



DVD-Video / USB Multi-Source Receiver / 7" Wide Screen Monitor / Navigation /
RDS-TMC / Built-in *Bluetooth*® wireless technology

MODEL

AVN827GA

INSTALLATION MANUAL

Be sure to read this installation manual thoroughly prior to installation. If installation methods or nonstandard parts not specified in this installation manual are used, accidents or injury may result.
Professional installation is required to install this system. ECLIPSE recommends you to have the system installed at your retailer. Be sure to keep this manual after installation for later reference.
Customer should keep manual for reference.

◆Contents



Tip

When installing the main unit, some vehicle models may require the use of items that need to be obtained separately such as a power supply adaptor cable, radio antenna adaptor cable or mounting bracket.

①	Main unit	x 1
②	Interconnecting cable (Power, speaker wires, etc.) (16P)	x 1
③	Interconnecting cable (Video-out, microphone, switch) (12P)	x 1
④	Interconnecting cable (Parking brake, reverse and speed, etc.) (8P)	x 1
⑤	Interconnecting cable (Pre-out, non-fader) (20P)	x 1
⑥	Interconnecting cable (VTR) (6P)	x 1
⑦	Hex-head bolt (Red:M5x8)	x 8
⑧	Flat head screw (Red:M5x8)	x 8
⑨	GPS antenna	x 1
⑩	Ground plate	x 1
⑪	Microphone	x 1
⑫	Switch cable	x 1
⑬	USB cable	x 1
⑭	SD Card	x 1

- Other accessories (Installation manual, user's manual, other documentation)

