Take extra care to avoid causing short-circuits when installing the unit.

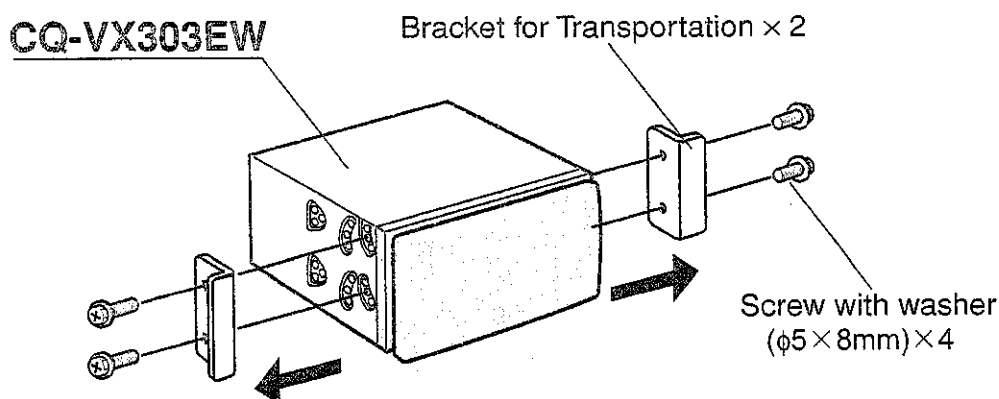
3. Follow the wiring connection diagram carefully to avoid causing damage to the unit.
4. Insulate all exposed wires to prevent short-circuits.
5. Secure all loose wires after installing the unit.
6. Please carefully read the operating and installation instructions of any equipment connected to this unit.

Transportation bracket removal

Be sure to remove the bracket for transportation before use (installation).

※ Use screws ($\phi 5 \times 8\text{mm}$) with washers for installation.

Be careful not to lose any of these parts.



Note:

- The unit is not TAP finished on the right side although there are screw holes in it. Please only use screws provided to mount the unit.
- To tighten the screws, press its head down straight forward.

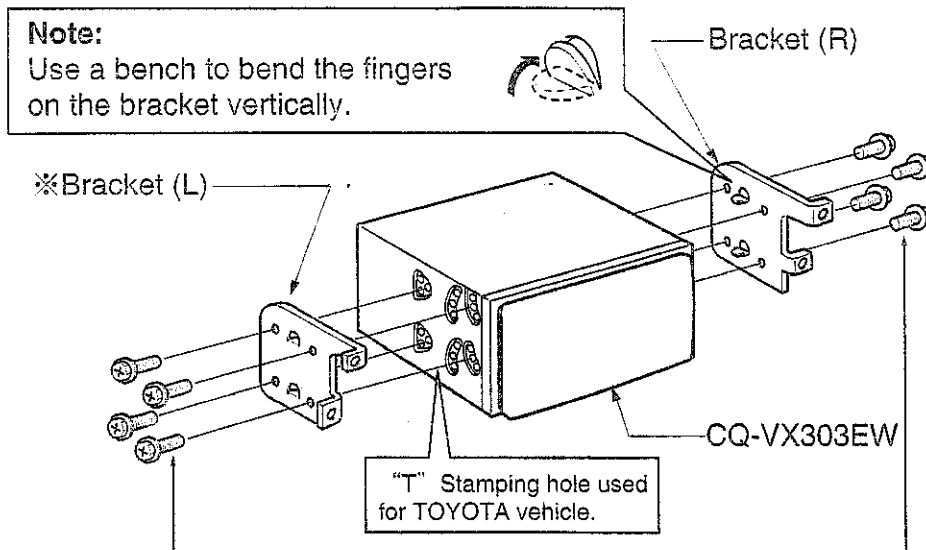
Installation Hardware

Item	Qty
Screw with washer ($\phi 5 \times 8\text{mm}$)	4
Flat-head small screw ($\phi 5 \times 8\text{mm}$)	8
Power Connector	1

