

COMPONENT CAR STEREO
TUNER CONTROL EQUALIZER DECK
WITH FM/AM HIDE-AWAY TUNER

SUPER TUNER III

OWNER'S MANUAL

Thank you for purchasing this PIONEER product.
Before operating it, be sure to read this manual.



PIONEER

KEEX-900

Combined Cassette Deck and Electronic Graphic Equalizer

Both a cassette tape deck and an electronic graphic equalizer are combined into a single unit. A single display switches to show tape transport, spectrum analyzer and graphic equalizer.

One-touch Recall of Equalizer Curves

Once an equalizer curve is set, it can be instantly recalled at the touch of a button (user preset curve). A set of factory preset curves are also available.

Convenient Tape Control Functions

A host of tape control functions puts more enjoyment into cassette tape playback. Music scan, skip search, and music search help to locate the beginning of a desired selection, while a blank skip function whisks past lengthy unrecorded sections on the tape.

Built-in Dolby NR for Reduced Tape Noise

A built-in Dolby B NR improves the signal-to-noise ratio by 10 dB in the mid-high range to dramatically cut tape hiss. A Dolby C NR is also built-in to improve the signal-to-noise ratio by an additional 10 dB.

PLL Synthesizer Circuit

Phase locked loop (PLL) synthesizer is used to assure highly stable reception. Station selection is electronic and the pin point tuning to the exact station frequency is digitally locked to prevent station drift due to temperature, humidity or voltage change.

Super Tuner III

The Super Tuner III provides not only high sensitivity (1.1 μV) but also reduced interference from strong electric fields. What's more, an FM muting function insures optimum FM reception to match FM wave variations. You'll always obtain the best sound quality for both stereo and monaural FM broadcast listening enjoyment.

Multiple Tuning Methods

A selection from among preset, preset-scan, seek and manual tuning methods locates frequencies quickly and easily. Preset tuning allows instantaneous tuning of up to 24 electronically preset frequencies with the touch of the buttons. Preset-scan tuning sequentially tunes in preset frequencies to help search for a favorite broadcast.

Best Stations Memory

Automatic tuning function allows to preset easily the best receivable stations.

Built-in Digital Quartz Clock

The current time stands out in 12-hour format even in the dark on a built-in digital quartz clock.

System Remote Control Unit

Connection of the accessory system remote control unit allows remote control of volume, fast forward/rewind, music search, and seek/manual tuning.

2-amp/4-speaker System

A built-in dual-amp balance control makes it possible to configure a 2-amp/4-speaker system that can be adjusted to create a powerful sound source at any listening position.

Anti-theft Mechanism

Presenting a personal secret code makes operations impossible under certain conditions unless the appropriate code is entered to reduce the chance of theft.

Secret Code

This unit is equipped with a secret code function. The secret code (4-digit) electronically locks the unit to reduce the danger of theft.

The code is preset to 0000 at the time of purchase, and the unit can be used normally without altering the code as preset. It is recommended, however, that the user change the code to another value to take full advantage of the anti-theft properties of this system.

Once a code is set, the unit will operate normally without input of the secret code, even if the ignition of the vehicle is switched OFF and then ON again. Should power to the unit be interrupted due to a battery charge, repairs, or theft, however, the unit will fail to operate when power is restored unless the preset secret code is first entered. Three consecutive wrong inputs of the code will cause the unit to lock electronically to accept no input of code for three hours. Once operation is restored, three more wrong code inputs result in another three hours of electronic lock up. This feature helps to prevent breaking of the secret code through sequential or random input.

These features mean that once the power supplied to the unit is completely cut, further operation is impossible except for those who know the secret code. This makes the unit unusable if stolen, thus reducing the danger of theft.

- When taking the unit to a service station for repair, be sure to either tell the service personnel the registered code or return the value to 0000.
- Should you forget your registered secret number, consult your local service station taking along a such proof of purchase and ownership as the original receipt, etc.

Secret Code Registration

The secret code should be registered after all connection and installation procedures are complete. Perform the procedures outlined in "Registering the secret code" within one minute after switching the ignition key of the vehicle to ON or ACC.