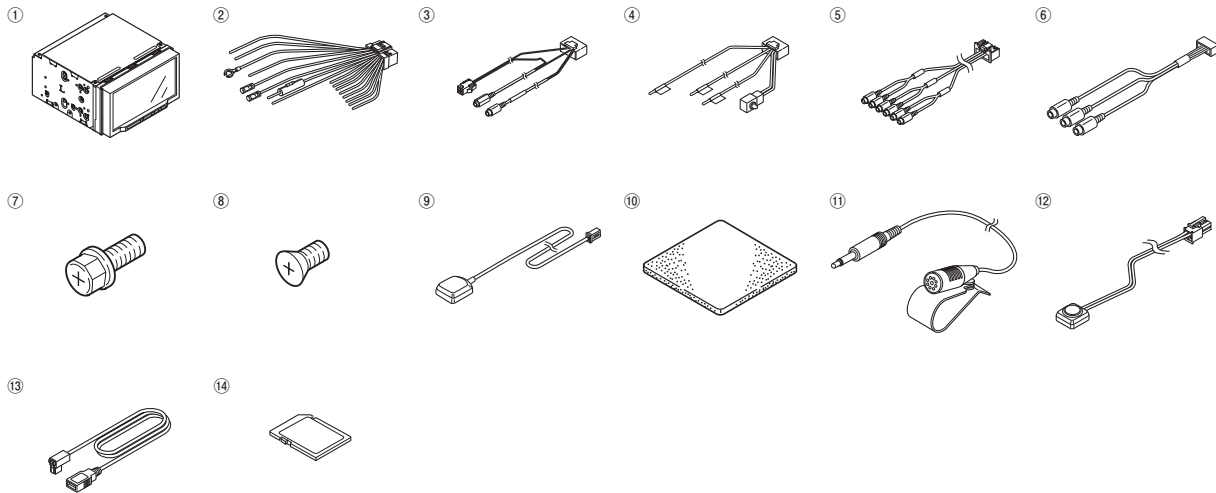
◆For your safety in using the system

⚠ Warning

- Do not install this main unit in locations where it may obstruct the driver's view, or where it may endanger passengers in the vehicle, otherwise an accident or injury may result.
- To prevent damage to the vehicle, confirm the locations of hoses, electrical wiring, and the fuel tank prior to drilling holes to install this main unit. Also, take precautions so that the main unit does not interfere, nor come in contact with them, otherwise a fire may result.
- When installing this main unit, never use the existing nuts or bolts that secure parts of the fuel tank, or the steering, or braking systems, otherwise improper steering or braking or a fire may result.
- To prevent a short circuit from occurring, disconnect the battery's negative terminal before installing this main unit, otherwise, an electric shock or injury may result.
- When using an existing nut and/or bolt from the vehicle to ground this main unit, do not use any that secure parts of the steering or braking systems, otherwise, an accident may result.
- Bundle wires and harnesses with electrical tape or wire ties to prevent them from interfering with moving parts. If they should entangle with the steering wheel, shift lever, or brake pedal, an accident may result.
- Never supply power to another electrical appliance by splicing or tapping into this main unit's power wire, otherwise the current capacity of the wire will be exceeded, resulting in a fire or electric shock.
- Never attempt to disassemble or modify the main unit, otherwise an accident, fire, or electric shock may result.
- When installing the main unit into a vehicle with a passenger side air bag, do not secure it to the air bag's cover or in places where it may impede air bag deployment, otherwise proper air bag operation may not be ensured in the event of an accident, causing injury or death.
- When making holes (example: drilling) be sure to wear protective eyewear, otherwise an injury such as loss of eyesight may result.
- Exposed wires must be insulated with electrical tape, otherwise a short circuit, fire, or electric shock may result.
- Do not modify this system for use other than that specified herein. Also, do not deviate from the installation procedures described herein; ECLIPSE will not be held liable for damages including, but not limited to serious injury, death, or property damage resulting from installations that enable unintended operation.
- This main unit is intended for operation in 12-volt DC, negative-grounded vehicles only. Never use it in 24-volt vehicles such as heavy trucks or diesel vehicle with cold-region specifications.
- Do not place the vinyl storage bag over a person's head. It may cause a serious accident or death by suffocation.
- Do not disassemble or rebuild this main unit. Doing so may cause an accident, fire, or electrical shock.
- When it is necessary to replace the fuse, always use a fuse of the correct rating (number of amperes). Use of fuses with higher amperage ratings may cause a fire.
- Do not operate the main unit in a malfunctioning condition, for instance, when the audio does not play. Doing so may result in an accident, fire, or electrical shock.
- If an abnormal situation occurs, such as foreign matter entering or liquid splashing on the main unit, or smoke or a strange odor emitting from the main unit, shut off the main unit immediately and consult the dealer from whom you purchased it. Continued operation may cause an accident, fire, or electrical shock.

⚠ Caution

- For best results, this main unit should be installed by a professional installer. Contact the dealer whom you purchased the main unit for an appointment.
- When installing this main unit, be sure to use the supplied mounting hardware. If parts other than those supplied are used, the main unit may be damaged internally, or may not be held in place securely and become dislodged.
- Avoid installing this main unit in places where it may get wet, such as near windows, or in places that are moist or dusty. Presence of liquid, moisture, or dust inside this main unit can cause short circuiting resulting in smoke or fire.
- If this main unit is not connected properly, a short circuit, fire, or accident may occur.
- When routing wires, use precautions to prevent contact of sharp metal parts such as brackets or screw tips, otherwise a short circuit, electric shock, fire, or accident may result.
- Play the audio at a moderate volume level that permits you to hear sounds from outside the vehicle. Driving without being able to hear outside sounds may result in an accident.
- This main unit must be operated only as an on-board main unit, or it may cause electrical shock or injury.
- Do not play distorted sounds for long periods of time; the speakers may overheat and cause a fire.
- Once installation and wiring have been completed, return the brakes and electrical equipment such as lights, horn, hazard warning lights and turn signal lights to their original places, and check that they operate correctly. If you use the vehicle while any of this equipment is not working correctly, fire, electric shocks or accidents may occur.
- Use supplied wire harness with this main unit. Other manufacturers may use a similar wire harness connector but pin configurations are incorrect for use with ECLIPSE main units and can damage the main unit. Prior to powering up the main unit, make sure the main unit is properly grounded with the vehicle chassis. If no ground is available to the chassis, add a ground strap from the main unit to the vehicle chassis to improve the ground.
- Do not use with speakers having 1 to 3 ohms impedance. This main unit is designed to be used with high-powered speakers rated above 50 W with impedance rating between 4 and 8 ohms.



◆Installing the GPS antenna

Notes on installation

⚠Warning

- The wires should be bound together with tape or a similar securing method (example: wire ties) so that they do not interfere with driving. If they become wound or entangled around parts such as the steering wheel, shifting lever, or brake pedal, accidents may result.
- Do not install the GPS antenna where it will obstruct the driver's vision or where it will be an obstacle while driving, otherwise traffic accidents may result.

