

Panasonic

Cassette Player/Receiver with Changer Control

CQ-FX421/FX321N Operating Instructions



Bedienungsanleitung
Manuel d'instructions
Gebruiksaanwijzing
Bruksanvisning
Manuale di istruzioni
Manual de Instrucciones



- Please read these instructions carefully before using this product and save this manual for future use.
- Bitte lesen Sie diese Bedienungsanleitung vor der Verwendung dieses Produktes aufmerksam durch und bewahren Sie sie danach für spätere Nachschlagzwecke sorgfältig auf.
- Prière de lire ces instructions attentivement avant d'utiliser le produit et garder ce manuel pour l'utilisation ultérieure.
- Leest u deze instructie alstublieft zorgvuldig door voor u dit product in gebruik neemt en bewaar deze handleiding voor later gebruik.
- Läs igenom denna bruksanvisning noga innan produkten tas i bruk. Spara bruksanvisningen för framtida behov.
- Si prega di leggere attentamente queste istruzioni prima di usare questo prodotto e di conservare questo manuale per usi futuri.
- Lea con atención estas instrucciones antes de utilizar el producto y guarde este manual para poderlo consultar en el futuro.

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Precautions (ISO Connector)

- The pin arrangement of the power connector conforms to ISO standard.
- The pin arrangement of ISO connectors in some cars may differ from the ISO standard.
- Please check that the pin arrangement of the connector in your car conforms to ISO standard.

- For car types A and B, change the wiring of the red and yellow leads as shown at right.
- After connection, insulate the portions marked (※) with insulating tape.

Note: For cars other than types A and B, please consult your local car shop.

Vorsichtsmaßnahmen (ISO-Stecker)

- Die Stiftanordnung des Versorgungssteckers entspricht dem ISO-Standard.
- Die Stiftanordnung der ISO-Stecker im manchen Fahrzeugen kann von dem ISO-Standard abweichen.
- Bitte stellen Sie sicher, daß die Stiftanordnung des Steckers in Ihrem Fahrzeug dem ISO-Standard entspricht.

- Für Fahrzeugtypen A und B die Verdrahtung der roten und gelben Kabel gemäß rechter Abbildung ändern.
- Nach der Verkabelung sollte unbedingt der durch (※) gekennzeichnete Teil mit Hilfe von Isolierbändern o.ä. isoliert werden.

Hinweis: Für andere als die Fahrzeugtypen A und B wenden Sie sich bitte an Ihre örtliche Werkstatt.

Mesures de précaution (connecteur ISO)

- La disposition des broches du connecteur d'alimentation est conforme aux normes ISO.
- La disposition des broches des connecteurs ISO de certaines voitures risque d'être différente par rapport aux normes ISO.
- Vérifier si la disposition des broches du connecteur de votre voiture est conforme aux normes ISO.

- En ce qui concerne les véhicules des types A et B, modifier le câblage des fils rouge et jaune comme indiqué ci-contre.
- Une fois le branchement réalisé, isoler les sections identifiées par le signe (※) avec de l'adhésif isolant.

Remarque: En ce qui concerne les véhicules des types A et B, veuillez vous renseigner auprès de votre concessionnaire automobile habituel.

Voorzorgmaatregelen (ISO aansluiting)

- De pennen van de stroomaansluiting voldoen aan de vereisten van de ISO standaard.
- De pennen van ISO aansluitingen in sommige auto's kunnen verschillen van de ISO standaard.
- Controleer of de pennen van de aansluiting in uw auto voldoen aan de ISO standaard.

- Voor auto's van de types A en B dienen de rode en gele draden gewijzigd te worden zoals rechts staat aangegeven.
- Na het aansluiten moeten de plekken die zijn aangegeven met (※) afgeplakt worden met isolatieband.

Opmerking: voor auto's van andere types dan A en B dient u uw plaatselijke garage te raadplegen.

Observera (ISO-kontakt)

- Stiftens placering i strömkontakten överensstämmer med ISO-standard.
- I vissa bilar kan stiftens placering i ISO-kontakter skilja sig från ISO-standard.
- Kontrollera att stiftens placering i kontakten på din bil överensstämmer med ISO-standard.

- För biltyp A och B: ändra ledningsdragningen av de röda och gula kablarna så som visas till höger.
- Delar märkta med (※) måste efter slutförda anslutningar isoleras med isoleringstejp.

Obs: Kontakta din lokala bilhandlare i fråga om bilar av annan typ än A och B.

Precauzioni (Connettore ISO)

- La disposizione dei pin del connettore di alimentazione è conforme allo standard ISO.
- La disposizione dei pin dei connettori ISO in alcune automobili potrebbe differire dallo standard ISO.
- Accertarsi che la disposizione dei pin del connettore dell'automobile sia conforme allo standard INSTALLATO.

- Per le macchine del tipo A e B, cambiare i collegamenti dei cavi rosso e giallo come mostrato a destra.
- Dopo il collegamento, isolare le parti contrassegnate collegare (※) usando del nastro isolante.

Nota: Per le macchine diverse dal tipo A e B, rivolgersi a una autorivendita locale.

Precauciones (conector ISO)

- La disposición de las patillas del conector de alimentación satisface las normas ISO.
- La disposición de las patillas de los conectores ISO de algunos vehículos puede ser distinta de las normas ISO.
- Compruebe que la disposición de las patillas del conector de su vehículo satisfaga las normas ISO.

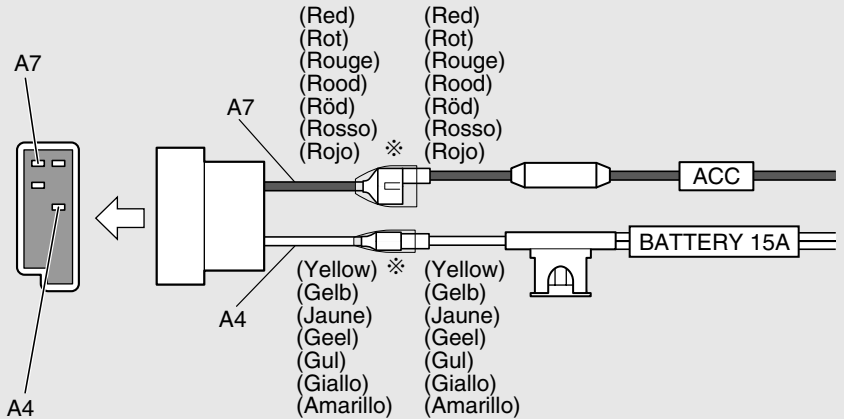
- Para los tipos A y B de vehículos, cambie las conexiones de los cables rojo y amarillo como se muestra a la derecha.
- Después de la conexión, aisle las partes marcadas con (※) usando cinta aislante.

Nota: Para los vehículos que no sean de los tipos A y B, consulte a su taller mecánico local.



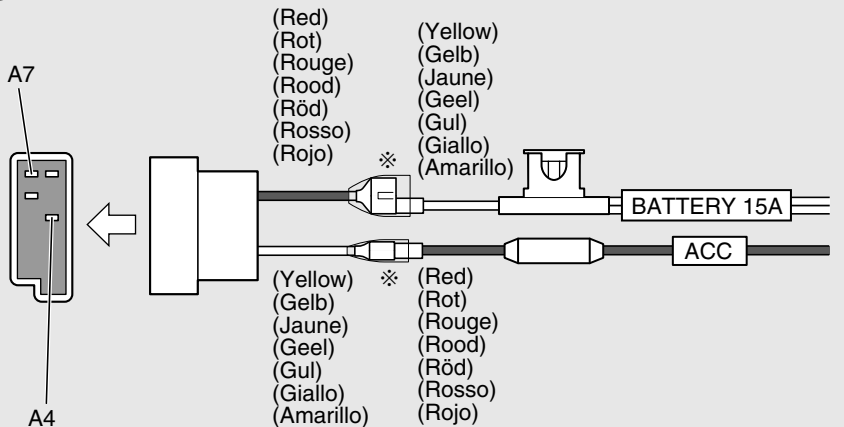
Standard ISO

- IGN or ACC switched 12V supply
 - Zündschalter (ACC/IGN)
 - Sélecteur ACC/IGN
 - ACC/IGN schakelaar
 - tändningsomkopplare
 - Interruttore ACC/IGN
 - Llave ACC/IGN
- +12 V Battery (Permanent supply)
 - +12 V-Batterie
 - Batterie +12 V
 - +12 V accu
 - +12 V batteri
 - Batteria +12 V
 - +12 V Batería