The internal microprocessor will judge that a secret code has not been set if registration is not begun within one minute, if the mode switch is pressed during the one-minute period, or if an attempt is made to load

a cassette. At this time, switch the ignition key OFF and then disconnect the unit's orange lead from the vehicle's battery. Then reconnect the lead and attempt secret code registration again.

Accessory Sticker and Card

- Affix the sticker on a window of the vehicle in which the unit is installed to inform potential thieves of the anti-theft function of the unit.
- Write the secret code, unit model number, and unit serial number on the card and store it in a safe place outside of the vehicle itself. The serial number of this device is located on the bottom of the unit. This information can then be made available to the police and your PIONEER service station should your unit be stolen.



Dealer Installation

When this unit is installed by the dealer, either inform the dealer of the desired secret code for presetting or be present during the installation procedure to set the secret code yourself.

Registering the Secret Code



1. Switch the ignition key of the vehicle to ON or ACC.
2. Simultaneously press the volume control buttons ❶ (+) and (-) within one minute after performing step 1.
3. The message C O d E will flash on the display ❷ to indicate that secret code registration is now possible. During this period, the buttons illustrated below become numeric input buttons (0-9) for the purpose of secret code registration.

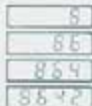


4. Use the numeric input buttons to register the 4-digit secret number of your choice.

Ex. Registration of "8842"

Press:

1. Volume control button (+)
2. Music Scan button
3. Command button 4
4. Command button 2



- If an input error is made, simply reinput the correct secret code from the beginning. The last four values input are registered as the secret code.
5. The entered value is registered as the secret code by pressing the program switching button ❸ after input is complete. The display ❷ will be cleared once this is done and normal operation of the unit will be possible. Be sure to attempt operation only after thoroughly reading the owner's manual.

Interruption of Power Supply

Interruption of the power supplied to the unit caused by battery replacement, repairs or theft of the unit causes the message C O d E to flash on the display once power supply is resumed and the ignition key of the vehicle is switched to ON or ACC. At this time the previously registered secret code should be entered using the following procedures:

1. Use the numeric input buttons (see "Registering the secret code") to enter the previously registered 4-digit secret code.
2. Press the program switching ❸ button. The message P R S S will appear on the display, an audible beep will sound, and normal operation will resume if the number entered matches the secret code registered before the power to the unit was interrupted. If the two numbers do not match, C O d E will flash on the display again and the unit will await input of the correct value.

Anti-theft Function

These consecutive inputs of values which do not match the previously registered secret code activates and error timer causing the message C O d E to appear on the display. Once this occurs, all operation of the unit, including code input, will be impossible for three hours. The message C O d E will return after three hours have passed. The anti-theft function will operate for all subsequent input until the correct value is entered.

Changing the Secret Code

1. Switch the ignition key of the vehicle OFF. Disconnect the unit's orange connecting cord from the battery of the vehicle and then reconnect it.
2. Switch the ignition key of the vehicle to ON or ACC and the message **C O D E** will flash on the display indicating that the unit is waiting for input of a secret code.
3. Use the numeric input buttons (see "Registering the secret code") to enter the previously registered 4-digit secret code.
4. Press the program switching button **Ⓜ**. The message **P R S S** will appear on the display, an audible beep will sound, and normal operation will resume if the number entered matches the secret code registered before the power to the unit was interrupted. If the two numbers do not match, **C O D E** will flash on the display again and the unit will await input of the correct value.
5. Simultaneously press the volume control buttons **Ⓢ (+)** and **Ⓣ (-)** within one minute after performing step 4.
6. The message **C O D E** will flash on the display **Ⓜ** to indicate it is now possible to change the registered secret code.
7. Use the numeric input buttons to register the 4-digit secret number of your choice.
8. The entered value is registered as the new secret code by pressing the program switching button **Ⓜ** after input is complete. The display will be cleared once this is done.

Nomenclature and Use (Tape Operation)



1 Fast Forward (+), Rewind (-)/Level Up (+), Down (-) Set Hours (+), Set Minutes (-) Button

Fast Forward (+), Rewind (-) button

Control fast forward/rewind only when the display is indicating tape transport or when the spectrum analyzer is shown. The (+) button is used for fast forward, while the (-) button is used for rewind. Pressing either of these buttons twice in succession activates the music search function, and pressing a third time returns to normal playback.