👉Tip

- If the vehicle glass is a special type of glass such as heat-reflective glass or bullet-proof glass, be sure to install the GPS antenna outside the vehicle. If the GPS antenna is installed inside the vehicle, the reception sensitivity will severely drop and will affect the accuracy of the position measurement.
- If installing the GPS antenna inside the vehicle, be sure it is mounted on the ground plate.
- If installing the GPS antenna inside the vehicle, the location and the slope of the vehicle's windshield will determine the accuracy of the GPS antenna to receive the GPS signal. If the GPS antenna location inside the vehicle is hindering the accuracy of the GPS antenna, then you may want to install the antenna outside the vehicle.
- The materials used in front and rear vehicle windows can cause GPS reception sensitivity to drop significantly. If this happens, install the GPS antenna outside the vehicle.
- If the attachment surface is a non-plastic surface such as genuine leather, wood panel, or cloth, attaching the antenna may damage the surface finish. Do not attach the ground plate to such surfaces.
- Wipe the installation surface thoroughly so that it is clear of any dirt, moisture, or grease before installing the antenna.
- Do not apply any coatings to the GPS antenna, otherwise it may cause a drop in the reception sensitivity of the antenna.
- Route the GPS antenna wire as far away as possible from TV and radio antennas, and wires, otherwise it may cause interference with video and audio signals.
- Do not install the antenna in places (such as front pillars and roof panel) that are shielded from the sky.
- The main GPS antenna unit should be installed in a level position where the signals will be as unobstructed as much as possible, such as on the vehicle's roof. Satellite signals cannot be received if the antenna is obscured or obstructed.
- If installing the GPS antenna unit outside the vehicle, remove the antenna unit if leaving the vehicle unattended for long periods in order to prevent theft or malicious damage to the antenna.
- Hold the GPS antenna unit when removing the antenna. Do not pull on the GPS wire, otherwise it may become damaged and result in problems with correct operation.
- If installing the GPS antenna outside the vehicle, remove the GPS antenna unit when washing the vehicle. (If you wash the vehicle with the antenna unit still attached, avoid spraying the wire section directly with water so that no water gets inside the vehicle.)
- The magnet that is attached to the GPS antenna unit is extremely strong. Be sure to note the following when installing the antenna.
 - Do not put the antenna down onto the ground or onto dirty or dusty surfaces. If iron filings become attached to the magnet, they may cause damage to the vehicle's body.
 - Keep the antenna away from watches and magnetic cards, otherwise they may be damaged and/or rendered unusable.

- 1 Choose an installation location on the dashboard which is flat and has a clear view of the sky.

👉Tip

- Select a location that is at least 20 in. away from the main unit. If this is not done, the GPS measurement precision will drop.
- Be sure to use the ground plate when installing the GPS antenna. If the ground plate is not used, the reception sensitivity will drop and will affect the accuracy of the position measurement.

- 2 Install the ground plate to the dashboard.
3 Install the GPS antenna to the ground plate.

👉Tip

If installing the GPS antenna inside the vehicle, the installation location and the shape of the vehicle's body will determine GPS accuracy. Accuracy is usually lower when the GPS antenna is installed inside the vehicle.

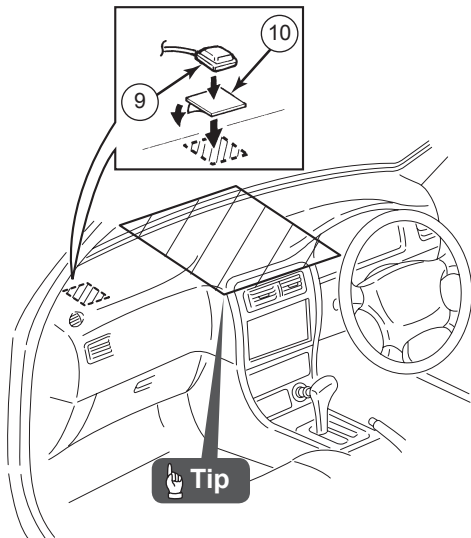
- 4 Secure the GPS antenna.
5 Route the GPS antenna wire along the crevice between the front windshield and the dashboard.

👉Tip

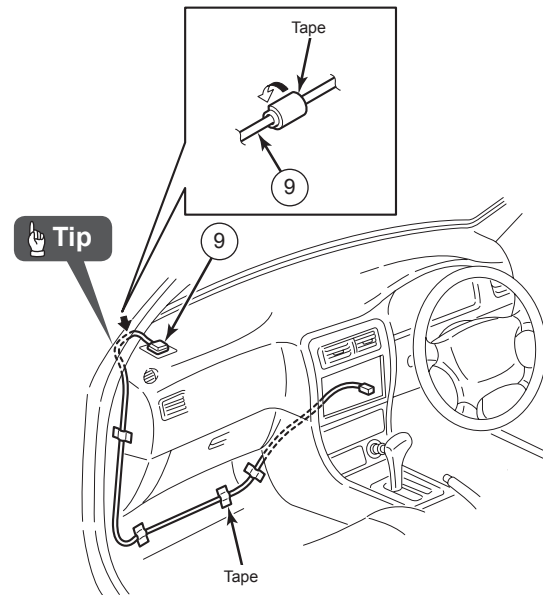
If the GPS antenna wire protrudes from the dashboard, wind tape around it so that it stays securely fixed in the crevice between the front windshield and the dashboard.