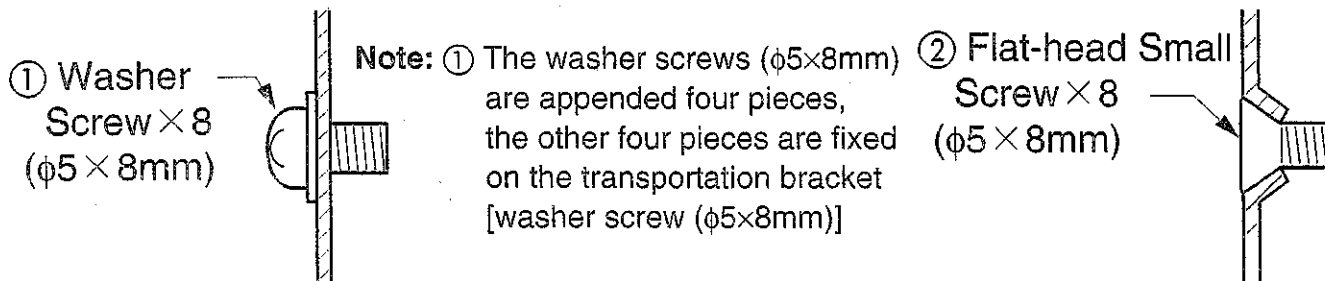
Installation Guide continued

■ Typical Installation (For vehicle with 2 DIN size)

1. Remove Car radio or little object box from the vehicle and the stopping brackets.
2. Use the appended screws ① or ② to install the brackets on this unit.
3. Install this unit into the vehicle.



Appended Screws (① or ②)... Select appropriate ones matching the hole shape of the bracket.



- If a special kit (Sold separately) is necessary for a certain year's, model or grade vehicle, please consult your dealer.
- For electrical connecting simply to your vehicle, you can buy a prepared power connector from your dealer.

■ Installation for except for the above motors

For general use kit (Sold separately) or motor's special kit (Sold Separately), Please consult your dealer.

Note:

The opening space 180mm(W) × 100mm(H) is for 2 DIN size vehicle.

