

Car AV Installation Set

TBXE-T003

This set is designed for models with driver's seat on the right side (Japan models). **Installation Manual**

Thank you very much for purchasing this Kanatechs Car AV equipment Installation Set.
Please carefully read and follow the instructions in this manual before installation.
Car owner should retain this manual for future reference.



Caution Installation with this set involves cutting plastic parts and handling of electronic parts. Work must be performed by a person with professional knowledge and skills. Damage to parts during the installation or damage to electronic parts due to miswiring are not covered under warranty.

★Removal of the Factory car AV disables the air conditioning control, but the air conditioning control box included in this set takes over the control of the air conditioning.

Compatible car make and models

Model	Model Year	Compatibility
MAZDA · RX-8	Apr 2003 - March 2008	Models with 4 speakers (Note 1, 2, 3, 4, 5, 6, 7, 8, 9 and 10)

Note1. Built-in Factory DVD car navigation system works, but TV function is disabled because the Factory radio is no longer available. Some features such as the operation sounds of the car navigation system may also be disabled.

2. Car models with the BOSE Sound System use a separate amplifier. The optional sound system translator for MAZDA models (**TBXE-X001**) is required for proper operation.
3. Clock and audio (volume, radio station, CD track indicators) on the information-center-display become disabled.
4. Automatic Level Control (ALC) becomes disabled (volume).
5. Beep sound for air conditioning control is disabled.
6. When turning-on the ignition, the information-center-display or the LED indicator on the Heater Control Unit may flicker or be delayed.
7. AMB (ambient temperature indicator) switch is gone and special operation for this set is used instead. (See Page 8)
8. When Head lights/parking lights are ON, the dimming feature on information-center-display and hazard lamp switch on Heater Control Unit is disabled.
9. Whenever the ACC is ON, the Heater Control Unit and hazard lamp switch illuminates regardless of the lighting switch position.
10. If the radio antenna plug cord from the vehicle is too short, obtain an extension cord available in the market.

※For installation, Factory Heater Control Unit, Hazard Lamp switch etc. need to be detached, and reassembled on Panel included in this set. It is necessary to cut off two holding flaps at the top of Heater Control Unit. (See page 4 **3**)

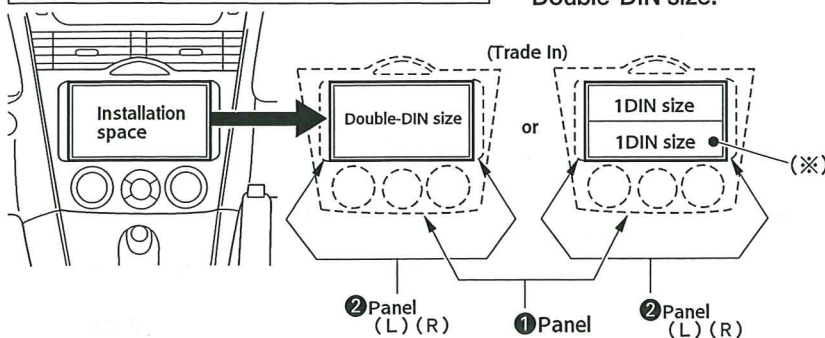
(If reversing back to the original equipment, Heater Control Unit is secured without screws for the already cut off flaps.)

※For cars with remote audio control switches on the steering wheel, installation of optional **FPCE-T001** enables the operation of audio remote control switch on the steering wheel.

※There are additional displays for the information-center-display with this set. (See Page 8).

Designed installation size

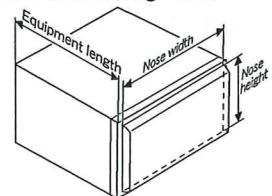
◆For 1DIN + 1DIN size and Double-DIN size.



(※) Please separately obtain a pocket available in market if needed.

※Car AV equipment with front panel size over 172 mm width and 100 mm height cannot be installed.

※The Car AV equipment with maximum length of 172 mm may be installed. However, some equipment may not fit with this set due to the center position of wire connecting units, the shape of the connector units, or space required for wires.



Parts List

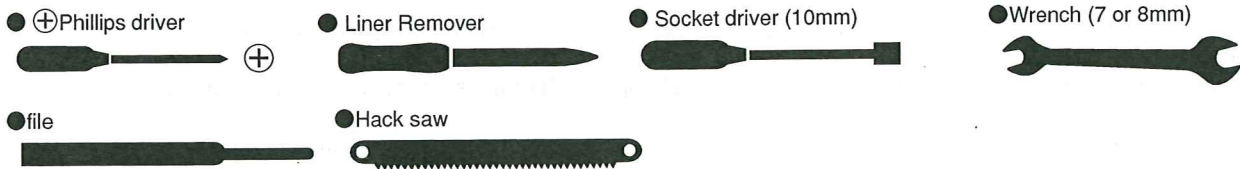
※Please use enclosed parts according to instructions. Installing or using outside parts may result in damage to the vehicle or car AV equipment.

Part No.	Part name	Quantity	Part No.	Part name	Quantity
①	Panel	1	⑥	Heater Control Unit Holding Clasps	2
			⑦	Power supply/front speakers/rear speakers Connector (24P)	1
②	Panel (L)(R)	1 each	⑧	Air Conditioning Control Box	1
③	Bracket (L)(R)	1 each			
④	Rear Bracket	1	⑨	Antenna power supply Conversion Cord.	1
			⑩	M5×8 Hex washer head screw (Note 1)	4
⑤	Rubber bushing	1	⑪	φ 5×12 Hex head tapping screw (Note 1)	4
			⑫	M4×6 Hex washer head screw (Note 1, 2)	2
			⑬	washer	8

Note 1 ... Used for co-attachment of ②Panel (L) (R) and ③Bracket (L) (R).

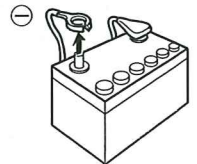
2 ... "M4×6 Hex washer head screw" is used with in-dash-sliding-front-panel type AV equipment (including Double-DIN size models) when shorter "M4×3 screws" are enclosed in the car AV equipment. Even though the car AV equipment manual may indicate to use the shorter screws, please use ⑫"M4×6 flange screw" included in this package to properly attach the equipment with sufficient screw length.