Level Up (+), Down (-) Button

Pressing the equalizer set button while the graphic equalizer display is shown changes the function of these buttons to level up/down buttons.

Set Hours (+), Set Minutes (-) Button

When setting time, press (+) side for hours and (-) side for minutes while the clock button is depressed.

2 Clear Button

Not used for normal operation, this button is pressed using a thin, pointed object to reset the unit when such symptoms as power supply failure, operation button failure, and abnormal display indicate misoperation of

the unit's built-in microcomputer caused by noise. It is necessary to reset time because the displayed time is erased when this button is pressed. Pressing this button causes the message **LOCK** to appear on the display. Input the previously registered secret code at this time.

3 Display

4 Mode Button

Switches from cassette deck to power OFF to tuner.

- When the AUX terminal is used, this button switches from cassette deck, to AUX (CD player, etc.), to tuner.

5 Open/Eject Button

Opens the flip down control panel. Press again to eject the cassette tape from the deck.

6 Display Select Button

Switches the contents of the display from tape transport, to spectrum analyzer, to graphic equalizer.

7 Volume/Attenuator Button

Pressing (+) increases volume while (-) decreases volume. Simultaneously pressing (+) and (-) immediately cuts the volume to 1/10 of its current setting. The volume display flashes at this time to indicate that the volume is attenuated. Simultaneously pressing the two buttons again returns the volume to its original level.

8 Clock Button

Pressing the clock button switches between the clock display and the tape transport display.

9 Command (0-5)/Music Scan (SC)/Equalizer Preset, Frequency Select Button

Command Buttons (0-5)

Sets the number of selections to be skipped in the skip search function when pressed while the tape transport display or spectrum analyzer display is shown.

Music Scan Button (SC)

Plays back 10 seconds of each successive selection when pressed while the tape transport display or spectrum analyzer display is shown. Pressing the release button cancels this function and resumes normal playback when the desired selection is located.

Equalizer Preset, Frequency Select Button

Presetting up to three equalizer curves (user preset curves) to buttons 0 through 2 allows instant recall when one of the buttons is pressed while the equalizer display is shown. Pressing button 3 through 5 selects one of three factory preset curves, and pressing the flat curve button (SC) recalls an uncompensated flat curve.

After the equalizer set button is pressed, these buttons function to select the desired frequency on the equalizer curve.

Program Select/Release/Equalizer Set Button

Program Select Button

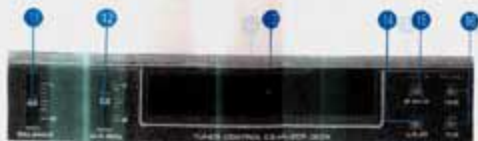
Switches the playback of the cassette tape between SIDE A and SIDE B when the tape transport display or spectrum analyzer display is shown.

Release Button

Cancels music scan, music search, skip search, and fast forward/rewind when pressed while the tape transport display or spectrum analyzer display is shown.

Equalizer Set Button

Allows creation of an equalizer curve using the frequency select button and level up/down buttons when pressed while the equalizer display is shown. This button is pressed once again to exit the equalizer set mode after the curve is set to the desired configuration.



(Flip-Down Control Panel Section)

1 Balance Control

2 Dual-amp Balance Control

Adjusts the balance between the front and rear speakers for a 2-amp/4-speaker system. Sliding towards F cuts the volume of the rear speakers, while sliding towards R cuts the volume of the front speakers.

3 Cassette Insertion Slot

4 Loudness Button

Compensates the low and high ranges when pressed to improve output at low volume.

5 Blank Skip Button

Sets the unit to automatically skip past long unrecorded portions (longer than 10 seconds) between selections or at the end of the tape. The B.S. indicator is shown on the display while this function is activated.

6 Dolby NR Button

Activates the Dolby NR system to improve the signal-to-noise ratio and cut tape hiss. is shown on the display when Dolby B Type NR is selected, while C indicates Dolby C Type NR.

System Remote Control Unit (Accessory)

Connection of a system remote control unit allows remote control of volume, attenuator, fast forward, rewind, and music search within easy reach.