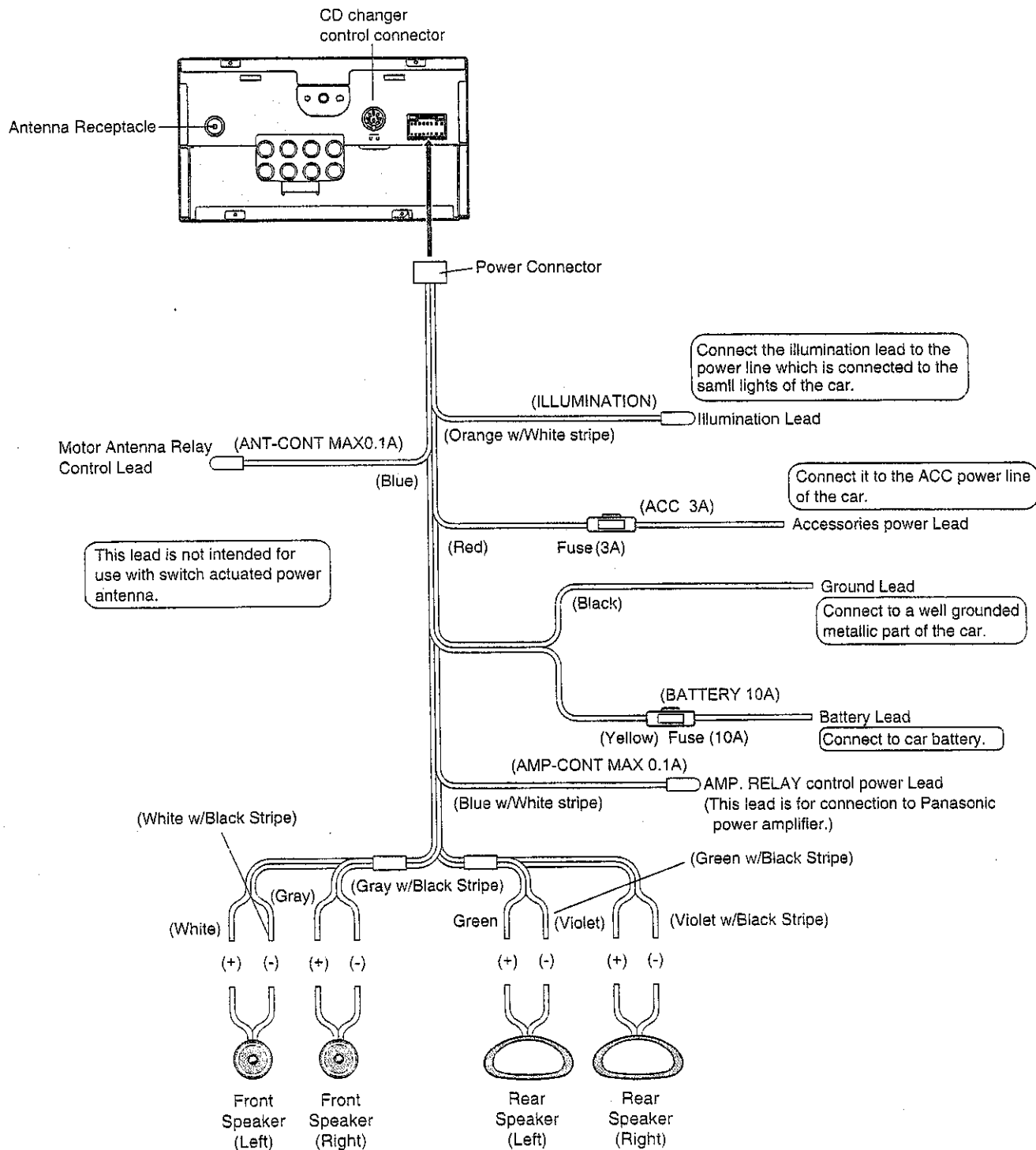
Electrical Connection

Precautions

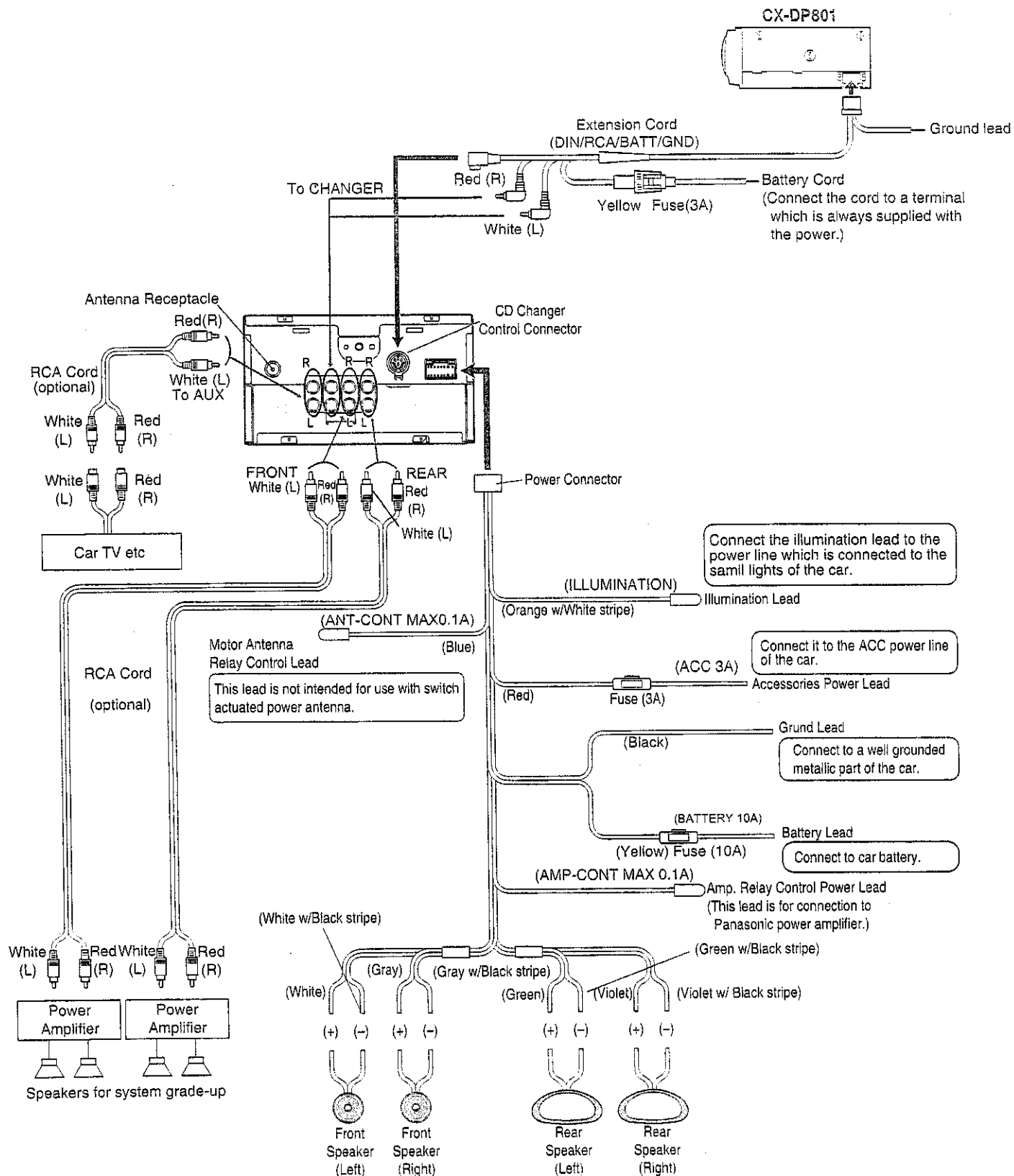
- This unit only operates in a 12-volt DC negative ground system.
- Prevent short-circuits, remove the negative (-) terminal of the battery.
- Please carefully read the operating instructions of any equipment connected to this unit.