Necessary tools



Read Before Starting the Wiring Work

- Warning** ⚠ Be sure to choke at least two wheels of the vehicle.
- Caution** ⚠ Be sure that parking brake has been securely set and locked by fully depressing pedal or by pulling the parking brake hand lever.



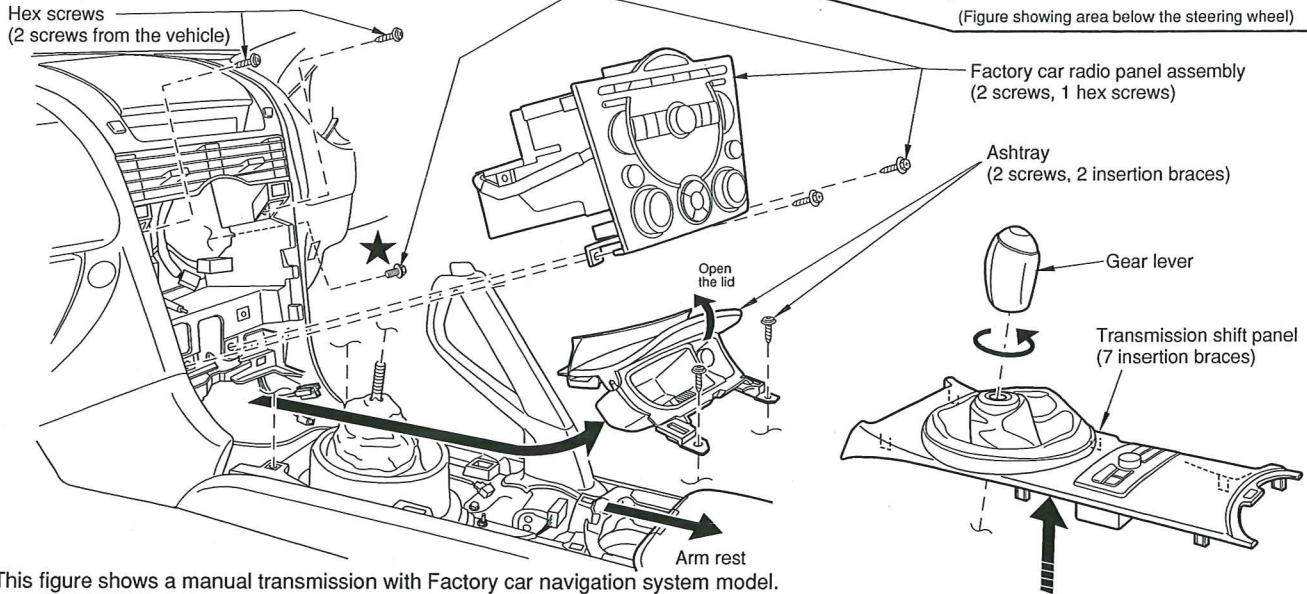
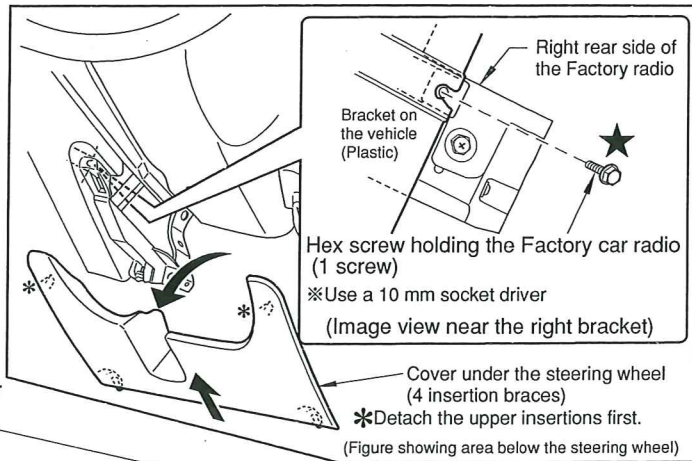
- ※ Disconnect the ground terminal of the car battery before installation to prevent electrocution or any damage to equipment during the wiring work.
 - ※ Professional skills and experience are necessary for detaching, installation, and wiring work. Improper installation may cause serious damage to the vehicle and car AV equipment. For safety, please refer installation to dealers and specialized installation shops.
 - ※ Do not install car AV equipment at places disturbing the forward view, interfering with driving operation (steering wheel, transmission lever, and brake pedal, etc.) or causing possible danger to passengers.
 - ※ Watch for burrs on vehicle frames etc. to avoid injury.
 - ※ Use care during removal and installation to prevent damage to vehicle side panels or car AV panels. etc. (Example: affix vinyl tapes or masking tapes to protect delicate parts for removal and installation.)
 - ※ Use a magnetized screw driver when working in narrow spaces. Screw drivers can be magnetized by attaching the driver to a speaker magnet for about 60 seconds.
- Screws and clamps removed during the detachment may be needed for installation. Use care not to damage or misplace these parts.

1

Detach Factory car radio panel assembly.

※The figure only shows manual transmission models and automatic transmission models should be installed in a similar manner.

- Shift the transmission lever to the N (neutral) position. Turn the gear lever counterclockwise and remove.
- Remove the transmission shift panel by sliding the arm rest backwards. (Disconnect wiring connectors.)
- Remove an ashtray with the lid open. (Also disconnect the cigarette lighter connector cord.)
- Remove a cover under the steering wheel, and remove the hex screw on the right side of the Factory radio (see figure on right).
- Detach the Factory car radio panel assembly. (Disconnect all wiring connectors and the antenna plug.)
- Remove hex screws located on right and left upper part of the dashboard.