- All the press type control buttons have an electronic sound (beep) and display for dual confirmation of operation.
- Noise reduction manufactured under license from Dolby Laboratories Licensing Corporation. "Dolby" and the double-D symbol are trade marks of Dolby Laboratories Licensing Corporation.
- Since an oil damper is used for the flip-down control panel, temperature and/or installation angle may effect the time required for opening and closing.
- The spectrum analyzer display shows the music signal only. Changes in the volume level do not effect the levels.

Nomenclature and Use (Tuner Operation)



1 Seek/Manual Tuning Button

Simultaneously pressing these two buttons switches between manual and seek tuning.

Seek Tuning (SEEK appears on display)

Automatically tunes in the nearest receivable frequency. Pressing (+) tunes in the nearest higher receivable frequency, while pressing (-) tunes in the nearest lower receivable frequency.

Manual Tuning

Each press of (+) increases FM frequencies in 0.2 MHz steps, AM frequencies in 10 kHz steps. Each press of (-) decreases frequencies in the same steps. Pressing and holding down either button causes high speed changes in the frequency according to the respective steps.

2 Clear Button

Not used for normal operation, this button is pressed using a thin, pointed object to reset the unit when such symptoms as power supply failure, operation button failure, and abnormal display indicate misoperation of the unit's built-in microcomputer caused by noise. Pressing this button

causes the message `CODE` to appear on the display. Input the previously registered secret code at this time.

3 Display

4 Mode Button

Switches from cassette deck to power OFF to tuner.

- When the AUX terminal is used, this button switches from cassette deck, to AUX (CD player, etc.), to tuner.
- This button may not function properly when the unit is first installed, and it may be impossible to switch to the tuner mode. In this case, pressing the clear button should allow normal operation.

5 Display Select Button

Switches the display contents from reception frequency, to spectrum analyzer, to graphic equalizer.

6 Preset Scan Tuning/Best Station Memory Button

Preset Scan Tuning Button

Sequentially recalls frequencies assigned to the preset buttons for play of approximately eight seconds each.

Pressing the release button cancels this function when a desired function is located.

Best Station Memory Button

Automatically tunes strong frequencies and assigns them to preset buttons 0 through 5 for one-touch automatic tuning. The best station memory function is activated by pressing and holding down this button until a beep is heard (approximately two seconds). The best station memory function is indicated by ----- flashing on the display, and this function can be canceled by pressing the release button.

- The frequencies previously assigned to the preset buttons are retained when six strong frequencies cannot be located.
- The best station memory function does not operate during preset scan tuning. To use the best station memory function, first use the release button to cancel preset scan tuning.
- The best station memory is operational while ----- is flashing on the display.

7 Frequency Preset/Memory Buttons

Frequency Preset

Assignment of FM/AM frequencies to these buttons allows one-touch tuning. 18 frequencies (8 for FM1, 6 for FM2, 6 for FM3) and 6 AM frequencies can be assigned for a total of 24 different frequencies.

Memory

Frequencies tuned using seek or manual tuning can be assigned to memory by pressing and holding down the desired button until a beep is heard (approximately two seconds).

8 Band Select/Release Button

Switches bands in the following sequence:

FM1 → FM2 → FM3 → AM

Also cancels seek tuning, preset scan tuning, and the best station memory function.



(Flip-Down Control Panel Section)

9 Local Station Button

Switches the seek level sensitivity of the seek tuning function among three levels in the following sequence:

OFF → LS → LS-HI

The OFF level has the greatest sensitivity, while the LS-HI setting will tune in only the strongest broadcasts.

10 FM Stereo/Monaural Button

This button is used to change from stereo to monaural for FM broadcasts, and is usually left in the stereo position. When a stereo broadcast is received, the stereo indicator will illuminate, with the "Super Tuner III" function, stereo broadcasts can always be enjoyed in their optimal reception mode. If excessive noise is present, pressing this button allows monaural reception of the broadcast.

System Remote Control Unit (Accessory)

Connection of a system remote control unit keeps seek and manual tuning within easy reach.

- All the press type control buttons have an electronic sound (beep) and display for dual confirmation of operation.
- Even when listening to the radio, inserting a cassette tape into the tape deck will automatically switch from the tuner to the tape deck.

