

KBJ

- When connecting the unit to your car's electrical system, connect the negative battery terminal first, and connecting the positive terminal later.
- When replacing the fuse, be sure to use fuses with an identical amperage rating. Using a fuse with a higher amperage rating may cause serious damage to the unit.
- DO NOT attempt to disassemble the unit. Doing so may damage the optical pickup or damage to the lens.
- Make sure that none of other hard or sharp objects do not get inside the unit. They may cause malfunctions, or create safety hazards such as electrical shock or laser beam exposure.
- If you have parked the car for a long time in hot or cold weather, wait until the temperature in the car becomes normal before operating the unit.
- Keep the volume at a level at which you can hear outside warning sounds (from horns, etc.).

CD Notes

- Playing a defective or dirty CD can cause dropouts in sound. Hold CDs as illustrated.
- Do not touch the unlabeled side.

- Do not attach any seal, label or data protection sheet to either side of a disc.
- Do not expose a CD to direct sunlight or high-temperature heat.
- Wipe a dirty CD from the center outward with a dry, soft cloth.
- Never use solvents such as benzine or alcohol.
- This unit cannot play Sacd, Dual CD, NEVER insert a 3-inch CD contained in the adapter or an irregularly shaped CD. The unit may fail to spin to a stop or resulting in a malfunction.

Before Operation

- Do not raise the volume level too much as this will block outside sounds, making driving dangerous.
- Stop the car before performing any complicated operation.

CAUTION

- DO NOT open covers and do not repair yourself. Consult the dealer or an experienced technician for help.

In addition to ordinary CDs, this unit can playback a CD

CD/MP3/USB PLAYER WITH FM/AM TUNER

OPERATING INSTRUCTION

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TT207002

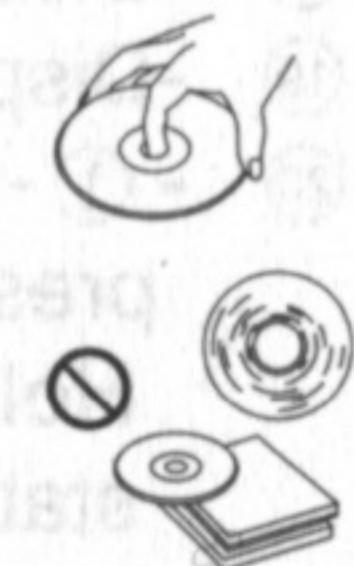
Safety Information

PRECAUTIONS

- Use only in a 24-volt DC negative-ground electrical system.
- Disconnect the vehicle's negative battery terminal while mounting and connecting the unit.
- When replacing the fuse, be sure to use one with an identical amperage rating. Using a fuse with a higher amperage rating may cause serious damage to the unit.
- DO NOT attempt to disassemble the unit. Laser beams from the optical pickup are dangerous to the eyes.
- Make sure that pins or other foreign objects do not get inside the unit, they may cause malfunctions, or create safety hazards such as electrical shock or laser beam exposure.
- If you have parked the car for a long time in hot or cold weather, wait until the temperature in the car becomes normal before operating the unit.
- Keep the volume at a level at which you can hear outside warning sounds (horns sirens, etc.).

CD Notes

- Playing a defective or dusty CD can cause dropouts in sound.
- Hold CDs as illustrated.
- Do not touch the unlabeled side.



- Do not attach any seal, label or data protection sheet to either side of a disc.
- Do not expose a CD to direct sunlight or excessive heat.
- Wipe a dirty CD from the center outward with a cleaning cloth.
- Never use solvents such as benzine or alcohol.
- This unit cannot play 3-inch (8cm) CDs. NEVER insert a 3-inch CD contained in the adapter or an irregularly shaped CD. The unit may not be able to eject it, resulting in a malfunction.

Before Operation

- Do not raise the volume level too much, as this will block outside sounds, making driving dangerous.
- Stop the car before performing any complicated operation.