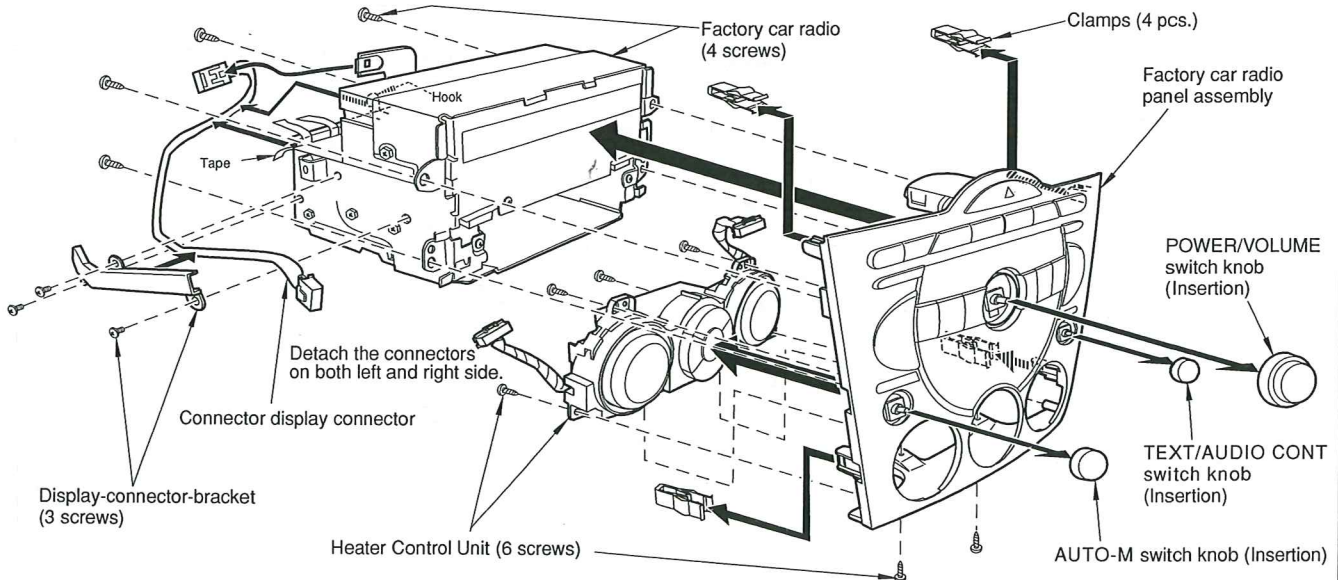


2

Detach Heater Control Unit etc from the Factory car radio panel assembly.

■ Detach Heater Control Unit etc from the Factory car radio panel assembly.

- Pull out switch knobs (POWER/VOLUME, TEXT/AUDIO CONT, and AUTO-M) from the Factory car radio panel assembly.
- Detach Factory car radio and Heater Control Unit. (Disconnect electrical wiring connectors.)
- Detach the display-connector-bracket on the left side of the Factory car radio, and then detach the information-center -display from the rear side. (Also remove the hook and the tape in the back.)
- Remove 4 clamps from back of the Factory car radio panel assembly.

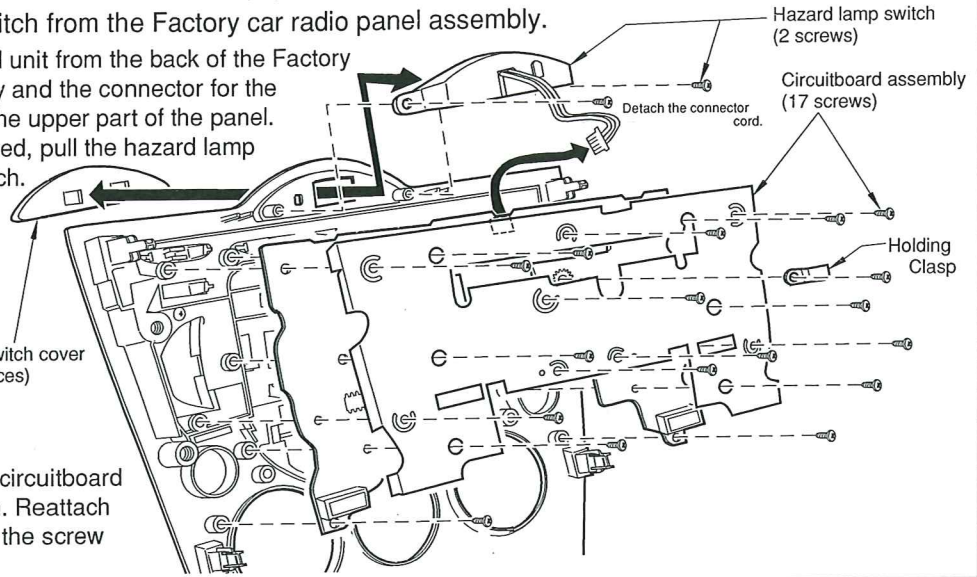


⚠ Handle the Circuit Board Unit with care to avoid physical or static electricity damage.

■ Remove hazard lamp switch from the Factory car radio panel assembly.

- Remove the circuit board unit from the back of the Factory car radio panel assembly and the connector for the hazard lamp located at the upper part of the panel.
- Once the screw is removed, pull the hazard lamp switch backward to detach. The hazard lamp switch cover comes off to front at the same time.

Hazard lamp switch cover (2 insertion braces)



※ The holding clasp from the circuitboard assembly is not used again. Reattach to the original position with the screw to avoid misplacement.

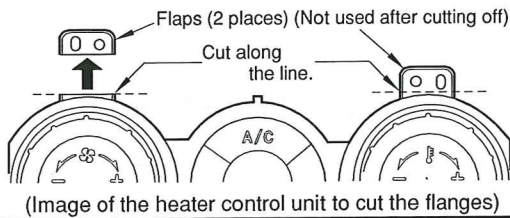
3 Set up Heater Control Unit etc. on Panel.