- 6 Route the GPS antenna wire to the main unit's installation location.

1 2 3 4



5 6

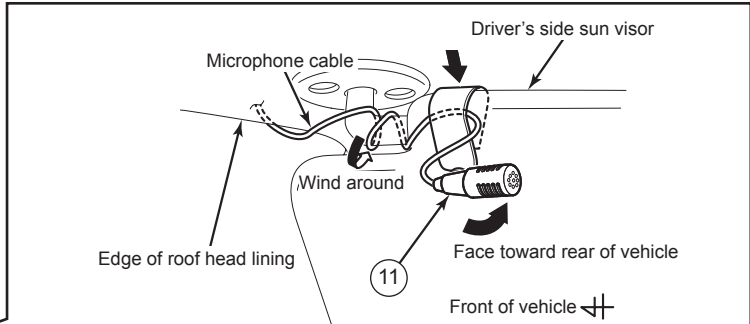
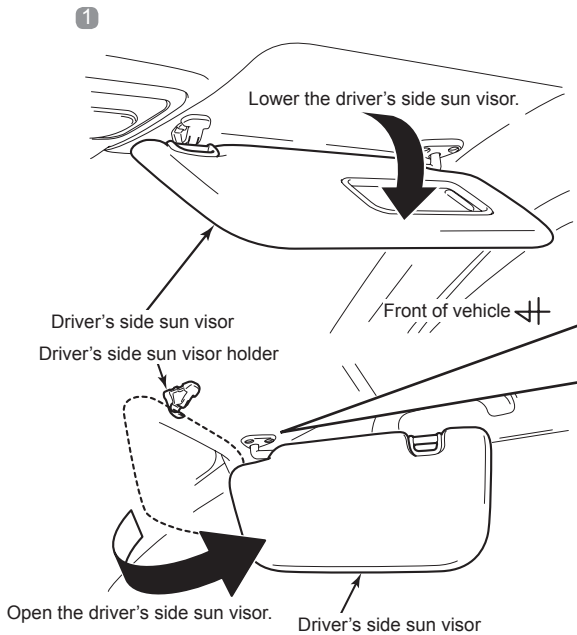


◆Installing the microphone

👉Tip

- Install the microphone and the microphone wire where they will not be obstacles while driving.
- Do not install the microphone in places where it will prevent vehicle switches from being operated or cause any other obstruction while driving.
- If installing the microphone and the microphone wire to a vehicle which is equipped with air bags, make absolutely sure to install them so that they will not obstruct air bag operation.

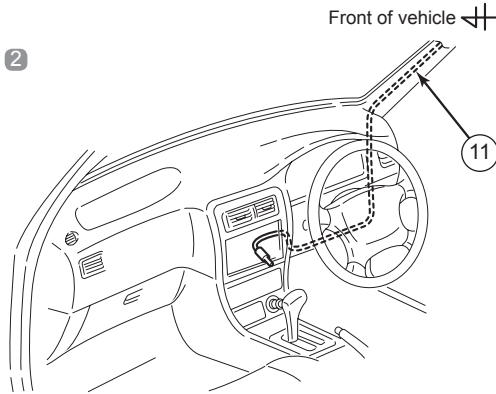
- 1 Install the microphone to a place such as a sun visor.
2 Route the microphone cable to the installation position for the main unit while securing the cable with tape.



👉Tip

- Face the microphone toward the rear of the vehicle, and extend it so that the microphone cable is as long as possible.
- Move the driver's side sun visor and check that the microphone cable does not get pulled and that the angle of the microphone can be adjusted.
- After routing the microphone cable, return the driver's side sun visor to its original position and face the microphone toward the rear of the vehicle.
- The volume of the conversation may drop depending on the direction of the sun visor.

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◆Installing the voice recognition ON/OFF switch

- 1 Install the voice recognition ON/OFF switch in a place where it will be easy to operate, such as on the right side of the cluster panel.

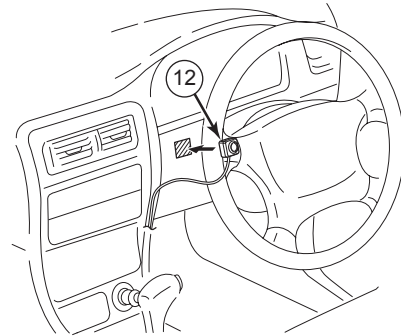
👉Tip

- Do not install it in a place where it may interfere with driving.
- Do not install in a place which is exposed to direct sunlight.