CAUTION

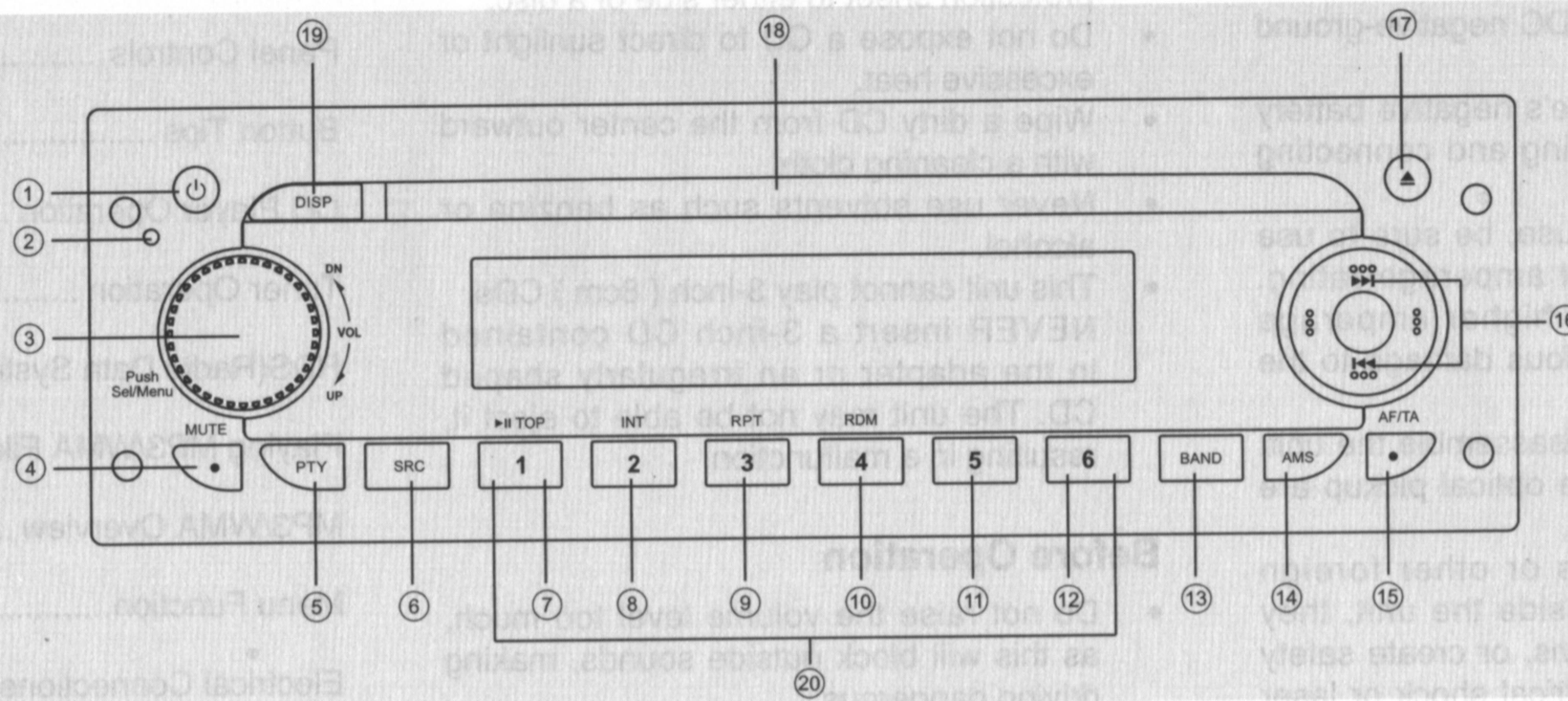
- DO NOT open covers and do not repair yourself. Consult the dealer or an experienced technician for help.

- * In addition to ordinary CDs, this unit can playback a CD-R or CD-RW, MP3.

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Panel Controls



- ① -Power on/off
- ② -Reset button
- ③ -Rotate the button to adjust volume level .
-Push to select VOL/BAS/TRE/BAL/FAD, rotate to adjust.
- ④ -Mute
- ⑤ -Program type
- ⑥ -REG on/off (press more than 2 seconds)
- Radio
- Disc play (when disc is in)
- Aux-in
- USB (when USB is in)

- ⑦ -Play/Pause
- Top play (long press)
- ⑧ -Intro play (10 sec)
- ⑨ -Track repeat play
- ⑩ -Track random play
- ⑪ -MP3/WMA track -10 down
- Previous folder (long press)
- ⑫ -MP3/WMA track +10 up
- Next folder (long press)
- ⑬ -Band switch: FM1 -> FM2 -> FM3 -> AM1
-> AM2
- ⑭ -AMS
- Radio preset scan
- Radio auto preset

- SEARCH**
- MP3/WMA track/file/character search
- ⑮ -Alternative frequency list
- Traffic announcements identification (long press)
- ⑯ -Radio tune
- To fast search within a track/skip to next or previous track
- ⑰ -Disc eject
- ⑱ -Disc slot
- ⑲ -Display switch
- ⑳ - ① - ⑥ Radio preset: Press to listen to a preset station.
Hold for more than 2 seconds to store station.

BUTTON TIPS

Power On/Off Button

Press the POWER button (1) to turn the unit on when the vehicle ignition switch is on. Press the button to turn the unit off.

Audio Mute

Press the MUTE button (4) to mute the volume from the system. "MUTE" will appear on the display panel and the volume will be muted. Press the MUTE button again, or press the VOL/MENU control (3) to return the volume level to the setting in use before the Mute function was activated.

Audio Controls

To adjust the bass, treble, balance and fader, press the VOL/MENU control (3) until the appropriate audio control appears on the display panel. Within five seconds, rotate the VOL/MENU control to adjust the audio settings for the selected function.

Mode Button (SRC)

Press the SRC button (6) to change between radio, AUX, USB, CD play.

Display Selector (DISP)