Reading the Displays (Tape Operation)



1 Skip/Equalizer Preset Number

Shows the number of selections skipped by the skip search function. Also shows the preset number (0–5, F) when the equalizer preset button is pressed.

2 Music Search/Skip Search Display

MS appears on the display during music search and skip search operations.

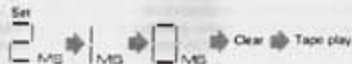
- The display changes as shown during music search:

Ex. Locating the beginning of the current selection.



- The display changes as shown during skip search:

Ex. Locating the beginning of the second selection before the current one.



3 Blank Skip Display

Lights when the blank skip button is pressed.

4 Music Scan Display

Lights when the music scan button is pressed. The music scan function is in operation while this indicator is lit.

5 Tape Transport/Spectrum Analyzer/Graphic Equalizer/Clock Display

Each press of the display select button causes the display to change as shown in A, B, and C below. Display D is shown when the clock button is pressed.

A: Tape Transport Display

—moving from the left to the right of the display indicates normal tape transport. When tape transport is reversed, — moves from right to left. The respective indicators increase in speed for such functions as fast forward, rewind, and music search.



B: Spectrum Analyzer Display

Frequency power levels are shown divided among seven frequencies.



C: Graphic Equalizer Display

Levels are shown divided among seven frequencies. The levels indicated by the red lines on the display are the uncompensated levels. The area above the red lines is the high level, while that below the red lines is the low level.



D: Clock Display

Pressing the clock button switches between the clock display and the tape transport display.

1 Volume Level/Attenuator Display

Displays the volume level. The indicator at the bottom of the display is always lit, even when volume is at its minimum setting. Simultaneously pressing both volume buttons cuts the volume to 1/10 of its current setting (attenuator function) and causes the volume display to flash.

2 Dolby NR Display

lights while the Dolby B NR button is pressed, while C lights while the Dolby C NR is pressed.

3 External Input Display

Lights when a unit (CD player) connected through the external input connector is in operation while the cassette deck is OFF.

4 Loudness Indicator

Appears when the loudness button is pressed to indicate that the loudness function is activated.

5 Frequency Display

Lights while the graphic equalizer display or spectrum analyzer display is shown.

1 70 μ s Tape Display

An automatic tape selector will switch the equalization (70 μ s/120 μ s) when a cassette tape is loaded into the unit. A 70 μ s tape will cause 70 μ s to be displayed, while a 120 μ s tape will result in no display at all.

2 Graphic Equalizer Display

Lights along with the preset number when an equalizer preset button is pressed while the graphic equalizer display is shown.

Reading the Display (Tuner Operation)



❶ Preset Number Display

Indicates the number of the preset button pressed to tune in the current frequency.

❷ FM Stereo Indicator

Indicates reception of a strong FM stereo broadcast.

❸ Preset Scan Tuning Display

Indicates operation of the preset scan tuning function.

❹ Seek Tuning Indicator

Indicates operation of the seek tuning function.

❺ Frequency Indicator

Shows ----- while the best station memory function is in operation.

❻ FM Monaural Indicator

Indicates reception of an FM broadcast while the stereo/monaural button is in the monaural position.

❼ Band Indicator

Indicates the band, switching in the sequences FM1 → FM2 → FM3 → AM → FM1... with each press of the band select button.

❽ Local Station Indicator

Indicates the seek level during operation of the seek tuning function.