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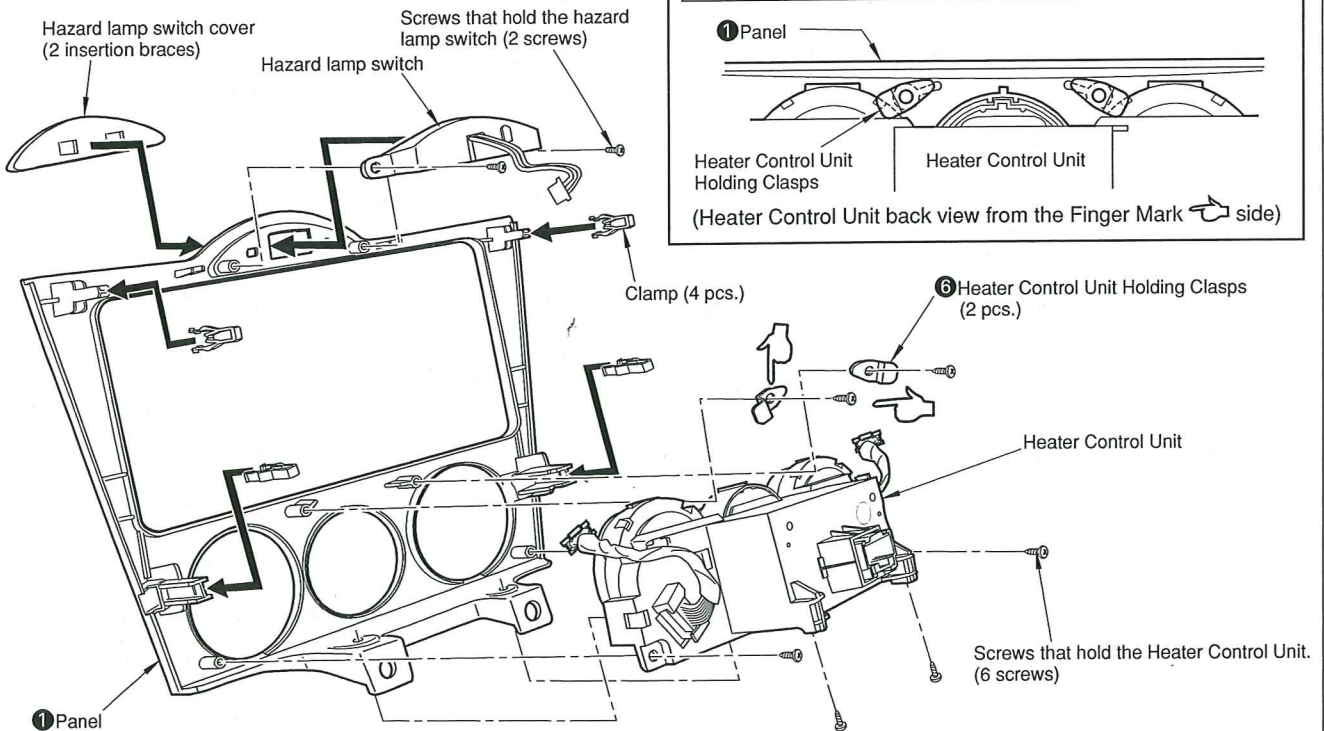
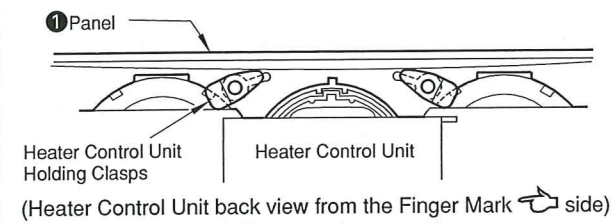
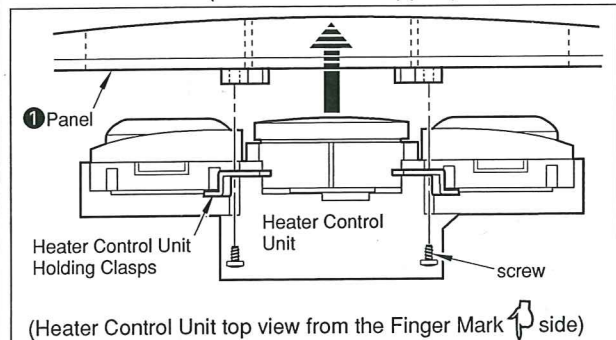
- Attach Heater Control Unit to the lower part of Panel.
- ※ Cut and remove the two upper flaps from Heater Control Unit (IRREVERSIBLE!). Attach Heater Control Unit to the Panel with holding Clasps. (See installation procedure on lower right figure)
- Attach hazard lamp switch and the hazard lamp switch cover to the upper part of Panel.
- Insert 4 clamps on Panel.

■ Heater Control Unit
Cut off the upper flaps (2 flaps) ■

- Use a hack saw to cut off the flaps. (Irreversible once cut off)
- ⚠ Caution ※ Use care not to over cut or damage the surface of the Unit. Most importantly avoid injury.



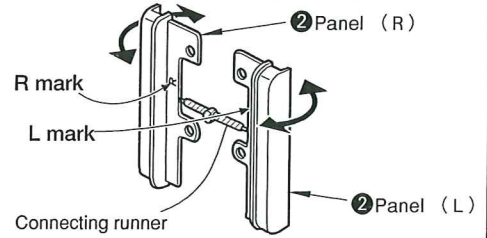
■ Attaching the Heater Control Unit (2 screws at the upper part) ■



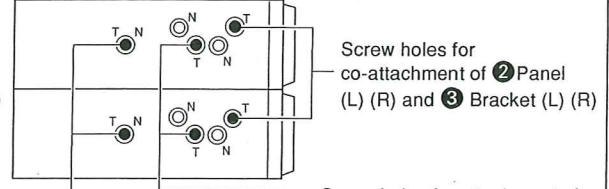
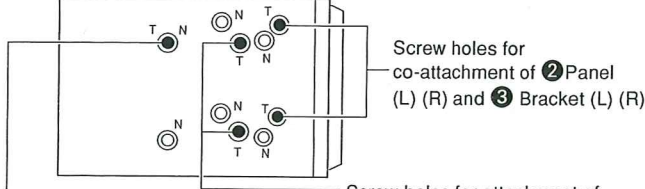
4

Attach Bracket (L) (R), Panel (L) (R) and Panel followed by Rear Bracket to the new car AV equipment.

- ※ Panel (L) (R) need to be cut out before use.
- Bending at the cut marks on the connecting runner between Panel (L) (R) should detach the parts.
- Caution** ※ Please use caution not to bend areas other than the cut marks or not to damage surfaces of any other parts. Use care to avoid injury.
- ※ Each Panel is clearly marked with L or R. Please note these marks when attaching to the equipment.