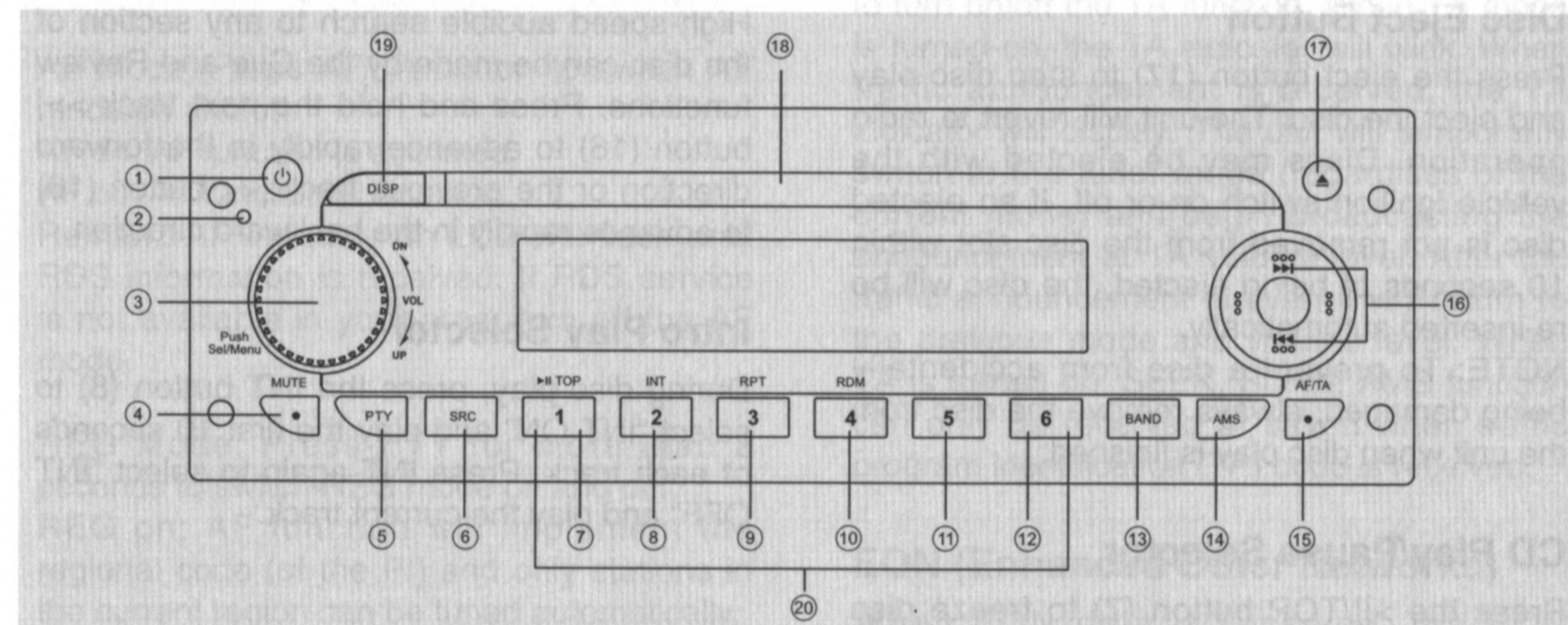
This unit can display either the clock time or radio frequency/CD player functions. Ordinarily, the radio frequency or CD player track indication is displayed, but the unit will display the time when the DISP button (19) is pressed. The time will display for approximately 5 seconds then return to the radio or CD player function display.

Setting the Clock

The correct time of day can be set by pressing and holding the DISP button.

To set the clock, perform the following steps:

1. Turn the vehicle ignition and radio on.
2. Press the DISP button (19) to view the clock.
3. With the clock visible on the display, press and hold the DISP button until the time display flashes.
4. Within 5 seconds, rotate the knob control counter anticlockwise to adjust the minutes to the desired setting. To change the hour, rotate the knob control clockwise to adjust the hour to the desired time.



CD PLAYER OPERATION

Inserting a Disc

With the label surface facing up, fully insert a compact disc into the disc slot (18) until the mechanism engages and pulls the disc in. Play will automatically begin from the first track on the disc.

NOTE: The unit is designed for play of standard 5" (12 cm.) compact discs only. Do not attempt to use 3" (8 cm.) CD singles in this unit, either with or without an adaptor, as damage to the player and/or the disc may occur.

Disc Eject Button

Press the eject button (17) to stop disc play and eject the disc. The unit will revert to radio operation. Discs may be ejected with the vehicle ignition switch on or off. If an ejected disc is not removed from the disc slot within 10 seconds of being ejected, the disc will be re-inserted automatically.

NOTE: To prevent a disc from accidentally being damaged, always remove the disc from the unit when disc play is finished.

CD Play/Pause Selector

Press the >||/TOP button (7) to freeze disc playback. Press >||/TOP again to resume disc playback.

Seek Up/Next Track

Press the next track >>| button (16) during disc play to select the beginning of the next track.

Seek Down/Previous Track

Press the previous track |<< button (16) during disc play to select the beginning of the current track. Press twice to select the beginning of the previous track.

Cue/Review Functions

High-speed audible search to any section of the disc can be made by the Cue and Review functions. Press and hold the next track >>| button (16) to advance rapidly in the forward direction or the previous track |<< button (16) to advance rapidly in the backward direction.

Intro Play Selector

During disc play, press the INT button (8) to select "INT ON" and play the first 10 seconds of each track. Press INT again to select "INT OFF" and play the current track.

Track Repeat Play Select

During disc play, press the RPT button (9) to select "RPT TRK" and repeatedly play the selected track. Repeat play will continue until RPT is pressed to select "RPT OFF".

Random Play Select

During disc play, press the RDM button (10) to select "RDM ON" and play all tracks on the disc in random, shuffled order. Press RDM again to select "RDM FOLD" and randomly play all songs in the current folder. In Random Play mode, you can press the tune/track buttons (16) to select tracks in a random order instead of the normal progression. Press RDM again to select "RDM OFF" and cancel Random Play mode.

TUNER OPERATION

AM/FM Band Selector (BAND)

During radio play, press the BAND button to choose between three FM and two AM bands. The indication "AM" or "FM" appears on the display panel according to your selection.

Up Tuning

Press the seek >>| to tune stations upward step-by-step. Press and hold the seek >>| button to the next available station. The current frequency will be shown in digital format on the display panel.

Down Tuning

Press the seek down |<< button to tune stations downward step-by-step. Press and hold the seek down |<< button to previous available station.