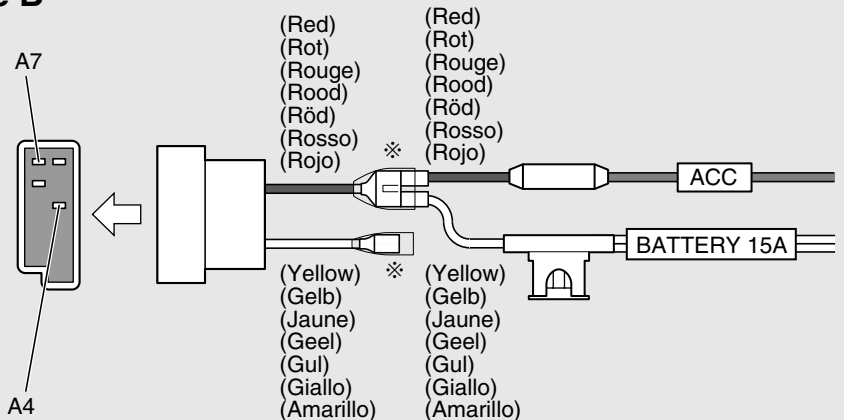
Car Type A

- +12 V Battery (Permanent supply)
 - +12 V-Batterie
 - Batterie +12 V
 - +12 V accu
 - +12 V batteri
 - Batteria +12 V
 - +12 V Batería
- IGN or ACC switched 12V supply
 - Zündschalter (ACC/IGN)
 - Sélecteur ACC/IGN
 - ACC/IGN schakelaar
 - tändningsomkopplare
 - Interruttore ACC/IGN
 - Llave ACC/IGN



Car Type B

- +12 V Battery (Permanent supply)
 - +12 V-Batterie
 - Batterie +12 V
 - +12 V accu
 - +12 V batteri
 - Batteria +12 V
 - +12 V Batería
- No connection
 - Kein Anschluß
 - Non connecté
 - Niet aangesloten
 - ingen anslutning
 - Non collegato
 - Sin conexión



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 Product (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 Product is designed to be used in a car having a 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 Product is made of precision parts. Do not attempt to disassemble or adjust any parts. For repair, please consult your nearest authorized Panasonic Service Center.

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

Note: This operating instruction manual is for two models CQ-FX421N and CQ-FX321N. The differences between these models are mentioned below. All illustrations throughout this manual represent model CQ-FX421N unless otherwise specified.

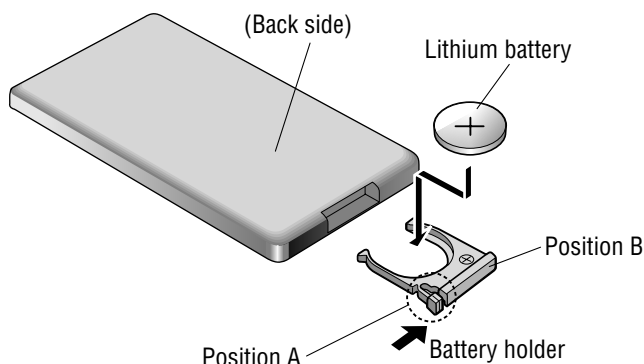
| Features | Model | CQ-FX421N | CQ-FX321N |
|------------------------|-------|----------------|-----------|
| Sub-Woofer Out (Level) | | Yes (2V) | None |
| LCD Color | | Multi Color | Blue |
| S•HDB | | Yes | None |
| Loudness | | None | Yes |
| Remote Control | | Supplied | Option |
| Pre-out | | 2 (Front/Rear) | 1 (Rear) |
| CD Changer Input | | Cord type | Fix type |

Remote Control Unit Preparation

(CQ-FX421N: Supplied / CQ-FX321N: Option)

Battery Installation

- ❶ Remove the battery holder.
Take hold of the holder at position B and pull it out by pushing position A in the direction shown by the arrow.
- ❷ Install the battery on the battery holder.
Set a new battery properly with its (+) side facing up as shown in the figure.
- ❸ Insert the battery holder.
Push in the battery holder back into its original position.



Battery Notes

Remove and dispose of an old battery immediately.

Battery Information:

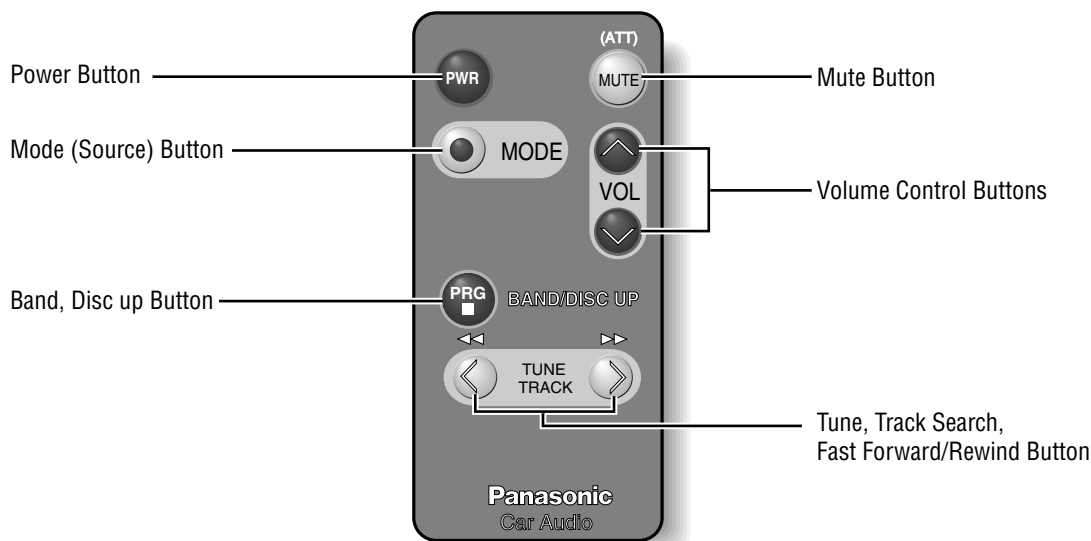
- Battery Type: Panasonic lithium battery (CR2025)
- Battery Life: Approximately 6 months under normal use (at room temperature)

Caution: Improper use of batteries may cause overheating, an explosion or ignition, resulting in injury or a fire. Battery leakage may damage the unit.

- Do not disassemble or short the battery. Do not throw a battery into a fire.
- Keep batteries away from children to avoid the risk of accidents.
- Be careful to the disposal rules when you dispose of batteries.

Main Controls

Some of the functions may not be usable even if they are shown.



Power and Sound Controls

Power

Turn the key in the ignition until the accessory indicator lights.

Power on : Press [SOURCE] (PWR).

Power off : Press [SOURCE] (PWR) again and hold.

Anti-Volume-Blast Circuit

When the power is switched off and on again, the volume slowly rises to the previous level.

The anti-volume-blast circuit will not work when the volume level is set lower than position 20 on the display.

Volume

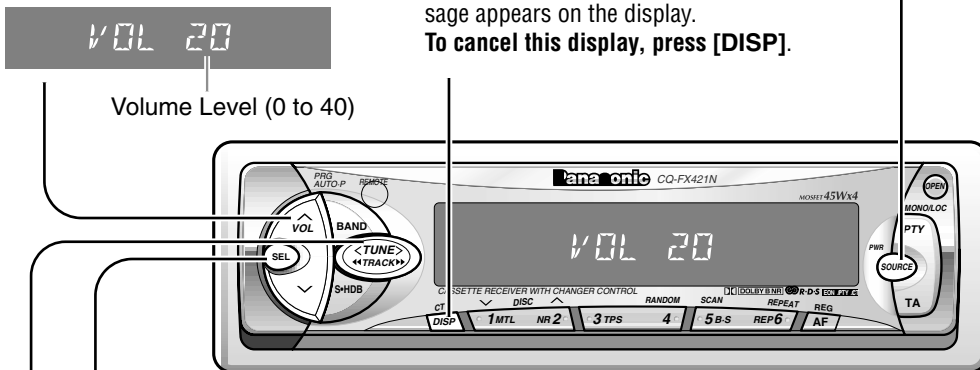
[▲VOL] : Up

[▼VOL] : Down

Press and hold for rapid adjustment.

Note: When the power is switched on for the first time, a demonstration message appears on the display.

To cancel this display, press [DISP].

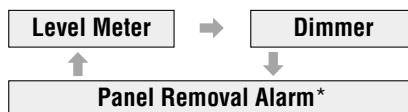


Display Control Mode

1 Press and hold [SEL] to change to the display control mode. ("PATTERN" appears on the display.)



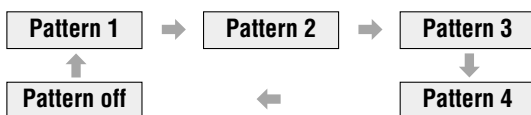
2 Press [SEL] during the display control mode to change the display control mode as follows.



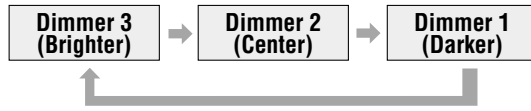
* See page 23.