Caution:

For installation to cars with trip or navigational computers, all electronic memory settings previously registered in the computer will be lost when the battery terminal is disconnected.



Example of System Grade-up (With 8 Speakers) Combination of CD Changer (CX-DP801) and a Car TV



Troubleshooting Tips

■ Power

Problem	Possible Cause	Probable Solution
Unit won't turn on.	Dead vehicle battery. Ignition not on.	Charge vehicle battery. Turn ignition to On or Acc.
	Bad each line connection.	Check connections.
	Bad power battery line connection.	Connect battery cables to terminals that are always live.
	Bad Accessory line connection.	Connect accessory power cord with ACC power supply of the car.
	Fuse burned out.	Replace it with one of the specified rating. Please consult your dealer.
	Bad ground line connection	Connect ground line to a metallic of your car.

■ General


Problem	Possible Cause	Probable Solution
No Sounds	Mute is on.	Press MUTE to set it OFF.
	Bad each line connection.	Check connections.
	Bad Speaker line connection.	Check connections.
	Condensation	Wait for some time before use.
No operation by pressing buttons	Spectrum analyzer display is in demo mode.	Select other than demo mode before operating.

Troubleshooting Tips continued


■ Radio

Problem	Possible Cause	Probable Solution
Much noise in FM stereo and monaural broadcasts	Station is too far or signals are too weak.	Tune in to a station emitting strong signals.
Presetting lost from memory	Bad power battery line connection.	Connect battery cables to terminals that are always live.

■ CD

Problem	Possible Cause	Probable Solution
NO Sound after inserting CD	CD inserted wrong side up.	Insert the CD with label side facing up.
	CD dirty	Clean CD by instructions of CD cleaning.
CD sound skip; poor sound quality	CD dirty	Clean CD by instructions of CD cleaning.
Sound skip due to vibration	Mounted at an angle of over 30 degrees.	Adjust mounting angle to be less than 30 degrees.
	Mounted unsteady	Securely fasten unit and mounting parts, referring to instructions for installation.
CD can't be ejected.	<ul style="list-style-type: none"> ● CD defective ● Mechanical defect 	Open front panel and press  button. If CD can't still be ejected, press RESET switch. If trouble is still unremedied, ask your dealer or nearest service station for repair.

■ Cassette Tape

Problem	Possible Cause	Probable Solution
Poor tape sound quality	Poor quality tape	Use better quality tape
	Head is dirty	Clean the head
Tape can't be ejected	<ul style="list-style-type: none"> ● Cassette tape defect ● Mechanical defect 	Press CST  button on inner panel.
Tape playing always change programs		Use better tapes.
Can't stop tape playing		Press RESET switch when can't play. If trouble is still unremended, ask your dealer or nearest service station for repair.