Auto Store

At FM band, press the AMS button to scan 18 preset stations. Hold it to automatically select 18 strong stations and store them in FM band. At AM band, press the AMS button to scan 12 preset stations. Hold it to automatically select 12 strong stations and store them in AM band. The new stations replace stations already stored in that band.

Note: The preset stations remain even the unit removed from the car.

RDS (Radio Data System)

RDS service availability varies with areas. Please understand if RDS service is not available in your area, the following service is not available.

RDS Basics

AF(Alternative Frequency): When the radio signal strength is poor, enabling the AF function will allow the unit to automatically search another station with the same PI(program identification) as the current station but with stronger signal strength.

PS(Program Service name): The name of station will be displayed instead of frequency.

AF Mode: Press AF/TA button to switch AF mode on and off.

AF on: AF function is activated.

AF off: AF function is disabled.

Remark: AF indicator on LCD will flash until RDS information is received. If RDS service is not available in your area, turn off the AF mode.

REG Mode: Press PTY for more than 2 seconds to switch REG mode on and off.

REG on: AF function will implement the regional code (of the PI) and only stations in the current region can be tuned automatically.

REG off: AF function will ignore the regional code (of the PI) and stations in the other regions can also be tuned automatically.

CT Service (Clock Time)

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

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 AF/TA more than 2 seconds to turn on/off the TA function. When TA mode is turned on, the TA indicator will blink. When traffic announcement is received, the TA indicator will display. The unit will temporarily switch to the tuner mode (regardless of the current mode) and begin broadcasting the announcement at TA volume level. After the traffic announcement is over, it will return to the previous mode and volume level. When TA is turned on, SEEK, SCAN, AMS function can only be received or saved when traffic program identification (TP) code is received.

EON (Enhanced Other Networks)

When EON data is received, the EON indicator lights and the TA and AF functions are enhanced.

RDS (Radio Data System)

TA: Traffic information can be received from the current station or stations in other network.

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 the one that currently tuned into. If you preset a station around the area at your 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.

PTY Reception (Program Type)

RDS FM stations provide a program type identification signal.

Example: news, rock, info, sport, etc.

PTY Type Preset

Press PTY button once to enter the MUSIC type or press "PTY" twice to enter the SPEECH type. Then use function ①-⑥ to select the desired program type. The selected PTY type is shown and searching starts if no other function is selected for 2 seconds. If there is no corresponding program type, NO PTY is shown and the unit will return to normal mode.

PLAYING MP3/WMA FILES

Display Information

During playback, ID3 tag display on the screen: FOLDER, FILE, MUSIC, ARTIST, ALBUM and Track Number/Elapsed Time.

Folder Up/Down

Hold the 5/DN button to go to the previous folder. Hold the 6/UP button to go to the next folder.

Direct Song/File Access

1. Press the AMS button once to enable direct track searching.
2. Rotate the VOL/MENU control to enter a digit in the third position.
3. Press the VOL/MENU control to confirm entry and the second digit will flash.
4. Rotate the VOL/MENU control to select the second digit.
5. Repeat above steps to enter the first digit, if necessary.

NOTE: The unit will only allow the selection of digits that correspond with the number of files on the media you are searching.

6. Once the track number appears on the screen, press the VOL/MENU control to play the selected song/file.

Searching Folders/Files

1. Press the AMS button twice to access the "NAVIGATE" option.
2. Rotate the VOL/MENU control to select the desired directory/song.
3. Press the VOL/MENU control to view the files inside the selected directory.
4. Rotate the VOL/MENU control to select the song/file. Press the VOL/MENU control to play the selected song/file.

Searching by Name (CHAR-SCH)

1. Press the AMS button three times to access the "CHAR-SCH" option.
2. Rotate the VOL/MENU control to select the characters A-Z, _ , - , + , and 0-9 for the first character.
3. Press the VOL/MENU control to confirm entry of the character and move to the next position.
4. Repeat for up to eight characters.
5. Press and hold the VOL/MENU control for 0.5 second to begin the search.
6. If a directory is found, rotate the VOL/MENU control to select the song/file in this directory/folder.
7. Press and hold the VOL/MENU control for 0.5 second to play the selected song/file. "NO MATCH" appears if there is no file beginning with the search string entered.

MP3/WMA Overview

MP3/WMA Overview

- MP3 is short for MPEG Audio Layer 3 and WMA for Windows Media Audio. They refer to audio compression standard.
- This product allows playback of MP3/WMA files on CD-ROM CD-R or CD-RW discs.
- The unit can read MP3/WMA files written in the format compliant with ISO 9660. However it does not support the MP3/WMA data written by the method of packet write.
- The unit can not read an MP3/WMA file that has a file extension other than ".mp3/.wma".
- If you play a non-MP3/WMA file that has the ".mp3/.wma" extension, you may hear some noise.
- In this manual, we refer to what are called "MP3/WMA file" and "folder" in PC terminology as "Track" and "Album", respectively.
- Maximum number of directory level is 8, including the root directory. Maximum number of files and folders per disc is 1000.
- The unit may not play tracks in the order of track numbers.
- The unit plays only the audio tracks if a disc contains both audio tracks and MP3/WMA files.

- When playing a disc of 8kbps or VBR*, the elapsed playing time in the display window will not be correct and also the intro play may not function properly. *VBR: Variable Bit Rate.