3 Press [▶TUNE] to change each setting. Select your desired setting. ([◀TUNE] : opposite direction)

Level Meter



Dimmer



Note: The display will be back to the previous mode with no operation for 5 seconds.

Mute

(Only for a Remote control)

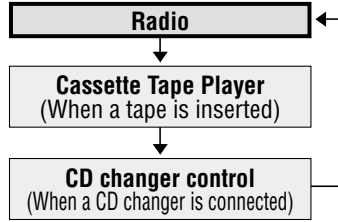
Press [MUTE] to mute the sound completely.
Press [MUTE] again to cancel.



Radio Basics

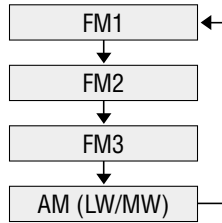
1 Mode Selection (SOURCE)

Press [SOURCE] to change to the radio mode.

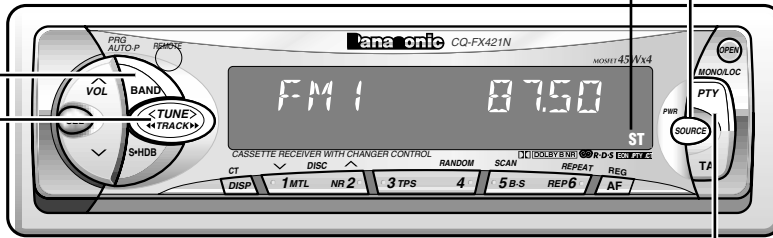


2 Band

Press [BAND] to change the bands.



FM stereo indicator



3 Manual Tuning

[>TUNE] : Higher frequency.
[<TUNE] : Lower frequency.

Seek Tuning

Press and hold
[>TUNE] : Higher frequency.
[<TUNE] : Lower frequency.
Tuning will automatically stop when the signals of the next broadcast station are received.

4 Mono/Local Selection (MONO/LOC)

MONO : Noise is significantly decreased when weak signals are received from an FM broadcast station.

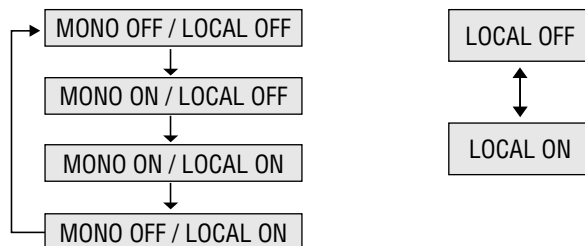
LOCAL : Only strong signals of stations are searched in seek tuning, while at the LOCAL OFF setting, relatively weak signals are also searched.

FM broadcasts

Press and hold [PTY] (MONO/LOC) to change the mode.
Release when at the desired point.

AM broadcast

Press and hold [PTY] (MONO/LOC) to switch LOCAL mode on and off.



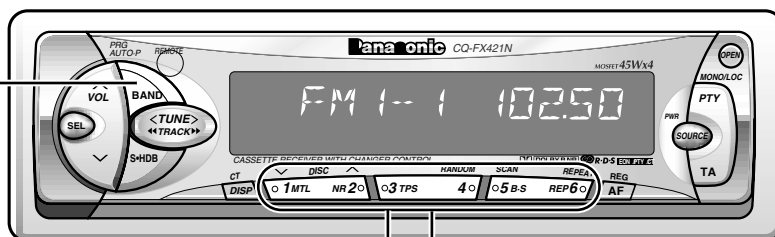
Preset Station Setting

Up to 6 stations each can be saved in the FM1, FM2, FM3 and AM (LW/MW) preset station memories.

Caution: To ensure safety, never attempt to preset stations while you are driving.

1 Band

Press **[BAND]** to select a desired band. (⇒ Page 10)



2 Auto Station Preset (AUTO • P)

Press and hold **[BAND] (AUTO • P)** for more than 2 seconds (Auto Preset Memory).

- The 6 strongest available stations will be automatically saved in the memory under preset buttons [1] to [6].
- Once set, the preset stations are sequentially scanned for 5 seconds each.

3 Tuning in a Preset Station

Press the corresponding preset button [1] to [6] to tune in a preset station.

Note: You can change the memory presetting by repeating the above procedure.

Manual Station Preset

- 1 Use manual or seek tuning to find a station. (⇒ page 10)
- 2 Press and hold one of the preset buttons [1] to [6] until the display blinks once.



Preset Number

RDS (Radio Data System)

RDS Basics

The following functions are available when receiving RDS stations.

PS Display

(Program Service name)

The name of station is displayed instead of the frequency.

CT Service

(Clock Time)

When receiving an RDS station, the CT (Clock Time) service automatically adjusts the time.

"NO CT" is displayed in areas where CT service is not available.

(→ Page 15 for Clock Set)

AF

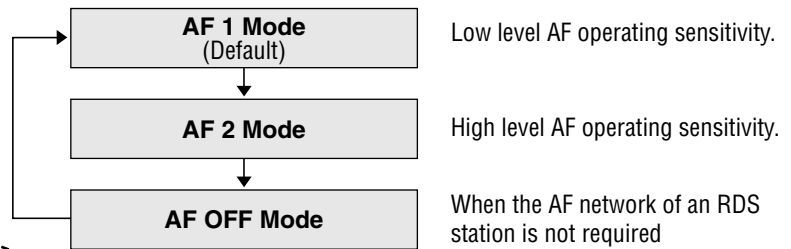
(Alternative Frequency list)

When reception is poor, an RDS station broadcasting the same program is tuned in automatically.

AF Mode

Press [AF] to select one of the following AF modes:

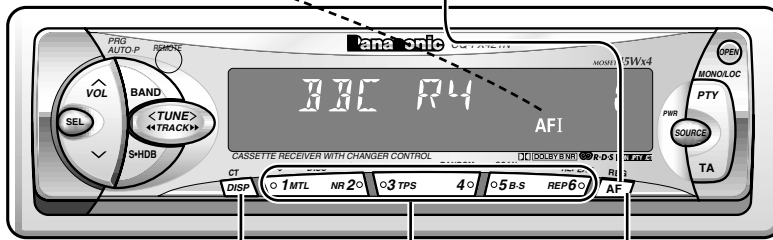
AFI



Low level AF operating sensitivity.

High level AF operating sensitivity.

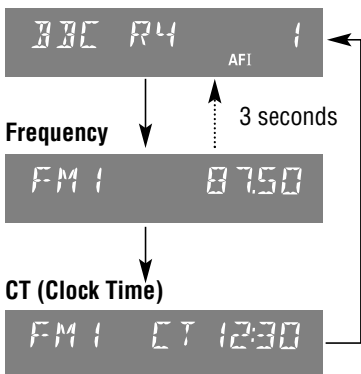
When the AF network of an RDS station is not required



Display Change

Press [DISP] to change the display as follows.

PS (Program Service Name)(Default)



Auto Preset Memory

Auto preset of RDS stations works only when AF mode is on.

Best Station Research

Best Station Research is automatically activated to store the station with the best reception for each preset button.

PI (Program Identification) Seek

If Best Station Research does not work properly and reception is poor when tuning in a preset station, press **the same preset button again**. PI Seek will search an AF station with good reception.

REG (Region) Mode

Changes the selection range of AF, Best Station Research and PI Seek. Press and hold [AF] (REG) when AF mode is on.



The frequency is changed only for programs within the region.



The frequency is changed also for programs outside the region.

Traffic Announcements

Some RDS FM stations periodically provide traffic information.

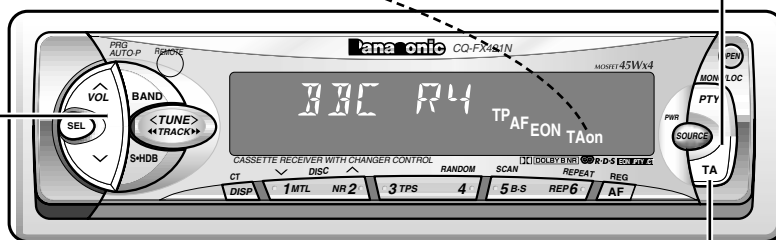
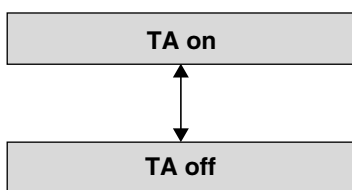
TP
(Traffic Program identification)
Broadcasting of traffic information

TA
(Traffic Announcements identification)
Radio announcements on traffic conditions

TA Mode

Press [TA] to switch TA mode on and off.

TA on



TA Volume Set

(Volume Level : 0 to 40)

Press [▲VOL] or [▼VOL] while receiving traffic announcements .
The TA volume differs from the regular volume (by up to 5 levels).