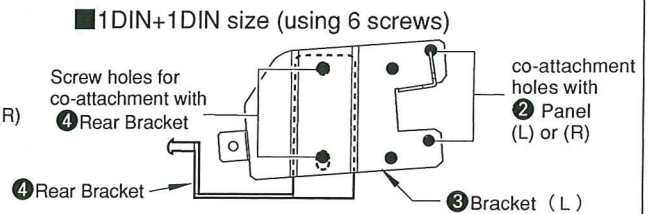
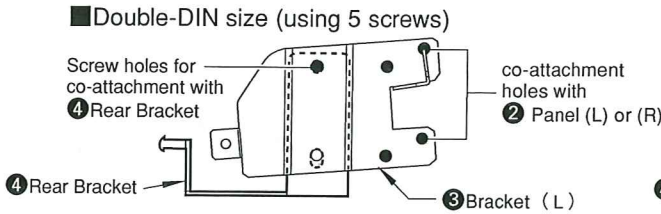


- Tapped screw holes on car AV equipment. (●) Screw holes with this mark are used. (Please also refer to the installation manual of the car AV equipment.)
- Double-DIN size (using 5 screws)
- 1DIN+1DIN size (using 6 screws)



T mark ... Toyota model screw holes
N mark ... Nissan model screw holes
[Only the left side view is shown. The right side is in the mirror image of the left side.]

- Screw holes on brackets used for installation. (●) Holes with these marks are used.
- Double-DIN size (using 5 screws)
- 1DIN+1DIN size (using 6 screws)



[Only the left side view is shown: Rear Bracket and Bracket (L). The right side is in the mirror image of the left side.]

- Attach Bracket (L) (R), Panel (L) (R) and Panel followed by Rear Bracket to the new car AV equipment.
- Place Panel (L) (R) on top of Bracket (L) (R) to co-screw.
- Insert the Rear Bracket from the bottom to the open slot behind the Bracket (L) (R), and co-screw the parts to secure.
- Insert Rubber bushing in back of Rear Bracket.

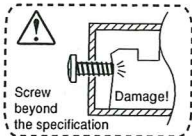
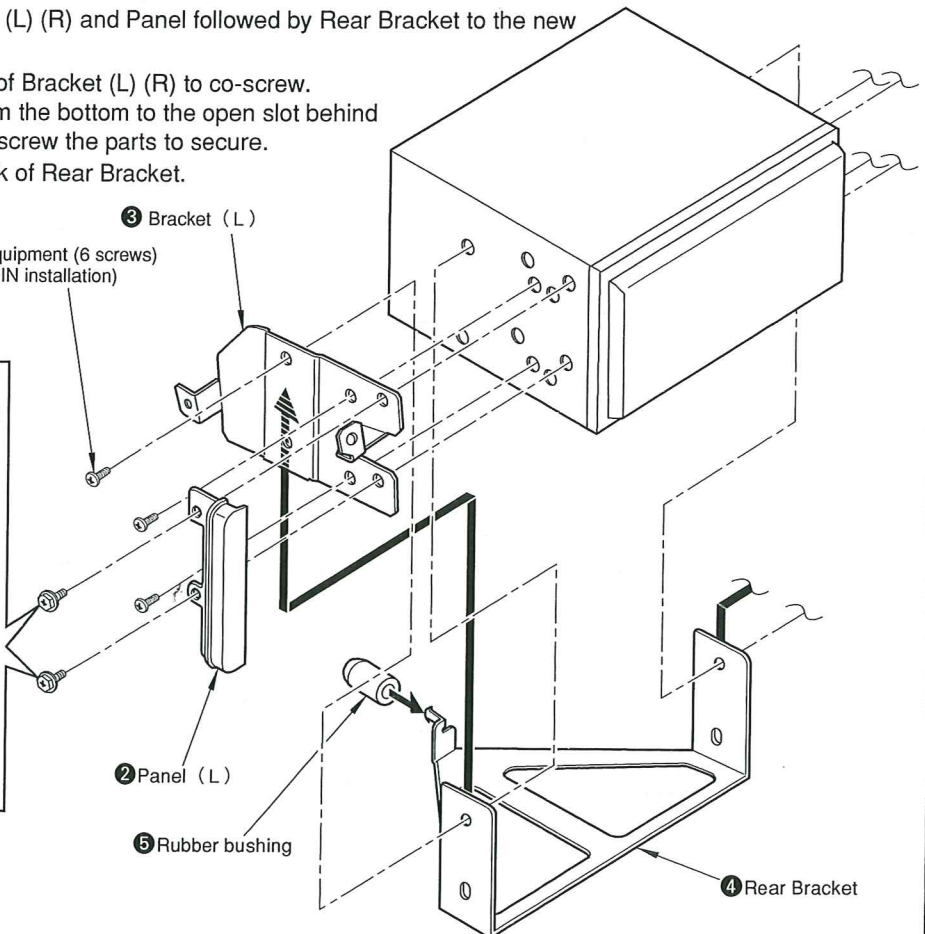
3 Bracket (L)
Screws from car AV equipment (6 screws)
(8 screws for 1DIN+1DIN installation)

※ Use a wrench (7 or 8 mm)

Please choose 4 screws of either 10M5x8 hex screws, 11 φ5x12 tapping hex screws or 12M4x6 flange screws (included in this set) according to the car AV equipment. Please refer to screws on the parts list on page 1. Refer to the parts list on page 2 for screws used.

11 Using φ5×12 Hex tapping screws with washers

13 washers (8 pcs.)



- The figure shows the installation of Double-DIN size equipment. Equipment with 1DIN+1DIN size may be similarly installed.
- Figure shows the left side attachment. Attach the right side parts in a similar manner.

5

Wiring connector.