■ Sound Control





Problem	Possible Cause	Probable Solution
No sound from left, right, front or rear speaker.	Left-right, front-rear balance is off.	Properly adjust BAL/FAD.
	Bad each line connection.	Check connection.
Bass sound from rear speaker or mono sound not output.	SBC-SW is "ON".	Set SBC-SW "OFF".
Right and left sounds reverse in stereo.	Speaker wires are connected wrong.	Connect speaker wires to be correct.

■ Clock



Problem	Possible Cause	Probable Solution
Clock unadjustable	Power is not on.	Press POWER button switch power On, then adjust the clock.

Troubleshooting Tips continued

■ Error Display Messages (CD Player)

Display	Possible Cause	Probable Solution
CD -E1-	Disc dirty or wrong side up.	Press CD  button on the inner panel. Check the disc.
CD -E2-	Disc damaged.	
CD -E3-	Unit fails to operate for some cause.	Press CD  button on the inner panel. If the unit still does not work, press RESET switch. If it still fails to operate normally, ask your dealer or nearest service station for repair.
 -PLS EJECT	CD player can't play for some cause.	Press CD  button on the inner panel.

■ Error Display Messages (Cassette)

Display	Possible Cause	Probable Solution
 -PLS EJECT	Cassette can't play for some cause.	Press CST  button on the Inner panel.

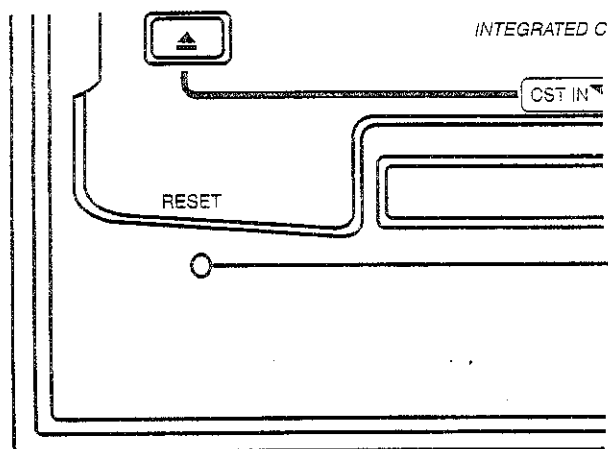
■ Error Display Messages (CD Changer)

Display	Possible Cause	Probable Solution
CD CH -E1-	• Disc dirty or wrong side up.	Eject magazine and check the disc.
CD CH -E2-	Disc damaged.	
CD CH -E3-	Unit fails to operate for some cause.	Press EJECT button on changer. If trouble is unremended, press the RESET switch on changer. If it still fails to operate normally, ask your dealer or nearest service station for repair.
NO DISC	No disc at all in magazine.	Insert discs into magazine.

Note:

- A number E1 or E2 indicates the number of an error disc.
- Display contents and operations vary in part from one changer to another (due to the differences in changer specifications). For details, refer to the operating instructions of the changer you are using.

If abnormal operation appears



RESET Switch

Use a unflexible thin stick to press this switch in the hole. The initial settings will resume and please note that all electronic memory settings previously registered will be lost.

Note:

If the unit still not operate normally after pressed the RESET switch, ask your dealer or nearest service station for repair.

Special Notes

Notes on Compact Discs

ONLY USE DISCS CARRYING LABEL SHOWN ON THE RIGHT



- Dirt, dust, scratches and bending of disc will cause misoperation. Handle discs with care.
- Do not place stickers or make scratches on disc.
- Do not bend discs.
- Disc should always be kept in the case when not in use to prevent from damaging.
- Do not place discs in the following places:
 - 1.) Direct sunlight
 - 2.) Dirty, dusty and damp areas
 - 3.) Near vehicle heaters
 - 4.) Seats and dashboard

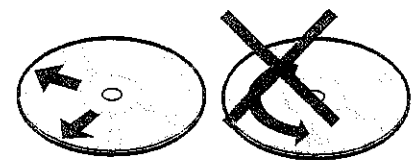
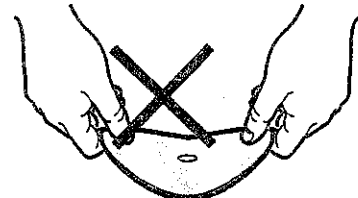
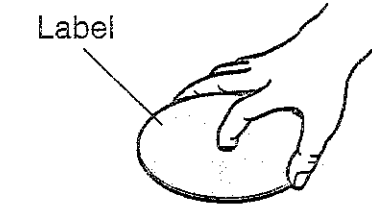
Disc Cleaning

Use a dry soft cloth to wipe the surface. If the disc is quite dirty use a soft cloth slightly.