Muting in TA Mode

To listen only to Traffic Announcements while muting, press and hold [TA] for more than 2 seconds.
To cancel the muting TA on mode (muting in TA mode → TA mode), take either following two.

- Press [TA] again.
- Press [▲VOL] several times.

Note: To switch to TA off, press [TA] again and hold for more than 2 seconds.

TA in Tape/CD Changer Mode

When TA is on, tape or CD changer playback will be interrupted by FM traffic announcements.



Information ↓ ↑ End



TP Auto Search

When reception of a TP station is poor, TP Auto Search will automatically search for a TP station with better reception.

Seek and Preset Station

TP Seek Tuning

Seek tunes only TP stations.

(→ Page 10)

Auto TP Station Preset

The 6 strongest TP stations are saved in memory.

(→ Page 11)

Tuning in a TP Preset Station

(→ Page 11)

RDS (Radio Data System) (continued)

PTY Reception (Program Type)

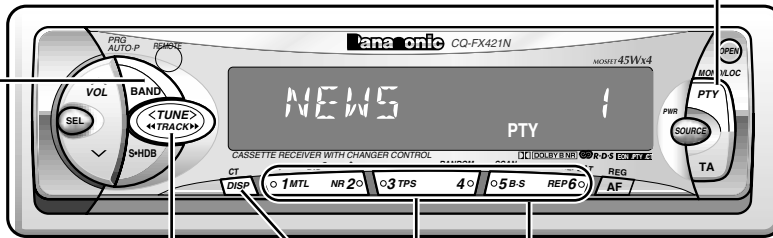
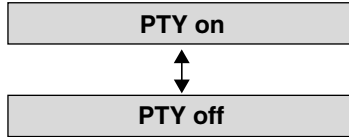
RDS FM stations provide a program type identification signal.
Example: news, rock, classical music, etc.

PTY Mode

Press [PTY] to switch PTY display mode on or off.



When there is no corresponding program type, "NO PTY" is display



PTY Selection

1 Press [>TUNE] to change the program type as follows. ([<TUNE]: opposite direction)

- | | | | | | | | |
|----------|---|----------|---|----------|---|----------|---|
| SPEECH | → | MUSIC | → | NEWS | → | AFFAIRS | → |
| INFO | → | SPORT | → | EDUCATE | → | DRAMA | → |
| CULTURES | → | SCIENCE | → | VARIED | → | POP M | → |
| ROCK M | → | M.O.R.M | → | LIGHT M | → | CLASSICS | → |
| OTHER M | → | WEATHER | → | FINANCE | → | CHILDREN | → |
| SOCIAL A | → | RELIGION | → | PHONE IN | → | TRAVEL | → |
| LEISURE | → | JAZZ | → | COUNTRY | → | NATIONAL | → |
| OLDIES | → | FOLK M | → | DOCUMENT | → | | |

2 Select the desired program and press [BAND]. Seek will start to tune in to a station broadcasting the selected program type.

PTY Search

1 Select a program type by pressing the preset button.
The preset program type appears on the display for 5 seconds.

(Example) Press preset button [1].



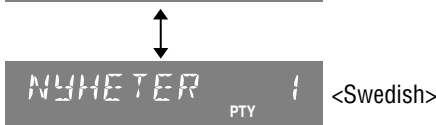
2 Press the same preset button again (or press [BAND]) to tune in the desired program type station.

(Example) Press preset button [1] again.



PTY display in Swedish

Press [DISP] to switch the PTY display language as follows.



PTY Preset Change

1 Select a program type by using PTY Selection or pressing PTY Preset buttons.



2 Press and hold one of the buttons [1] to [6].
(Example) Press and hold preset button [2].



Clock Set

PTY Type Preset

Program types are stored in memory under preset buttons [1] to [6] as shown in the table below. To tune in the desired program type, press any of preset buttons [1] to [6].

| Preset No. | Program Type | Display | |
|------------|---------------|------------|---|
| 1 | News | NEWS 1 | NEWS |
| 2 | Speech | SPEECH 2 | AFFAIRS / INFO EDUCATE / DRAMA CULTURES / SCIENCE VARIED / WEATHER FINANCE / CHILDREN SOCIAL A / RELIGION PHONE IN / TRAVEL LEISURE / DOCUMENT |
| 3 | Sport | SPORT 3 | SPORT |
| 4 | Pop. Music | POP M 4 | POP.M |
| 5 | Classic Music | CLASSICS 5 | CLASSICS |
| 6 | Other Music | MUSIC 6 | ROCK M / M.O.R.M LIGHT M / OTHER M JAZZ / COUNTRY NATIONAL / OLDIES FOLK M |

EON (Enhanced Other Networks)

When EON data is received, the EON indicator lights and the TA and AF functions are expanded as follows.

TA : Traffic information from the current and other network stations can be received.

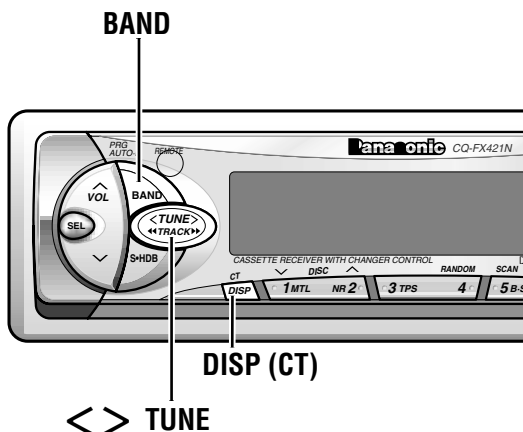
AF : The frequency list of preset RDS stations is updated by EON data.

EON enables the radio to make fuller use of RDS information. It constantly updates the AF list of preset stations, including that currently tuned in to. For example, if you preset a station far from home, you will later be able to receive the same station at an alternative frequency, or any other station serving the same program. EON also keeps track of locally available TP stations for quick reception.

Emergency Announcement Reception

When an emergency announcement is broadcast, the unit is automatically switched to receiving that broadcast. If this happens in a mode other than radio mode (tape mode, CD Changer mode) or in Muting in TA mode, "ALARM" blinks on the display.

When RDS CT service is not available, set the clock as follows.



AM Band

- 1 Press [BAND] to change to AM band.

AM 1305 (AM band)

- 2 Press [DISP].

NO CT (Clock display)

Hours

- 3 Press and hold [DISP].

0:00 (hour blinks)

- 4 Press [>TUNE] or [<TUNE].

10:00 (hour set)

Minutes

- 5 Press [DISP].

10:00 (minute blinks)

- 6 Press [>TUNE] or [<TUNE].

10:35 (minute set)

- 7 Press [DISP].

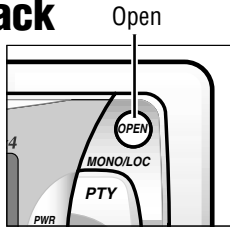
10:35 (end)

Note: Hold [>TUNE] or [<TUNE] to change numbers rapidly.

Cassette Tape Player Basics

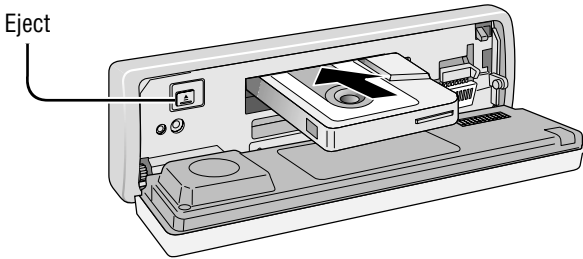
Tape Insert and Playback

- ❶ Open the front panel.
- ❷ Insert a cassette tape.
- ❸ Close the front panel manually.
Play back will start automatically.



Stop and Tape Eject

- ❶ Open the front panel.
- ❷ Press [▲] to stop tape play and eject the cassette tape.
- ❸ Close the front panel manually.



Cautions:

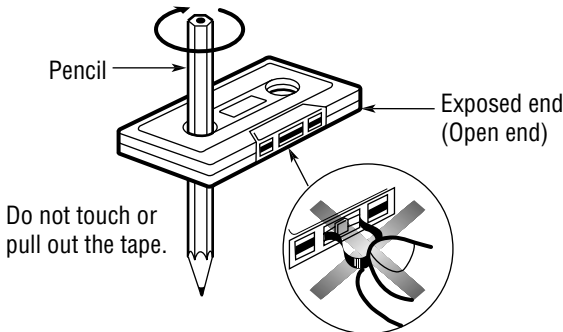
- When the front panel is opened, do not force it down and do not put anything on it since these may result in damage to the unit.
- When ejecting a cassette tape, do not close the front panel until the cassette tape is ejected and removed from the cassette slot completely.

Note: To maintain your cassette player in top condition, avoid using tapes that are longer than 90 minutes (C-90).

Notes on Cassette Tape

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.