Note on creating your own CD-Rs or CD-RWs containing MP3/WMA files

- To enjoy high quality sound, we recommend converting to MP3/WMA files with a sampling frequency of 44.1 kHz and a fixed bit rate of 128 kbps.
- DO NOT store more than 1000 MP3/WMA files per disc.
- For ISO 9660-compliant format, the maximum allowable depth of nested folders is 8, including the root directory(folder).
- When CD-R disc is used, playback is possible only for discs which have been finalized.
- Make sure that when MP3 CD-R is burned that it is formatted as a data disc and NOT as an audio disc.
- You should not write non-MP3/WMA files or unneeded folders along with MP3/WMA files on the CD-R otherwise it takes a long time until the unit starts to play MP3/WMA files.
- With some CD-R media, data may not be properly written depending on their manufacturing quality. In this case, data may not be reproduced correctly. High

- quality CD-R disc is recommended.
- Up to 16 characters are displayed for the name of an Album or a Track. ID3 TAG version 1.x is required.
- Note that the unit may not play tracks in the order that you wrote them to the disc.

Menu Function

Press the VOL/MENU knob more than 2 seconds to enter menu mode, then each press changes the mode as follows:

TA VOL

Rotate the VOL/MENU knob to choose traffic announcement volume.

DSP mode:

Rotate the VOL/MENU knob to choose DSP sound effect:

FLAT->POP->ROCK->CLASSIC->DSP OFF

BEEP ON/OFF

Rotate the knob to choose button beep sound on or off.

STEREO/MONO mode (Radio mode)

Rotate the VOL/MENU knob to choose FM stereo or mono.

DX/LOC mode

Rotate the VOL/MENU knob to choose tuner sensitivity local or distant.

VOL LAST/ADJ mode

Rotate the VOL/MENU knob to choose VOL LAST mode, the turn on volume level is the volume level of latest power off.

Rotate the VOL/MENU knob to choose VOL ADJUST mode, press to enter A-VOL mode, then rotate the knob to set the turn on volume level.

ESP mode

ESP 12s: Selected as CD-ESP time 12 seconds, MP3-ESP time >100 seconds.

ESP 45s: Selected as CD-ESP time 45 seconds, MP3-ESP time >100 seconds.

LOUD mode

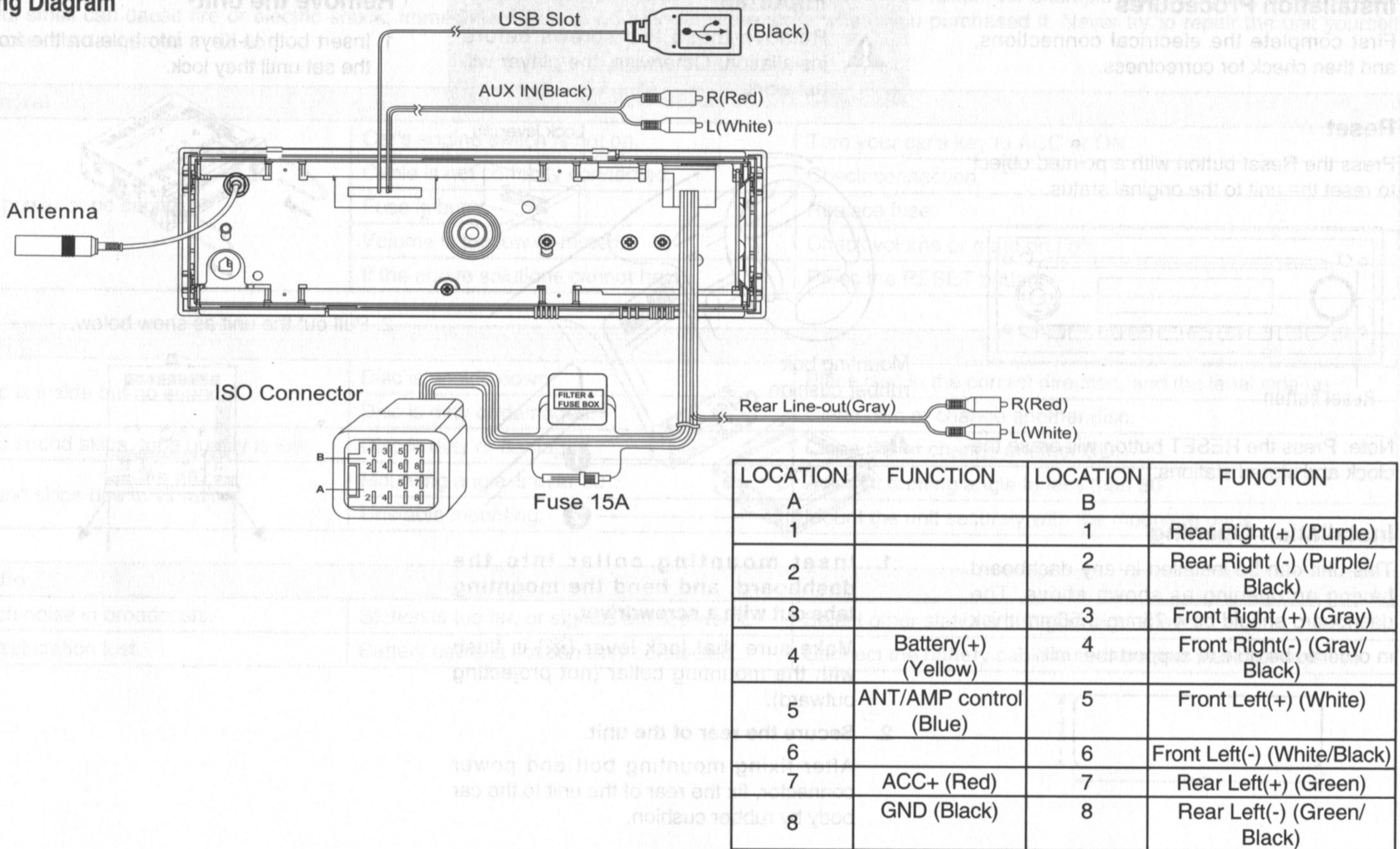
When listening to music at low volumes, this feature will boost the bass and treble ranges to compensate for the characteristics of human hearing.