- 2 Route the switch cable to the installation position for the main unit while securing it with cable with tape.

👉Tip

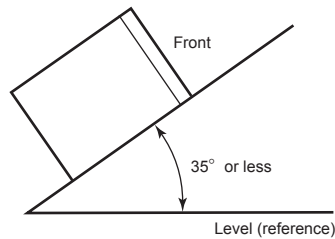
- When routing the cable, route it in places where it will not interfere with driving.



◆Installing the main unit

- 1 To maintain proper function, the main unit must be mounted at less than 35 degrees. If the angle is in excess of 35 degrees, CD/DVD skipping and improper CD/DVD ejection may occur.

1

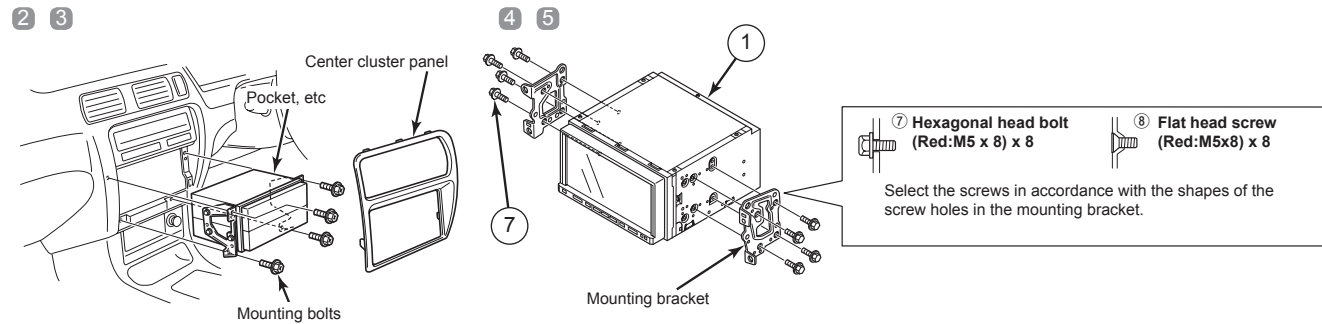


- 2 Remove the pocket and any other accessories from the center cluster to make room for the main unit.
- 3 Remove the mounting brackets for the pocket.
- 4 Attach the brackets to the main unit.
- 5 Install the main unit in the vehicle.



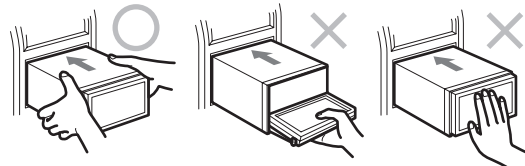
Tip

- Carefully bind any excess length of wire that is connected to the main unit and secure it to an area of empty space in the vehicle so that it does not dislodge or interfere with the main unit or vehicle-side equipment. If the wires are not handled correctly, operating problems or short-circuits may occur, and this may result in the danger of fire or other accidents.
- Connect all wires before installing the main unit.
- Be sure to use the supplied accessory mounting screws (Red: M5 x 8) as the mounting screws. If any other screws are used, they may damage the inside of the main unit.



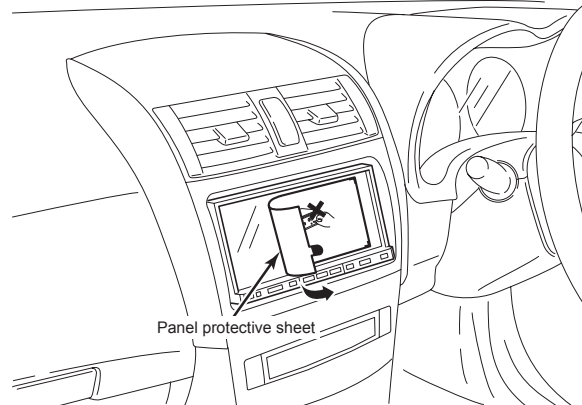
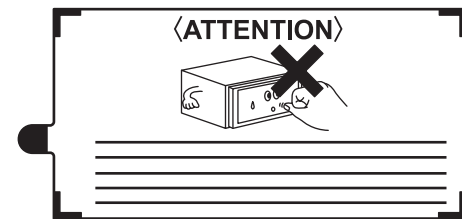
Tip

- Be careful not to press hard on the main unit display or the buttons when installing the main unit to the vehicle, otherwise the display and buttons may become damaged.



Tip

- Do not peel off this protective label before finishing installation and checking operations.