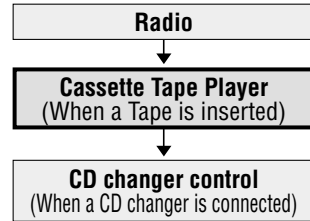


Listening to a Cassette Tape

Mode Selection

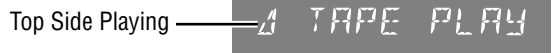
Press [SOURCE] to change to Cassette tape play mode.

Source



Play Side Change

Press [BAND](PRG) to reverse.

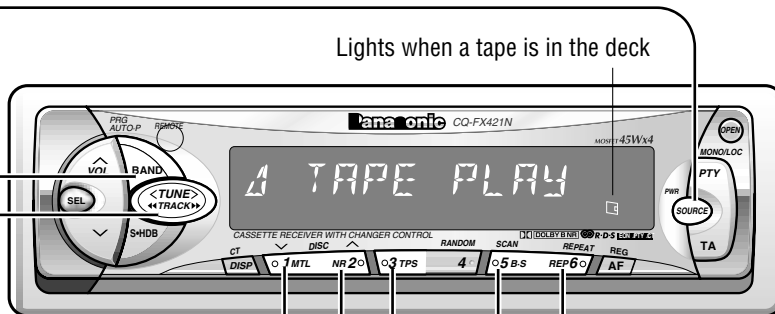


Rewind and Fast Forward

Press [◀◀TRACK] or [▶▶TRACK] to activate rewind or fast forward of the tape.



Press [BAND](PRG) to resume the tape play.



Metal Tape Mode

- Press [1](MTL) when playing metal or chromium dioxide (CrO₂) tapes.
- Press [1](MTL) again to cancel.



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

Dolby Noise Reduction

- Press [2](NR) to set the Dolby B NR mode.
- Press [2](NR) again to cancel.



Note: Set the Dolby B NR mode when playing back a tape recorded with Dolby B Noise Reduction.

Repeat Play

- Press [6](REP) to repeat the current program.
- Press [6](REP) again to cancel.



Blank Skip

- Press [5](B•S) to skip unrecorded portions longer than 15 seconds on the tape.
- Press [5](B•S) again to cancel.



Note: When repeat is on, the blank skip does not work because the repeat has priority over the blank skip.

Tape Program Search (TPS) Operation

- Press [3](TPS) to activate the Tape Program Search mode.



- To select a desired program, press [▶▶TRACK] or [◀◀TRACK] corresponding times to go forward (up to 9) or backward (up to 8).



- Press [3](TPS) again to cancel.

Notes:

The TPS mode may not work correctly in the following cases. This, however, does not mean that the unit is defective.

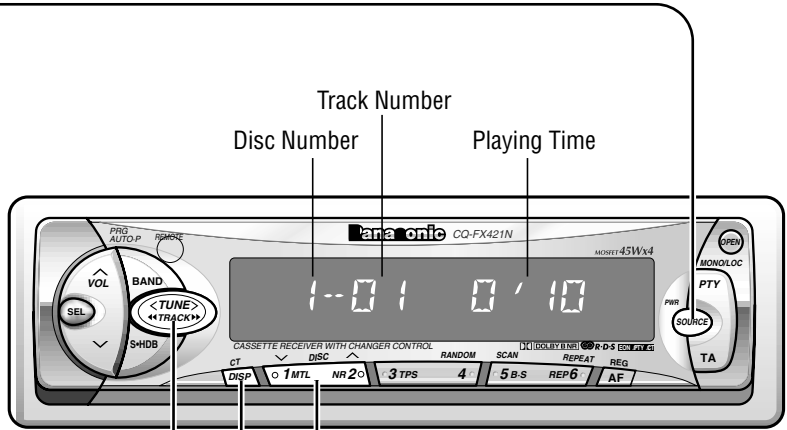
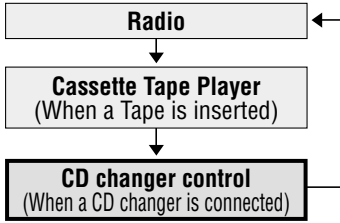
- There is an interval less than 3 seconds or having a high level of noise or hum between programs.
- **There is particularly low-level passage during the program.**

CD Changer Basics

Mode Selection

Press [SOURCE] to change to the CD changer mode.

Source



Track Selection

- [▶▶TRACK] : Advance to the next track.
- [◀◀TRACK] : Back to beginning of the current track.
Back to previous track.
(Press twice)

Disc Selection

- [1] (∇DISC) : Previous disc.
- [2] (∧DISC) : Next disc.

Track Search

- Press and hold
- [▶▶TRACK] : Fast forward
 - [◀◀TRACK] : Fast backward
Release to resume the regular CD changer play.

Display Change

- Press [DISP] to switch to the clock display.
- Press again to cancel.

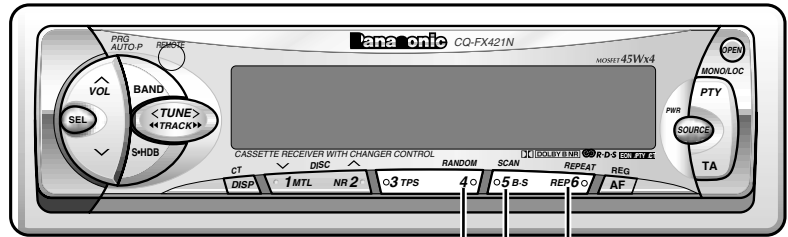


Error Display Messages

| | |
|--|--|
| | <p>Appears on the display when the compact disc is dirty or inverted. Select the next available compact disc.</p> |
| | <p>Appears on the display when compact disc is scratched. Select the next available compact disc.</p> |
| | <p>Appears on the display when the unit stops operating for some reason. Press the reset switch on the CD changer.</p> |
| | <p>Appears on the display when there is no disc in the magazine.</p> |

Note: The CD Changer functions are designed for an optional CD changer unit.

Various Way of Listening



Track Random

- Press [4] (RANDOM).
All tracks on all discs in the magazine are played in random order.
- Press again to cancel.

RAND

Track Scan

- Press [5] (SCAN).
The first 10 seconds of each track on the disc are played in sequence.
- Press again to cancel.



Disc Scan

- Press and hold [5] (SCAN) for more than 2 seconds.
The first track of all discs in the magazines is played for 10 seconds each.
- Press again to cancel.



Track Repeat

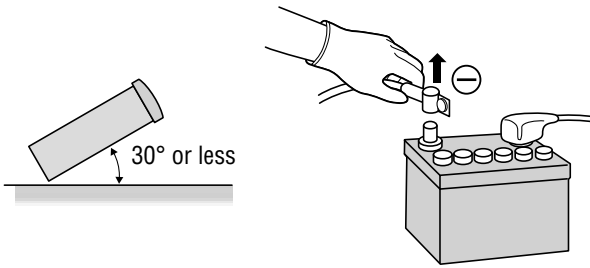
- Press [6] (REP).
The current track is repeated.
- Press again to cancel.

REP

Installation

Preparation

- Before installation, check the radio operation with antenna and speakers.
- Disconnect the cable from the negative (-) battery terminal (see caution below).
- Unit should be installed in a horizontal position with the front end up at a convenient angle, but not more than 30°.

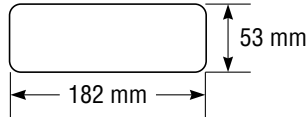


Caution: Do not disconnect the battery terminals of a car with trip or navigational computer since all user settings stored in memory will be lost. Instead take extra care with installing the unit to prevent shorts.

Dashboard Installation

Installation Opening

The unit can be installed in any dashboard having an opening as shown at right. The dashboard should be 4.5 mm - 6 mm thick in order to be able to support the unit.



Installation Precautions

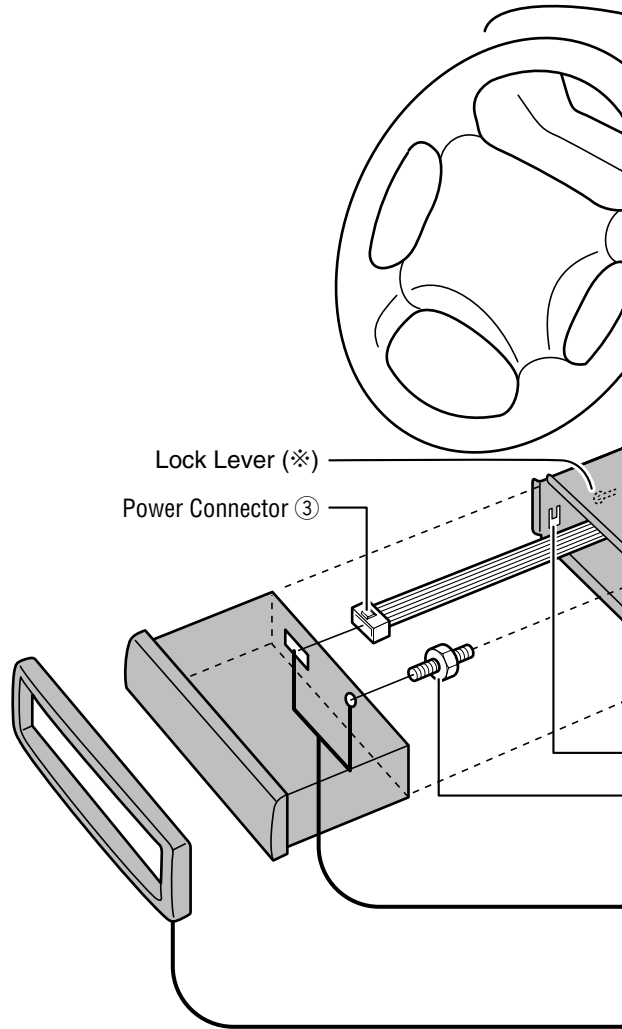
This product should be installed by a professional installer, if possible.