12/24 HOUR mode

Rotate the VOL/MENU knob to select 12 or 24 HOUR time format.

Electrical Connections

Wiring Diagram



Installation Guide

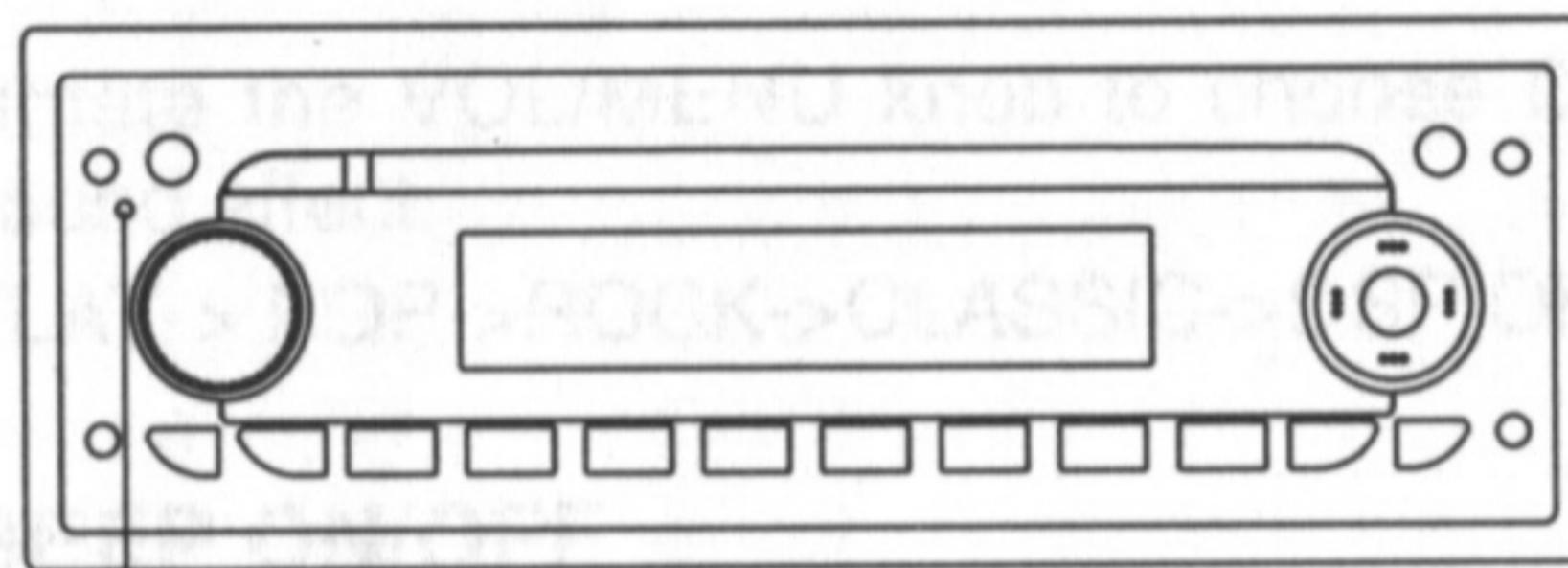
Installation Procedures

First complete the electrical connections, and then check for correctness.

TAXIOL

Reset

Press the Reset button with a pointed object to reset the unit to the original status.