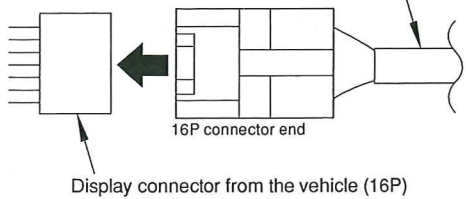
Cautions

◇ Check the following before starting the wiring work: ◇

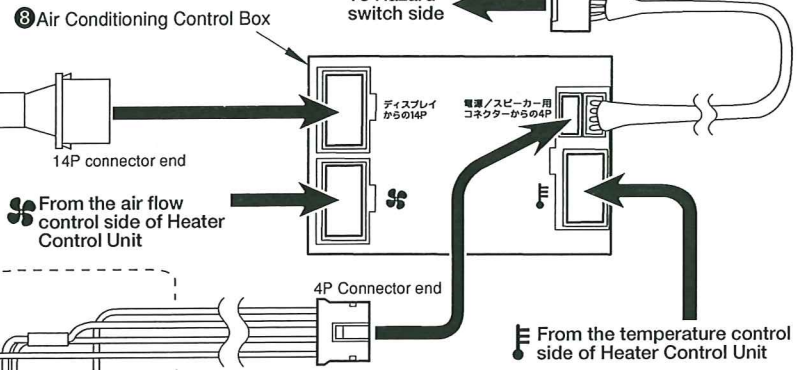
- Make sure that the maximum total current load (refer to the specification in the car AV equipment manual) connected to the wiring connector is 10A or less, which is the current capacity of the vehicle's radio circuit.
- If the main AV unit does not include a power amplifier unit or if the vehicle's radio current capacity needs to be exceeded, use power supply cables from the car AV equipment manufacturer (a wiring kit for taking electric current directly from the battery).
- While the coloring code and shapes for wires in this set follows the JEITA specification, the car AV equipment manufacturer may use another coloring specification. Please refer to the car AV equipment installation manual for proper wiring.
- Please fully insert electric quick connectors including the blade and bullet type connectors.
- When placing wires for installation, make sure that the wires are not caught in narrow spaces such as near body frames, screw holes or near moving parts such as sheet rails. Bundle and securely affix the wires out of the way of vehicle operation (keep away from the steering wheel, the transmission lever and the brake pedal motion path).

■ Air Conditioning Control Box

Connector cord (14P-16P) removed from the original information-center-display unit.

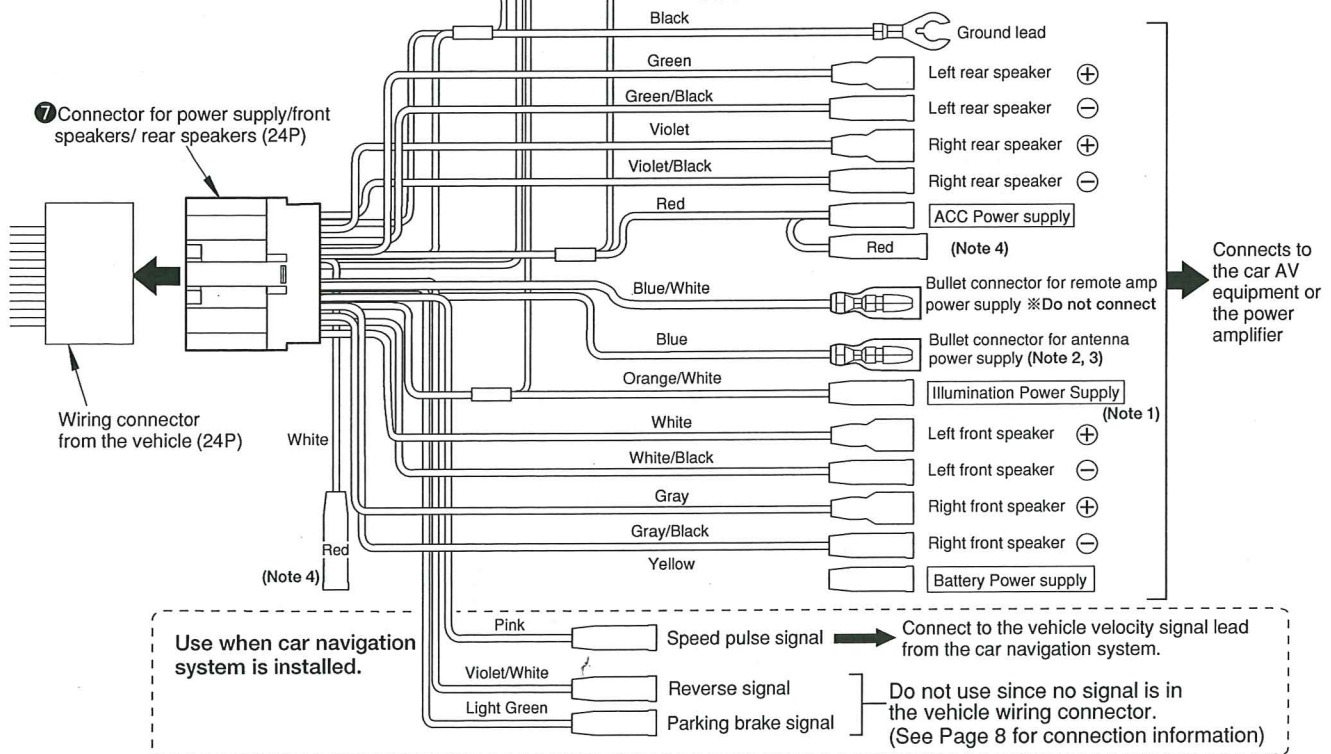


※ Please refer to page 7 for cord connection sequence and layout. (Same shape connectors exist; check the other end of cord before inserting connectors.)



■ Power supply/front speakers/ rear speakers Connector (24P)

7 Connector for power supply/front speakers/ rear speakers (24P)



- Note 1. If the car AV equipment does not use the illumination power supply, it is not necessary to connect.
2. If the car is equipped with a glass printed antenna, connect to the auto antenna lead (Blue) from the car AV equipment.
3. If the antenna power supply connector from the car AV equipment is other than the bullet connector specified by JEITA (such as the blade type connector), insert the antenna power supply conversion cord included in this set.
4. This connection is used if optional **FPCE-TO01** is installed for the steering wheel car audio remote control switch.
- ※ Not connected to the connector cord (16P) for cars with a genuine car navigation system.