In case of difficulty, please consult your nearest authorized Panasonic Service Center.

1. This system is to be used only in a 12-volt, DC battery system (car) with negative ground.
2. Follow the electrical connections carefully (⇒ Page 24). Failure to do so may result in damage to the unit.
3. Connect the power lead (red) after all other connections are made.
4. Be sure to connect the battery lead (yellow) to the positive terminal (+) of the battery or fuse block (BAT) terminal.
5. Insulate all exposed wires to prevent short circuiting.
6. Secure all loose wires after installing the unit.
7. Please carefully read the operating and installation instructions of the respective equipment before connecting it to this unit.







• We strongly recommend that you wear gloves for installation work to protect yourself from injuries.

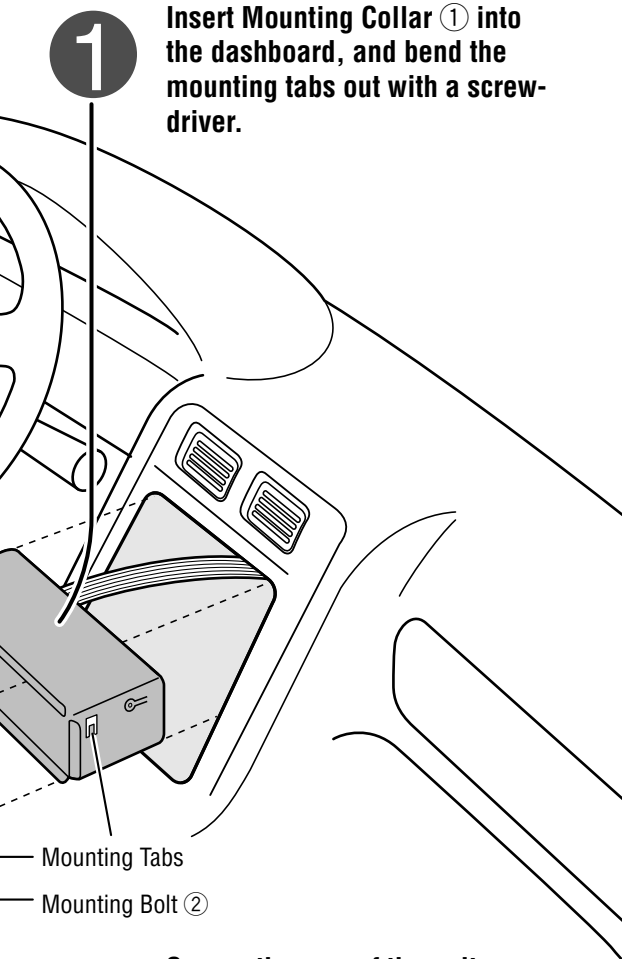
First complete the electrical connections, and then check them for correctness. (⇒ Page 24)



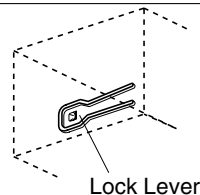
- When bending the mounting tab of the mounting collar with a screwdriver, be careful not to injure your hands and fingers.

Supplied Hardware

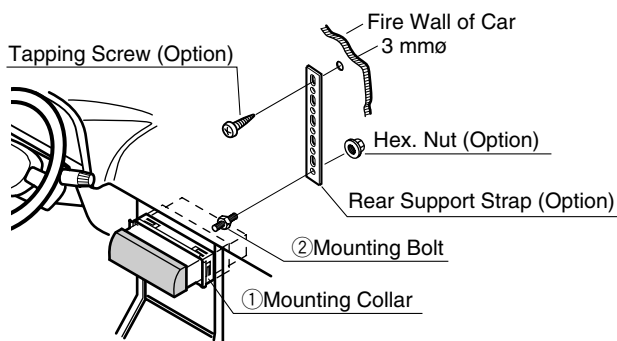
| No. | Item | Diagram | Q'ty |
|-----|---------------------------|---|------|
| ① | Mounting Collar |  | 1 |
| ② | Mounting Bolt (5 mmø) |  | 1 |
| ③ | Power Connector |  | 1 |
| ④ | Removable Face Plate Case |  | 1 |
| ⑤ | Trim Plate |  | 1 |
| ⑥ | ISO Antenna Adapter |  | 1 |



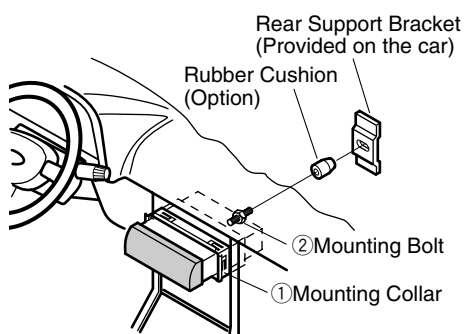
Make sure that the lock lever (※) is flush with the mounting collar (not projecting outward).



(a) Using the Rear Support Strap (Option)



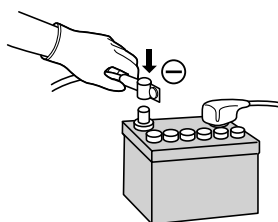
(b) Using the Rubber Cushion (Option)



2 **Secure the rear of the unit.**
After fixing Mounting Bolt ② and Power Connector ③, fix the rear of the unit to the car body by either method (a) or (b) shown at right.

3 **Insert Trim Plate ⑤.**

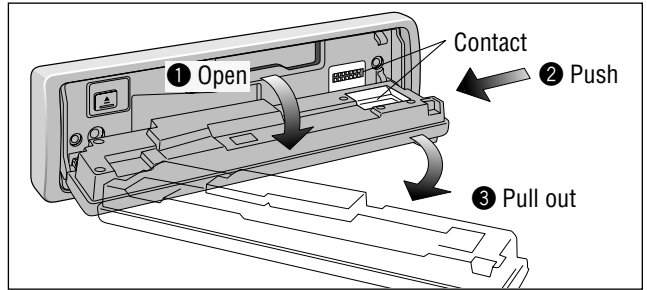
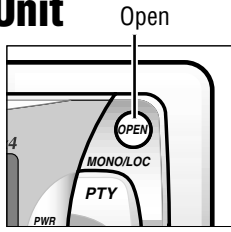
4 **After installation reconnect the negative (-) battery terminal.**



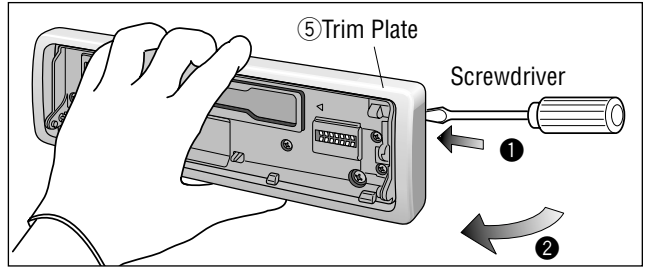
Installation (continued)

To Remove the Unit

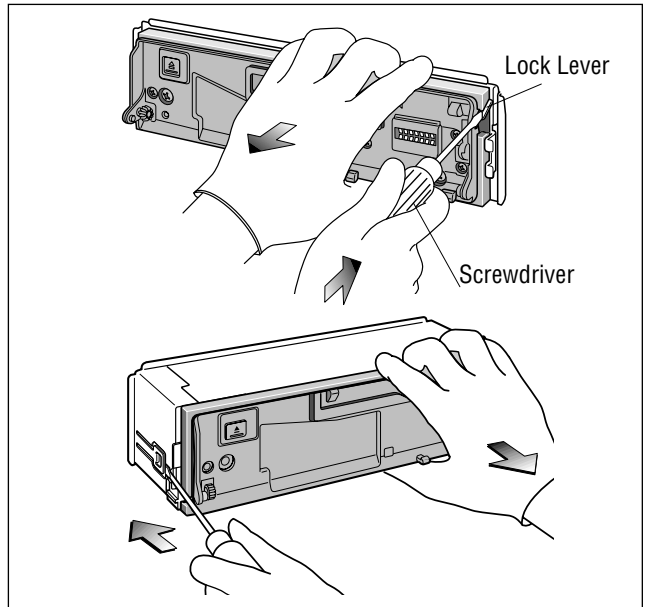
- 1 Remove the removable face plate.
 - (a) Open the face plate.
 - (b) Push the face plate to either the right or left, then pull it out toward you.