◆Connecting the vehicle speed pulse, parking brake and reverse wires

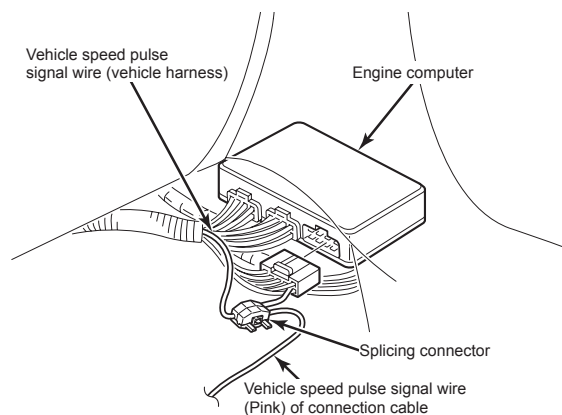
Connecting point for the vehicle speed pulse signal (example)



Tip

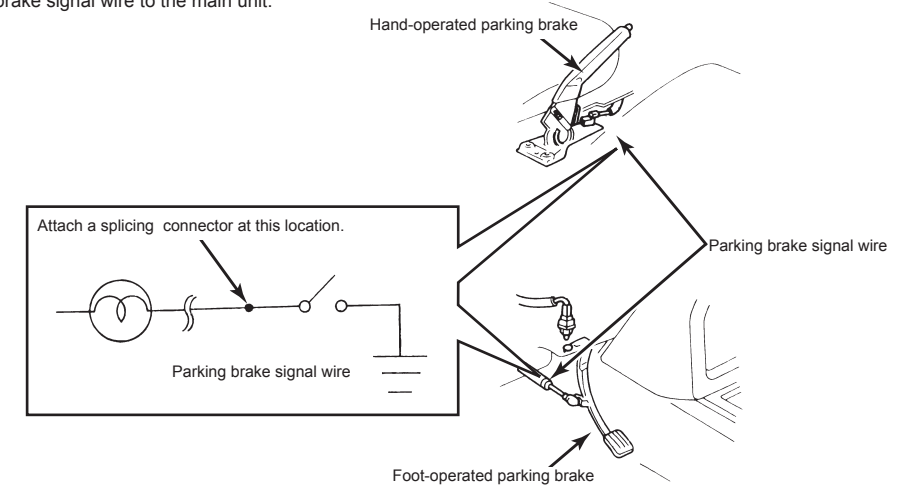
- Always be sure to connect the vehicle speed pulse, otherwise the measurement precision will be greatly reduced.

- 1 Use a splicing connector to connect the vehicle speed pulse signal wire (Pink) coming from the main unit to the vehicle speed pulse signal wire of the vehicle.
- 2 Route the vehicle speed pulse signal wire to the main unit.



Connecting point for the parking brake signal (example)

- 1 Use a splicing connector to connect the parking brake signal wire (Light Green) coming from the main unit to the parking brake signal wire of the vehicle.
- 2 Route the parking brake signal wire to the main unit.



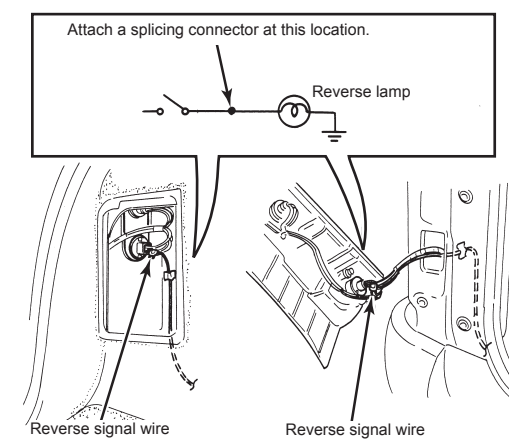
Connecting point for the reverse signal (example)



Tip

- Be sure to connect the reverse signal wire. If it is not connected, when reversing the vehicle, the position of the vehicle may be different to that displayed on the navigation screen.
- Use a circuit tester to confirm that a sensing voltage of 6V or higher is generated when the selector lever is in reverse.

- 1 Use a splicing connector to connect the reverse signal wire (Violet/White) coming from the main unit to the reverse signal wire of the vehicle.
- 2 Route the reverse signal wire to the main unit.



Notes on installation

⚠ Warning

- Check the speed pulse signal, parking brake signal and reverse signal carefully before making the connections. If the wires are incorrectly connected, accidents or problems with correct operation may result.
- The locations of the speed pulse signal wire, parking brake signal wire and reverse signal wire may vary depending on the vehicle model and grade. Ask the car dealer or your nearest ECLIPSE dealer for details.