LS-H: Low sensitivity

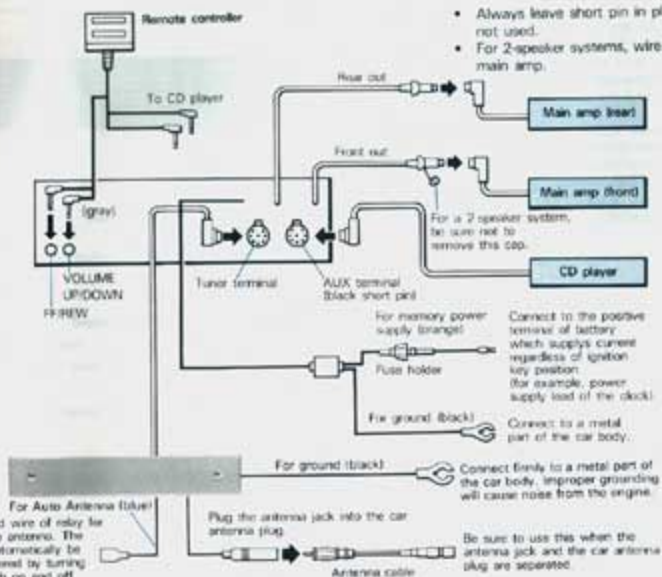
LS: Medium sensitivity

OFF (no display): High sensitivity

Connecting the Units

- Before making final connections, make temporary connections then operate the unit to check for any connecting cord problems.
- Refer to the owner's manual for details on connecting the various cords of the main amp and other units then make connections correctly.
- Be sure to correctly connect the memory power supply lead (orange) as specified. If the connection is made incorrectly or forgotten, this unit will not work at all.
- Don't pass the memory power supply lead (orange) through a hole into the engine compartment to connect to the battery. This will damage the lead insulation and cause a very dangerous short.
- If you should encounter more than two lead wires of the same color, when wiring connections, it will be convenient to wire them together, as shown in the following diagram.





- Always leave short pin in place when AUX terminal is not used.
- For 2-speaker systems, wire the rear output cord to the main amp.

Connect to lead wire of relay for the power auto antenna. The antenna will automatically be raised and lowered by turning the radio switch on and off (Max. 300 mA, 12 V DC.)

Installation

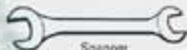
- Be sure to use the parts supplied and install the unit securely. If parts other than those supplied (specified) are used, they may loosen or cause damage internal parts.
- Be sure to install the unit in places where the driver is not bothered and where there is no danger of passengers being injured in case of sudden stops.
- Be sure to consult your dealer before making any holes in the car.

Before Installation

- First prepare the necessary tools. (Fig. 1)
 - Make sure to take off the (-) side connector on the car battery to prevent short circuits. (Fig. 2)
- After installation and wiring, check the connections once again to make sure there are no errors. Then connect the (-) connector to the car battery after all the parts of the car interior have been re-installed.



Screwdriver



Spanner



Hex screwdriver



Electric drill



Radio pliers

Fig. 1

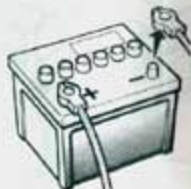


Fig. 2

Control Section Installation

- This product is designed to be installed in the radio space in the dashboard. If this space is too small, enlarge as shown below (Fig. 3)
- If installation angle exceeds 30° from horizontal, the unit might not give its optimum performance. (Fig. 4)



Fig. 3

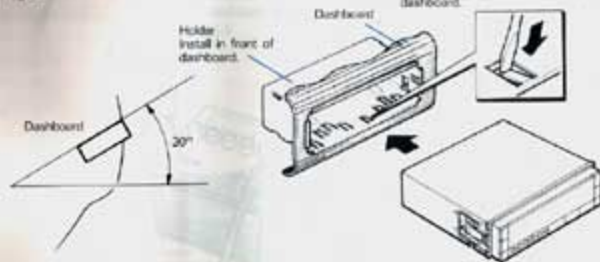


Fig. 4

Installation Procedure

1. Attach holder to dashboard. (Fig. 5)
2. The rear of the unit can be installed by any one of the following methods. (Fig. 6) (Fig. 7)
3. Install the frame (Fig. 8)

Installing with rubber bush

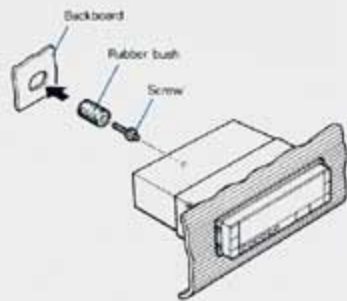
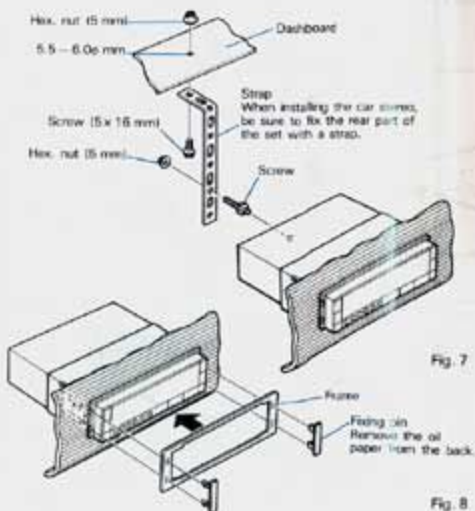