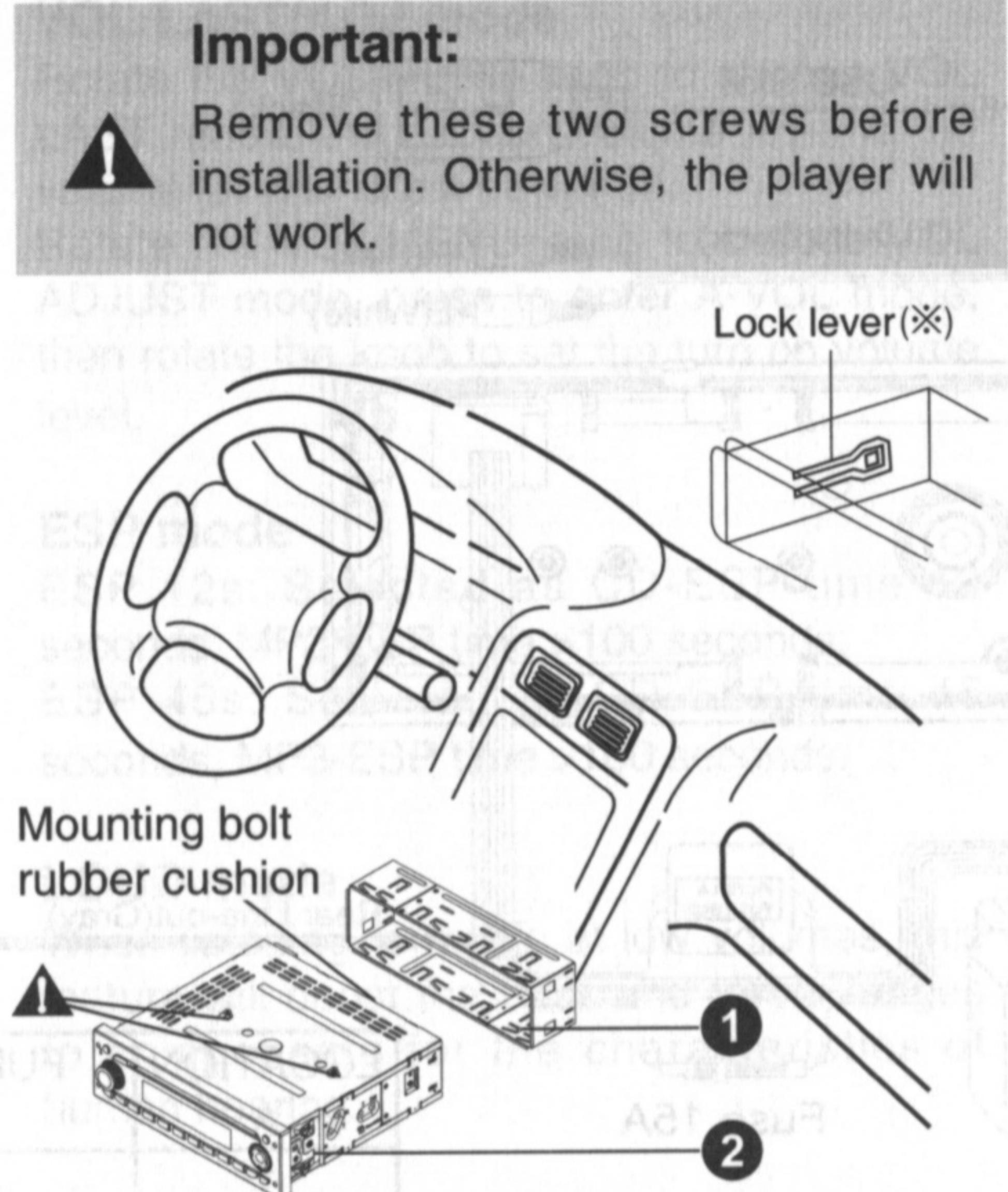


Reset button

Note: Press the RESET button will erase the clock and stored stations.

Installation Opening

This unit can be installed in any dashboard having an opening as shown above. The dashboard should be 4.75mm-5.56mm thick in order to be able to support the unit



1. Inset mounting collar into the dashboard, and bend the mounting tabs out with a screwdriver.

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

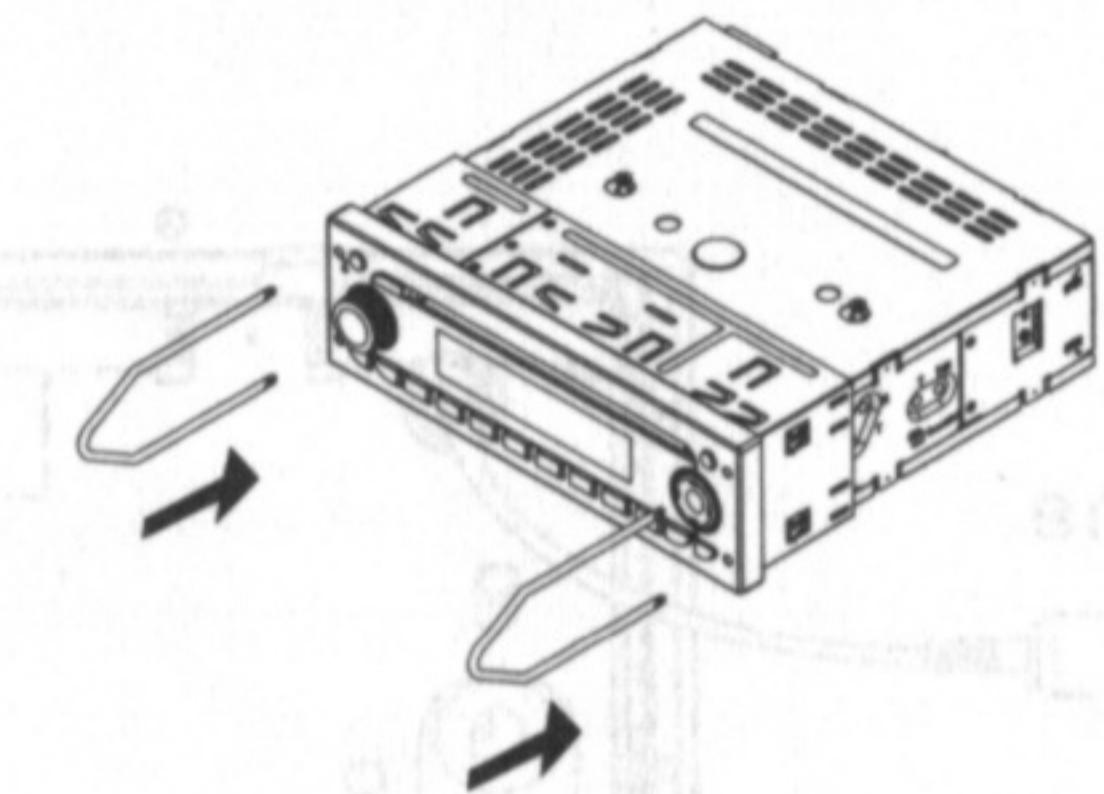
2. Secure the rear of the unit.