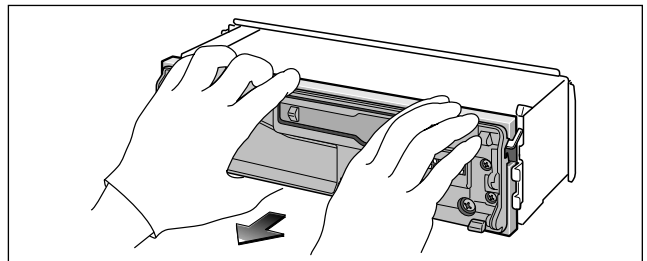
- 2 Remove the trim plate ⑤ with a screwdriver.



- 3 Pull out the unit while pushing down the lock lever with a screwdriver.



- 4 Remove the unit pulling with both hands.



Cautions:

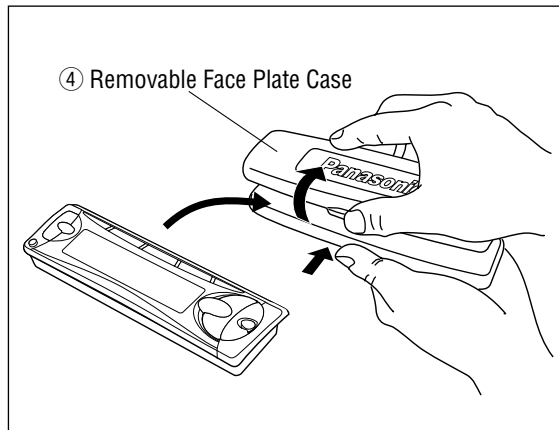
- Do not touch the contacts on the face plate or on the main unit, since this may result in poor electrical contacts.
- If dirt or other foreign substances get on the contacts, wipe them off with clean and dry cloth.
- Do not apply a strong downward force onto the face plate and do not put anything on it while it is open, or it might be damaged.

Anti-Theft System

This unit is equipped with a removable face plate. Removing this face plate makes the radio totally inoperable.

Place Removable Face Plate into Case

- ❶ Switch off the power of the unit.
- ❷ Remove the removable face plate. (→ Page 22)
- ❸ Gently press the bottom of the case and open the cover. Place the face plate into the case and take it with you when you leave the car.

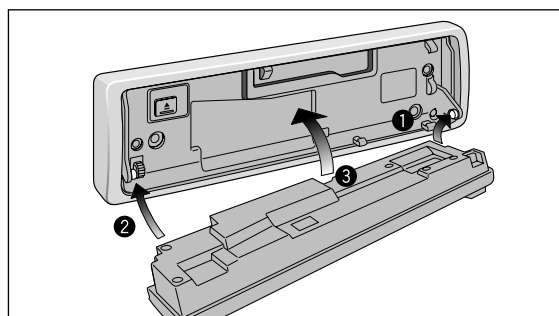


Cautions:

- This face plate is not water-proof. Do not expose it to water or excessive moisture.
- Do not remove the face plate while driving your car.
- Do not place the face plate on the dashboard or nearby areas where the temperature rises to high levels.

Install Removable Face Plate

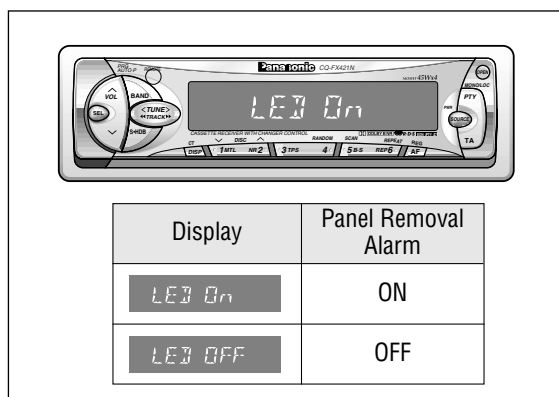
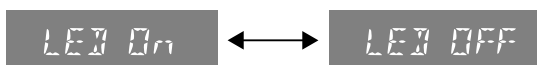
- ❶ Fit the face plate with its right or left hole on one of the pins provided on the main unit.
- ❷ Fit the other hole on the other pin applying slight pressure.
- ❸ Move the face plate up and down a few times to make sure it is secure. Then close the front panel and press down the right side of the face plate until it clicks into place.



Panel Removal Alarm

This alarm sounds to warn you not to forget to remove the panel before leaving your car.

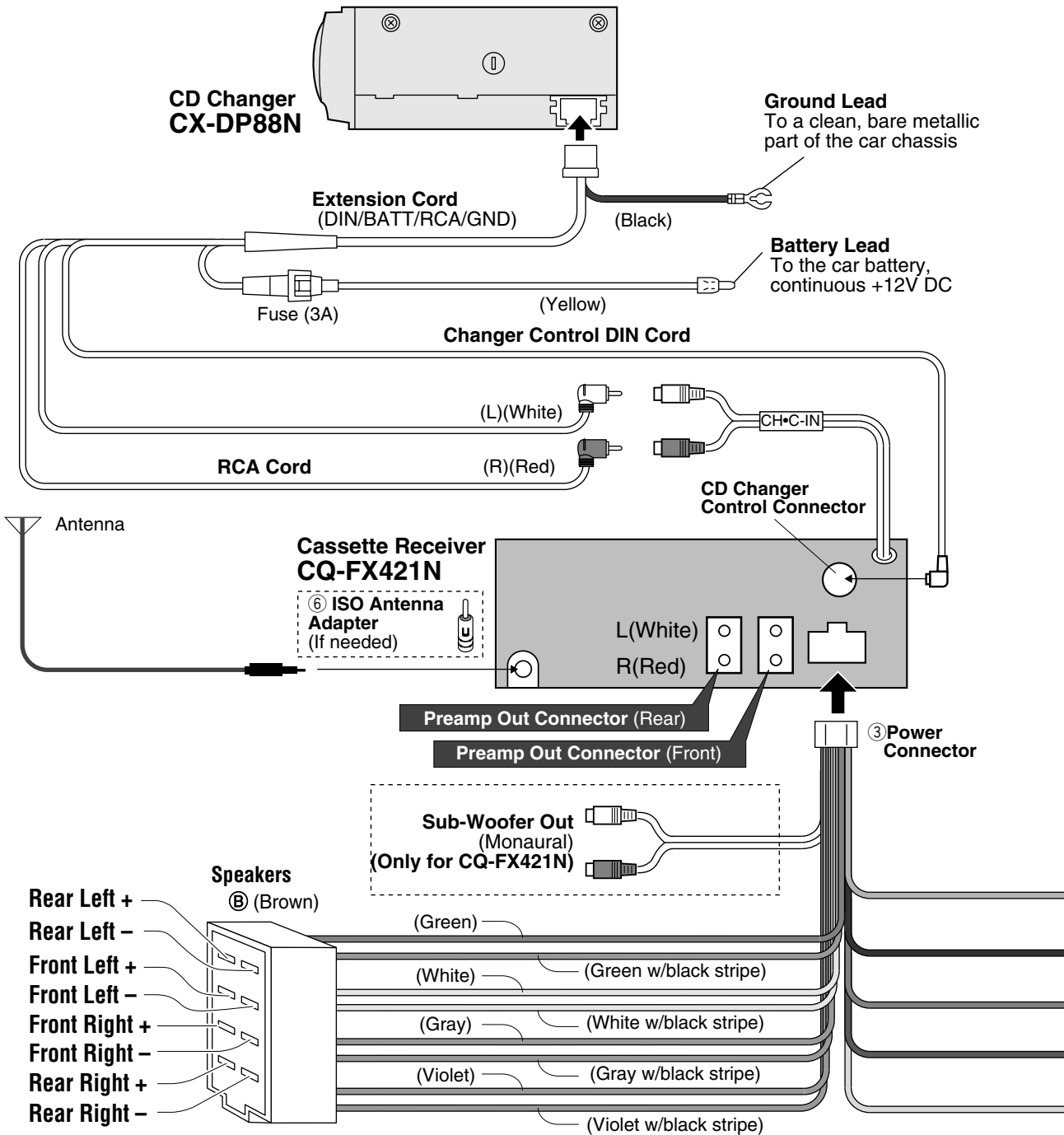
- ❶ Press and hold [SEL] to change to display control mode. ("PATTERN" is displayed.) (→ Page 8)
- ❷ Press [SEL]. "LED On" or "LED OFF" is displayed.
- ❸ Press [<TUNE] or [>TUNE] to turn the Panel Removal alarm on or off (LED ON or OFF).