Fig. 5

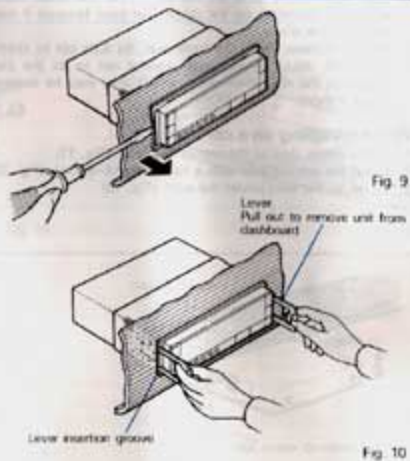
Fig. 6

Installing with strap



Removing the Unit

1. Disconnect wiring at rear of unit.
2. If the unit has been attached with a strap, remove.
3. Remove the frame and the spacer using a screwdriver. (Fig. 9)
4. Remove unit. (Fig. 10)



Tuner Section Installation

Be sure to observe the following precautions.

- Don't make installations in hot places such as near the heater outlet, in the glove compartment and under floor mats that are tightly closed.
- Rain water easily gets on the floor near the door. Also, don't make an installation on the driver seat base because it may interfere with the driver.
- For installations under the front seat, be sure not to obstruct the seat slides. Also, be extremely careful not to let the cords get caught in the slide mechanism where they may be damaged and cause a short.

When installing on a car mat

1. Apply magic tape to the rear of this unit. (Fig. 11)
2. Install the ground lead with a hex screw (4×6mm). (Fig. 12)
3. Install on the floor under the seat. (Fig. 13)



Fig. 11

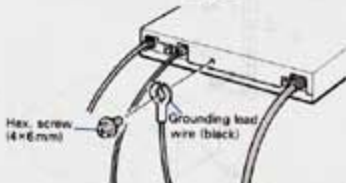


Fig. 12

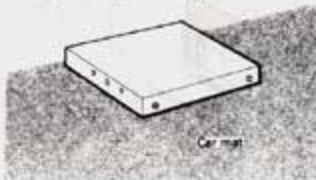


Fig. 13

When installing under the dashboard

1. Fold the strap a couple of times to break it off from the middle. (Fig. 14)
2. Bend the broken strap to an L-shape and install it on both sides of the tuner. (Fig. 15)



Fig. 14



Hex. screw (4×6mm)

Fig. 15



Fig. 16



Fig. 17



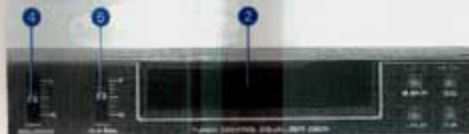
Fig. 18



Fig. 19

3. After deciding on the installation location, use a felt pen to mark the places where holes are to be made. (Fig. 16)
4. Use an electric drill and make 2 holes at the place of the markings. (Fig. 17)
5. Install the ground lead with a hex screw 4×6mm. (Fig. 18)
6. Install the tuner (Fig. 19)

Playback



(Flip-Down Control Panel Section)

1. With the ignition switch in the ON or ACC position, press the open button **1** and the flip-down control panel will open.
2. Insert a cassette tape into the tape slot **2**. The deck will automatically set the tape and begin playback.
3. Adjust the volume **3**, balance **4**, and dual amp balance **5** (for 4-speaker systems) to the desired levels.
4. Close the flip-down control panel **6**.
5. Press the mode button **7** to stop tape transport. Press again to resume tape transport.
6. To remove a tape, press the open/eject button **1** and the flip-down control panel will open. Press the button once more and the cassette will eject.
 - The cassette tape will automatically be ejected after a few seconds if it fails to be set. Reinsert the tape and try to set it again.
 - A loose or warped label on a cassette tape may interfere with the eject mechanism of the unit or cause the cassette to become jammed in the unit. Avoid using such tapes or remove such labels from the cassette before attempting use.