After fixing mounting bolt and power connector, fix the rear of the unit to the car body by rubber cushion.

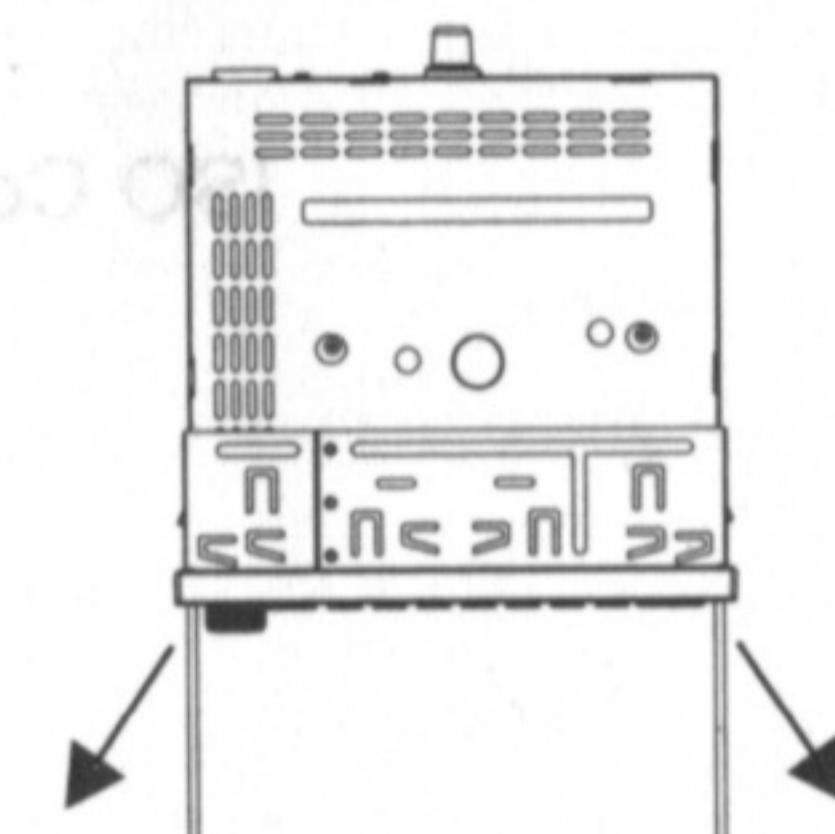
Anti-Theft System

Remove the unit

1. Insert both U-Keys into hole on the front of the set until they lock.



2. Pull out the unit as show below.



Troubleshooting

If you suspect something is wrong, immediately switch power off. Do not use the unit in abnormal condition, for example without sound, or with smoke or foul smell can cause fire or electric shock. Immediately stop using it and call the store where you purchased it. Never try to repair the unit yourself because it is dangerous to do so.

General		
No power or no sound	Car's engine switch is not on.	Turn your car's key to ACC or ON.
	Cable is not correctly connected.	Check connection.
	Fuse is burnt.	Replace fuse.
	Volume is too low or muted.	Check volume or mute on / off.
	If the above solutions cannot help.	Press the RESET button.
Disc		
Disc is inside but no sound.	Disc is upside down.	Place disc in the correct direction, and the label side up.
	Disc is dirty or damaged.	Clean disc or change another disc.
Disc sound skips, tone quality is low.	Disc is dirty or damaged.	Clean CD or change another CD.
Sound skips due to vibration.	Mounting angle is over 30°.	Adjust mounting angle to less than 30°.
	Unstable mounting.	Mount the unit securely with the mounting parts.
Radio		
Much noise in broadcasts.	Station is too far, or signals are too weak.	Select other stations of higher signal level.
Preset station lost.	Battery cable is not correctly connected.	Connect the battery cable to the terminal that is always live.

Specifications

General	
Power supply:	24V DC
Maximum power output:	45Wx4 channels
Suitable speaker impedance:	4-8 ohm
Pre-Amp output voltage:	2.0V (CD play mode: 1KHz, 0 dB, 10 KΩ load)
Fuse:	15A
Dimensions(WxHxD):	178x50x162mm
Weight:	1.7kg
Aux-in:	≥500mV

FM Stereo Radio	
Frequency range:	87.5-108.0 MHz (EUROPE)
	87.5-107.9 MHz (USA)
Usable sensitivity:	8 dBµ
Quieting sensitivity (S/N=50dB):	12 dBµ
Frequency response:	30Hz-15kHz
Stereo separation:	30dB(1kHz)
Image response ratio:	50dB
IF response ratio:	70dB
Signal/noise ratio:	55dB

AM(MW) Radio	
Frequency range:	522-1620 KHz (EUROPE)
	530-1710 KHz (USA)
Usable sensitivity (S/N=20dB):	30 dBµ

Disc Player	
System:	Disc digital audio system
Frequency response:	20Hz-20kHz
Signal/noise ratio:	>80 dB
Total harmonic distortion:	Less than 0.20% (1kHz)
Wow and flutter:	Below measurable limits
Channel separation:	>55 dB

Components	
Mounting collar	1
Machine screws M5x6mm	4
Mounting bolt (50mm)	1
Wire connector	1
U-key	2
Operating instructions	1
Rubber cushion	1

Note: Specifications and the design are subject to change without notice due to improvements in technology.