◆Checking operation after installation

- 1 Insert the ignition key into the vehicle and start the engine.

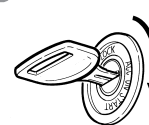


Tip

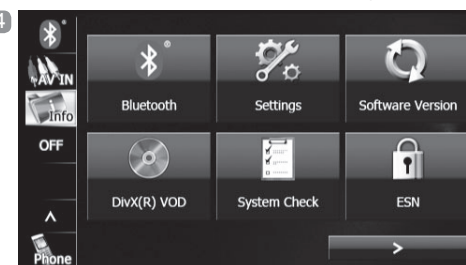
- Do not turn the ignition key to ACC OFF or operate the main unit until the navigation screen appears.
- Check that the shift position is correct and that the area around the vehicle is safe before starting the engine.

- 2 Press the  button to open the display, and then insert the map SD card into the main unit.
- 3 Press the  button to close the display.
 - After the program has finished loading, follow the directions on the screen to display the map screen.
- 4 Press the "AUDIO" button and then touch "INFO".
- 5 Touch "SYSTEM CHECK" and check the connection status for each signal.

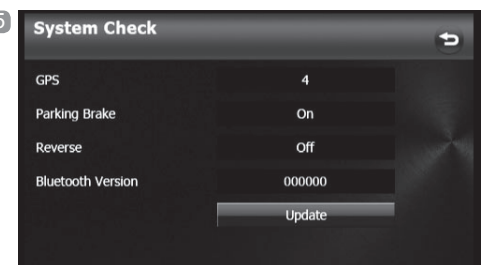
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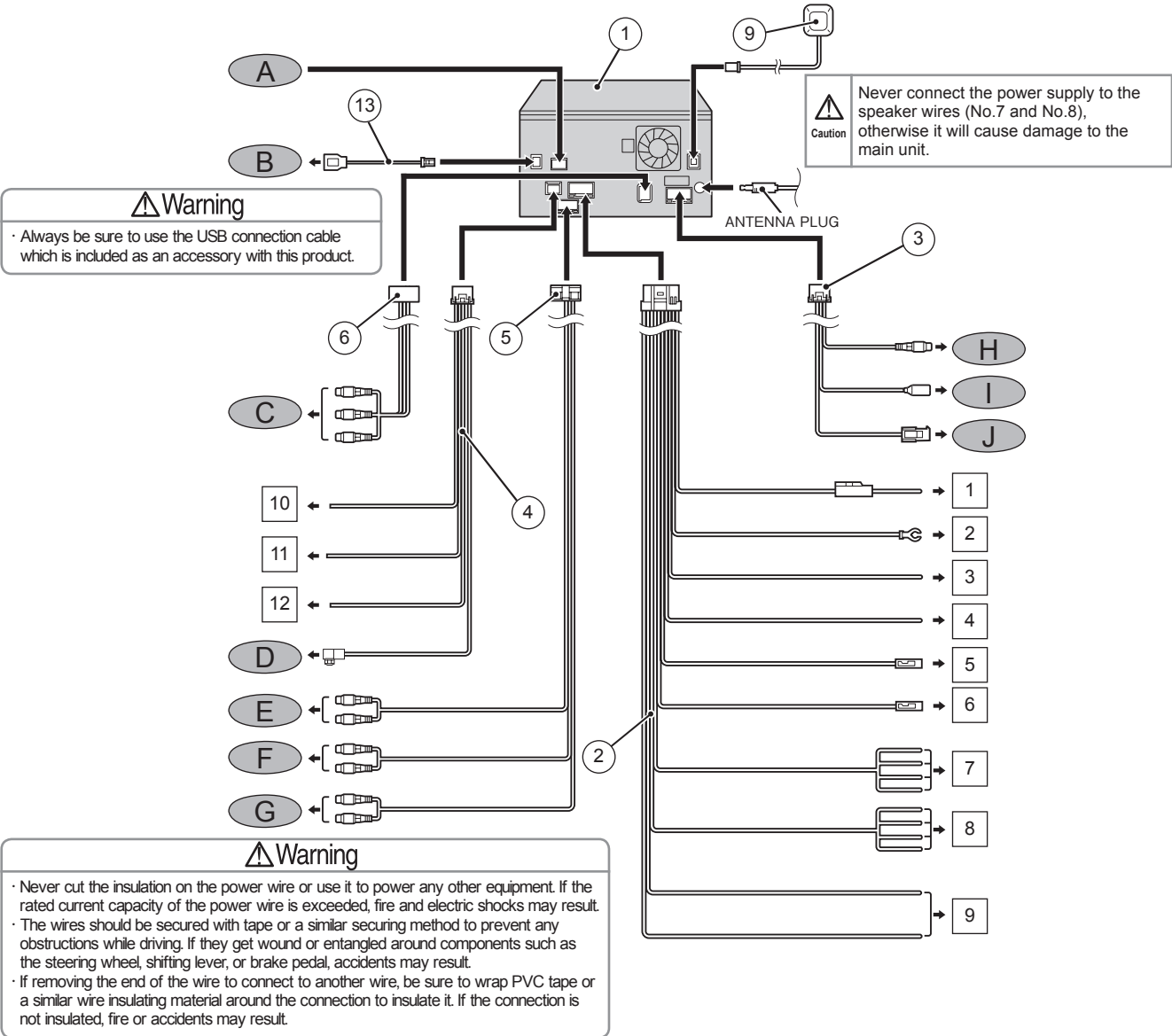
4