■ Antenna power supply conversion cord (Note 3)



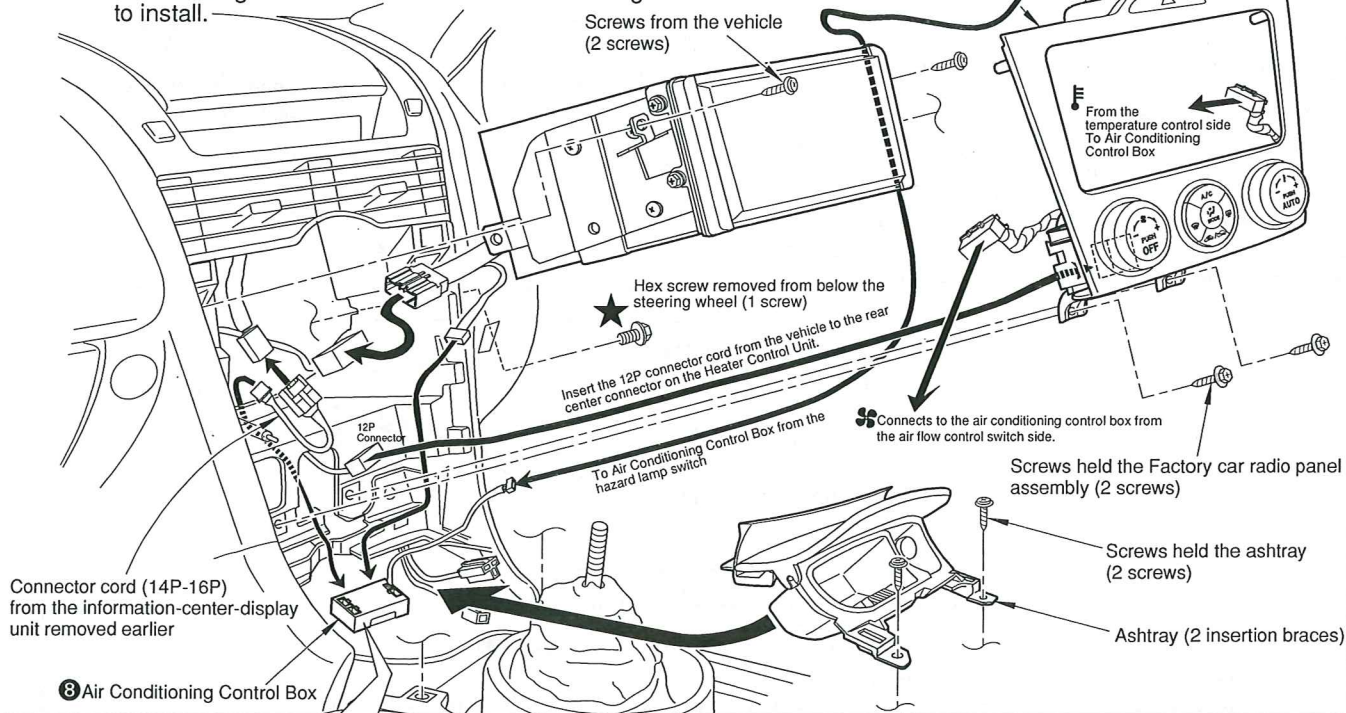
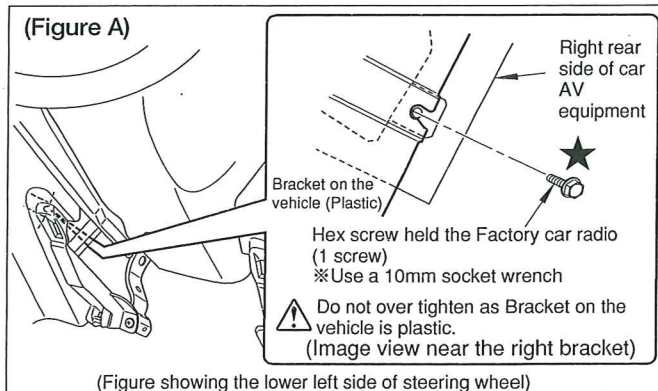
6

Install the car AV equipment and the panel to the dashboard, and test its operation.

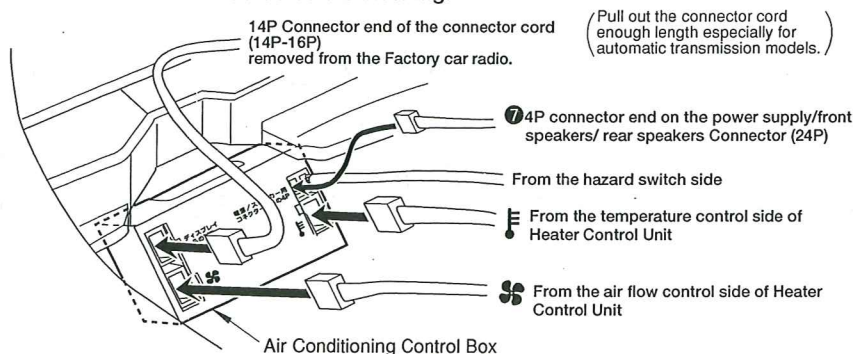


Battery is continuously supplying power to some cords. Remove the negative terminal at the battery before work. If any abnormal behavior (hazard lamps flickering or the Heater Control Unit illumination turning on) is observed when connecting the battery terminal (with the ignition key at the OFF position), immediately detach the negative terminal of the battery and check for wrong connections.