For Special Shape CDs

The heart shape or polygon shape disc can not be used in the unit.

Label

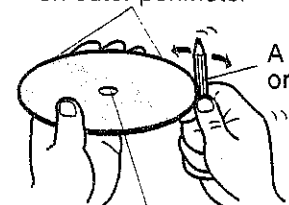


Wipe the disc from center to outside direction.

Caution for use of a new Disc

A new disc may have rough edges on its inner and outer perimeter. If a disc with rough edges is used, proper setting will not be possible and the CD player will not play the disc. Therefore, remove the rough edges in advance by using a ball-point pen or pencil as shown on the right. To remove the rough edges, press the side of the pen or pencil against the inner and outer perimeter of the disc.

Rough edges
on outer perimeter



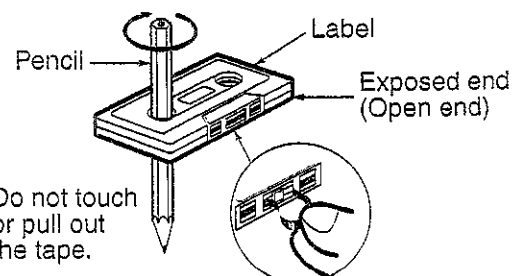
A ball-point pen
or pencil

Rough edges
on inner perimeter

Notes on Cassette Tapes

Tape Slack:

Use a pencil or similar object to take up the slack as shown. If a loose tape is used, this may result in the tape becoming tangled in the rotating parts of the unit.



Specifications

GENERAL

Power Supply	: 12V DC (11V-16V); test Voltage, 14.4 V; negative ground
Current Consumption	: 8.5 A (at CD operation, rated output)
Rated output	: 16W × 4 channels (1,000Hz, 1%, 4Ω)
Maximum output	: 37W × 4 channels
Suitable speaker impedance	: 4Ω
Audio input impedance	: 10 kΩ
Audio input sensitivity	: 200mV (AUX IN)
Pre-out voltage	: 600mV
Pre-out impedance	: 600Ω
External dimensions	: 178(W) × 100(H) × 160(D)mm
Weight	: 2.7kg

DSP

Channel	: 2 channels for input; 4 channels for output
DSP patterns	: 7 patterns
Equalizer center frequency	: 80, 160, 320, 640, 1.6k, 4k, 10k(Hz)
Equalizer range	: -12 dB to +12 dB (13 step)

FM Stereo Radio

Frequency range	: 87.5 to 108.0 MHz
Useable sensitivity	: 12 dBf
Total harmonic distortion (mono)	: 0.3% (1kHz)
Weighed S/N ratio (mono)	: 70 dB
Frequency response	: 20 to 15,000 Hz ± 3 dB
Stereo separation	: 42 dB(1kHz)
Image rejection ratio	: 75 dB

MW Radio

Frequency Range	: 531 to 1,602 kHz
Useable Sensitivity (S/N 20dB)	: 27 dB/μV
Image rejection ratio	: 65 dB

CD Player

Channel	: 2 channels
D-A Conversion	: 16-bit linear
Frequency response	: 5 to 20,000 Hz
Signal to Noise Ratio	: 90 dB (IHF, A)
Wow and flutter	: Below measurable limits

Cassette Player

Reproduction System	: 4-track, 2-program stereo
Tape Speed	: 4.76 cm/sec.
FF/REW Time	: Less than 110 sec. (C-60)
Frequency Response	: 30-14,000 Hz (Normal) : 30-17,000 Hz (Metal)
Wow and Flutter	: 0.12 % (WRMS)
Signal to Noise Ratio	
Dolby B NR OFF	: 56 dB (IHF, A)
Dolby B NR ON	: 66 dB (IHF, A)

Note:

Specifications and the design are subject to possible modification without notice due to improvements in technology.

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