5



◆Name and functions of terminals



◆ Wire colors and connection points for connection wires (2, 3, 4, 5 and 6)

- 1 B+ (Yellow)**
Connect where power is constantly available, regardless of the ignition key's position.
- 2 Ground (Black)**
Connect where good body grounding is available.
- 3 ACC (Red)**
Connect where the power comes on when the ignition is in the ACC position.
- 4 Illumination power supply (Orange/White)**
Connect to where power comes on when the vehicle light switch is turned on.
- 5 Antenna power supply (Blue)**
Connect to the power antenna control terminal of the vehicle.
- 6 Remote turn-on (Blue/White)**
Connect to the control terminal for the external amplifier, etc.
- 7 Front speaker output wires**
Connect to the front speakers.
White: Left +
White/Black: Left -
Gray: Right +
Gray/Black: Right -
- 8 Rear speaker output wires**
Connect to the rear speakers.
Green: Left +
Green/Black: Left -
Violet: Right +
Violet/Black: Right -
- 9 Steering remote control terminals**
Connect to the vehicle steering remote control.
White/Blue: STR-SW1
Brown: STR-SW2

- 10 Vehicle speed pulse signal wire (Pink)**
Connect to the vehicle speed pulse signal terminal.
- 11 Parking brake signal wire (Light Green)**
Connect to the parking brake signal terminal.
- 12 Reverse signal wire (Violet/White)**
Connect the reverse signal output of the vehicle to this terminal.

- B USB connection terminal**
Connect to a USB device such as a flash drive, or to ECLIPSE Direct Cable for iPod (sold separately).
- C AV input terminals**
Connect to the output wire of external video equipment/device such as a VTR.
Yellow : Video signal
White : Audio (left) signal
Red : Audio (right) signal
※ If using the ECLIPSE Direct Cable for iPod (sold separately), connect the RCA terminals of the Direct Cable for iPod. As a result of doing this, it will not be possible to connect any other video equipment/device.
- D Rear view camera external input terminal (4P)**
Used with the ECLIPSE rear view camera (sold separately).
- E Line-out terminals (Non fader)**
Connect to the RCA input connectors of an equalizer, or to the RCA input connectors of a woofer amplifier.
- F Line-out terminals (Front)**
Connect to the RCA connector of an external amplifier.

- G Line-out terminals (Rear)**
Connect to the RCA connector of an external amplifier.
- H VTR output terminal**
Connect to the monitor with video input.
- I Microphone input terminal**
Connect to the accessory microphone (1).
- J Voice recognition ON/OFF switch connection terminal**
Connect to the accessory voice recognition ON/OFF switch (2).

Tip

"Made for iPod" and "Made for iPhone" mean that an electronic accessory has been designed to connect specifically to iPod or iPhone, respectively, and has been certified by the developer to meet Apple performance standards. Apple is not responsible for the operation of this device or its compliance with safety and regulatory standards. Please note that the use of this accessory with iPod or iPhone may affect wireless performance. iPhone, iPod, iPod classic, iPod nano, and iPod touch are trademarks of Apple Inc., registered in the U.S. and other countries. The Bluetooth® word mark and logos are registered trademarks of Bluetooth SIG, Inc., and any use of such marks by FUJITSU TEN LIMITED is under license. Other trademarks and trade names are those of their respective owners.

◆ Main unit connections

- A Not used (12P)**

◆System connection example

Tip

- Install and connect all of the peripheral units before connecting them to the main unit.
- Do not remove any of the protective caps (RCA, etc.) unless the connectors are in use.
- Be sure to wrap the connection wires with tape (PVC tape) to insulate them.
- Be sure to grip the connector's body. Rough tugging may result in broken wires or harnesses.