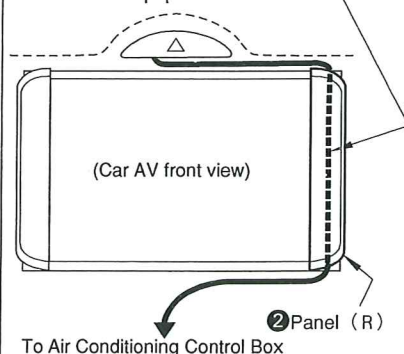
- Connect the 16P side of the connector cord (16P-14P) for the information-center-display unit to the vehicle side, and lay out the cord from the lower end of the dashboard to the outside.
- Connect the antenna plug and Power supply/ front speakers/rear speakers Connector (24P) to the car AV. Place the cords to the back right of the dashboard. Lift the car AV equipment to align the screw hole and secure with a hex screw under the steering wheel column. (See A and ★ below)
- Attach the car AV to the dashboard. (Lay out the wirings with care not to be caught between parts.)
- ※ Some connectors have the same shape. Check the other end of the connector before inserting.
- Insert the 14P side of the connector cord (16P-14P) for the display unit and the 4P end of the Power supply/front and rear speakers Connector Cord to Air Conditioning Control Box.
- Draw the hazard lamp switch cord behind the Panel (R) attached to the car AV equipment downwards and connect to Air Conditioning Control Box. (See B below)
- Insert and attach Heater Control Unit cords from both air flow control and temperature control to Air Conditioning Control Box.
- Insert the 12P connector cord from the vehicle to the rear center connector on Heater Control Unit.
- Place Air Conditioning Control Box at the bottom of the dashboard and restore the Panel. (See figure C below). (Lay out the wirings with care not to be caught between parts.)
- Attach wirings from the ash tray, and lightly push Air Conditioning Control Box forward without catching cords to install.



(Figure C) Once all wires are properly connected, push the air conditioning control box to the lower part of the dashboard to install.
 ※ Some connectors have the same shape. Check the other end of the connector Cords before inserting.



(Figure B) Draw the hazard lamp switch cord toward the back of the right Panel of the car AV equipment.



Restore parts (transmission shift cover, cover under the steering wheel etc) to the original position.

Once restored, test operation of the air conditioner etc.

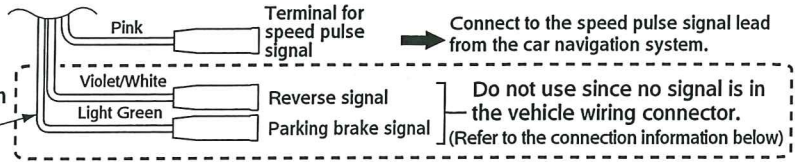
Connecting information for car navigation system

It is possible that detail may be modified by the car manufacturer. Please verify compaibility at car dealers.

Connecting the speed pulse signal

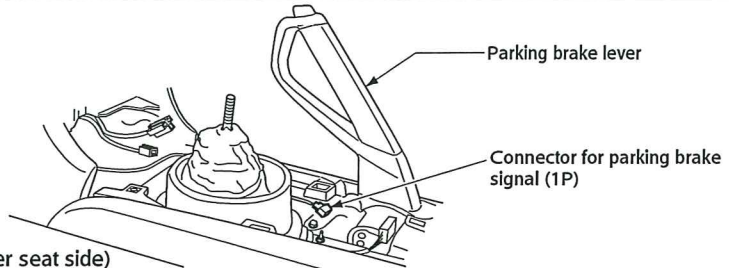
Connect the pink speed pulse signal wire terminal from the 24P power supply/ front speakers/ rear speakers Connector to the vehicle-velocity signal from the car navigation system.

Power supply/ frontspeakers/ rear speakers Connector (24P)



Connecting parking brake signal

Connect the gray 1P connector located at the lower left side of the parking brake lever to the parking signal wire from the car navigation system.



Connecting reverse signal

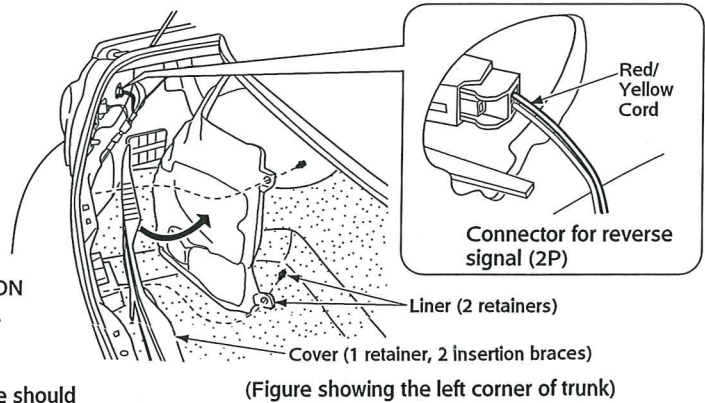
Detach the liner in the trunk and connect the reverse signal cord from the car navigation to the Red/Yellow cord on 2P connector for reverse lamp.

Caution

- Do not start the engine (nor turn to START position).
- The battery may drain if the ignition key is turned on for a long time.

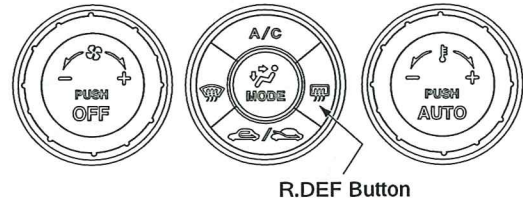
How to verify reverse signal connection.

Securely set the parking brakes, turn the ignition switch to the ON position, and shift the transmission gear to the reverse position. Measure the voltage between the vehicle's frame (Non-painted metal) and the reverse signal 6P connector (Red/Yellow cord). The connector side should read about positive 12V. The voltage should read 0V by shifting the gear from R (reverse) into other positions.



Switching the temperature indicator from inside to outside temperature

- To switch to the outside temperature, press and hold the R.DEF button. (To switch back to inside temperature, press and hold the R.DEF button.)



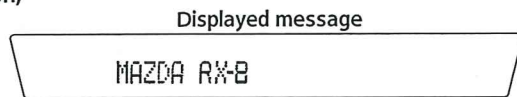
Start-up message on Information-center-display

(The following Kanatechs's original message displays in this set.)

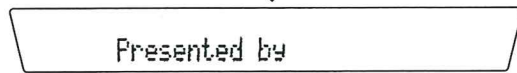
Display of the start-up message

- When the ignition key is turned from ACC to ON position, the following three messages will sequentially display.

Display of "MAZDA RX-8" followed by



Display of "Presented by" followed by



Display of "Kanatechs"