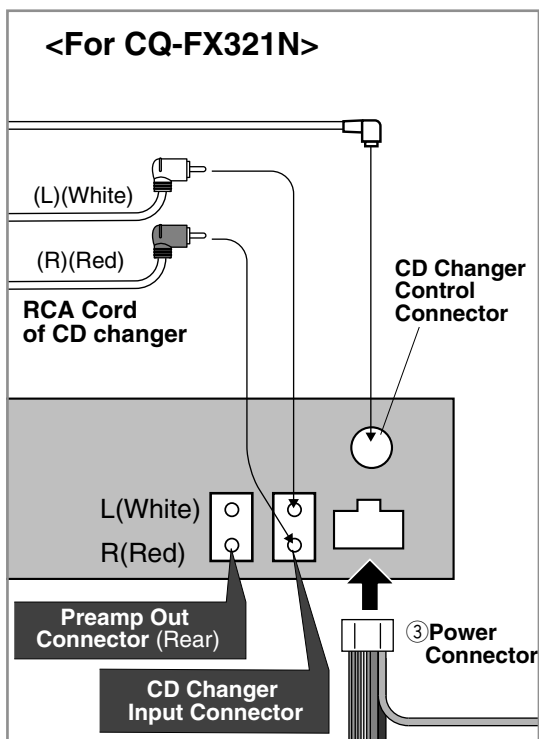


Electrical Connections

Cable Wiring Diagram

Example : Connection with CD changer CX-DP88N (Option).

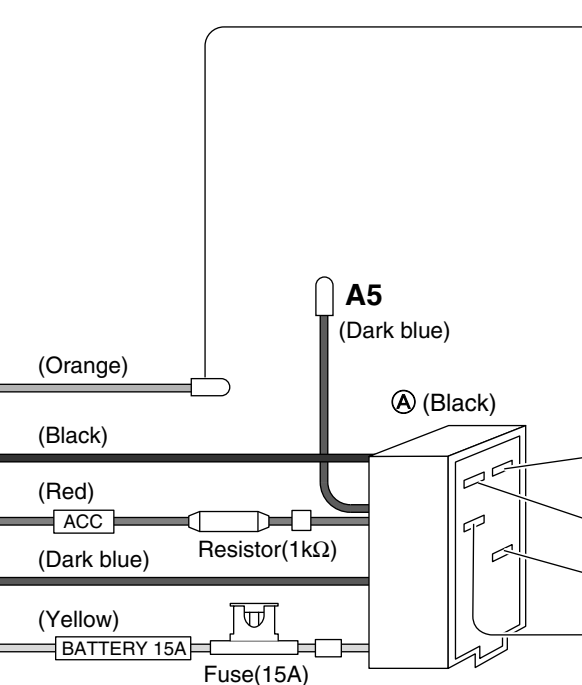




Cautions:

- **Check the connectors provided on your car (see note on page 4 and 5) before connecting the system.**
- This unit is designed for use in a car having a 12-volt negative ground battery system.
- To prevent damage to the unit, be sure to follow the connection diagram below.
- Strip about 5 mm of the lead ends for connection (only non-ISO connector cords).
- Do not insert the power connector into the unit until the wiring is completed.
- Be sure to insulate any exposed wires to prevent short circuiting with the car chassis. Bundle all cables, and prevent cable terminals from touching any metal parts.

- This unit can be connected to an optional CD changer (CX-DP9061/DP9060EN, CX-DP88N, CX-DP801/DP803EN or CX-DP601EN) and optional extension cord.
- For details consult your nearest authorized Panasonic Dealer.
- For connection to a CD changer, refer to the operating instructions of the CD changer (CX-DP9061/DP9060EN, CX-DP88N, CX-DP801/803EN or CX-DP601EN).



C1 : (Orange)

Telephone Mute Lead (*)

Connect to the car telephone mute lead.

Note: The telephone mute lead is only for connection to the radio mute lead. Output other than telephone will not be muted

Navi Mute Lead ()**

To the Navi Mute lead of the Panasonic car navigation system.

* Telephone Mute

The sound from the speakers cannot be heard while the telephone conversation is in progress.

** Navi Mute

The sound from the speakers cannot be heard while the navigation guide is on.

A8 : Ground Lead (Black)

To a clean, bare metallic part of the car chassis

A7 : Power Lead (ACC or IGN) (Red)

To ACC power, +12VDC

A4 : Battery Lead (Yellow)

To the car battery, continuous +12 V DC

A5 : (Dark blue)

Motor Antenna Relay Control Lead

(To Motor Antenna) (Max. 500mA)

This lead is not intended for use with a switch actuated power antenna.

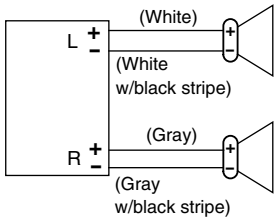
Amp-Relay Control Power Lead

This lead is for connection to a Panasonic power amplifier.

Speaker Connections

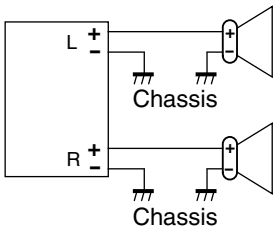
Caution: Please follow the instructions given below. Failure to do so will cause damage to the unit and speakers.

<Right>

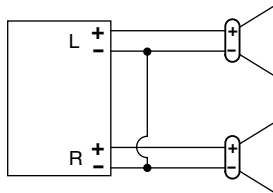


- Use ungrounded speaker only.
- The maximum speaker output should be 45 W or more. (If used with the optional power amplifier, the speaker output should be higher than the maximum amplifier output.)
- The speaker impedance should be 4 - 8 Ω.
- This unit uses the BTCL circuit, so each speaker should be connected separately using parallel vinyl insulated cords.
- The speaker cords and the power amplifier unit should be kept away (about 30 cm apart) from the antenna and antenna extension cord.

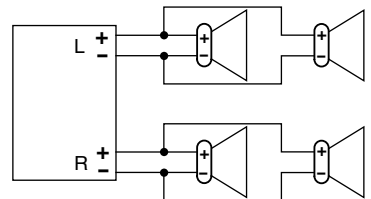
<Wrong>



- Never connect the speaker cord to the body of the car.



- Do not use a 3-wire type speaker system having a common earth lead.



- Do not connect more than one speaker to one set of speaker leads.

Fuse

Use fuses of the same specified rating (15 A). Using different substitutes or fuses with higher ratings, or connecting the unit directly without a fuse, could cause fire or damage to the unit.

If the fuse replacement fails, contact your nearest authorized Panasonic Service Center.


Maintenance

Your product is designed and manufactured to ensure the minimum of maintenance. Use a soft cloth for routine exterior cleaning. Never use benzene, thinner, or other solvents.

Specifications

| General | | FM Stereo Radio | |
|---------------------------|--|-----------------------|---|
| Power Supply | : DC 12 V (11 V - 16 V), Test Voltage 14.4 V, Negative Ground | Frequency Range | : 87.5 - 108 MHz |
| Tone Controls | : Bass; ± 12 dB at 100 Hz Treble; ± 12 dB at 10 kHz | Usable Sensitivity | : 6 dB/ μ V (S/N 30 dB) |
| Current Consumption | : Less than 2.5 A (tape mode, 0.5 W 4-Speaker) | Stereo Separation | : 35 dB (at 1 kHz) |
| Maximum Power Output | : 45 W x 4 (at 4 Ω) | MW Radio | |
| Power Output | : 22 W x 4 (DIN45 324, at 4 Ω) | Frequency Range | : 531 - 1,602 kHz |
| Speaker Impedance | : 4 - 8 Ω | Usable Sensitivity | : 28 dB/ μ V (S/N 20 dB) |
| Pre-Amp Output Impedance | : 600 Ω | LW Radio | |
| Sub-Woofer Output Voltage | : 2 V (CQ-FX421N) | Frequency Range | : 153 - 279 kHz |
| Dimensions (Main Unit) | : 178(W) x 50(H) x 150(D) mm | Usable Sensitivity | : 32 dB/ μ V (S/N 20 dB) |
| Weight (Main Unit) | : 1.6 kg | Cassette Tape 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 - 17,000 Hz (normal) 30 - 18,000 Hz (metal) |
| | | Wow and Flutter | : 0.12 % (WRMS) |
| | | Signal to Noise Ratio | : 52 dB (Dolby off) 62 dB (Dolby B NR on) |

Note: Specifications and design are subject to modification without notice due to improvements.

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