

Component Procedures: Entertainment Systems

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Component Procedures: Entertainment Systems

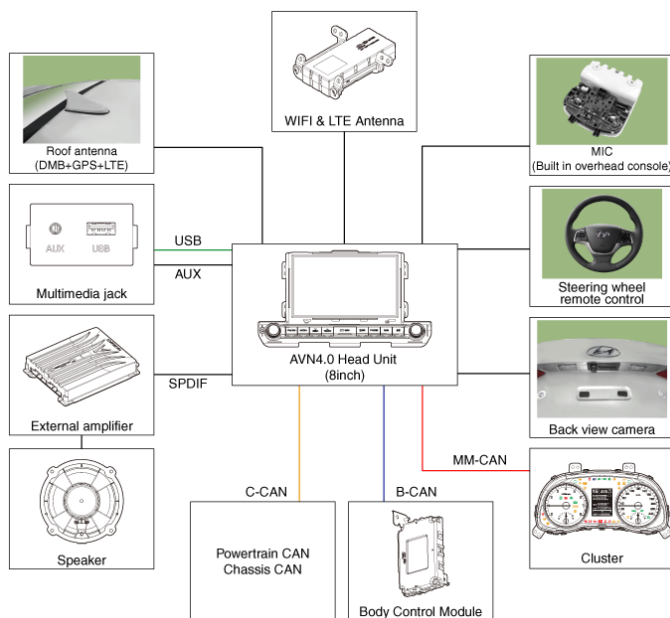
AVN System - Description and Operation (Article 44749)

- Description

AVN System

- Simplification of user interface : the multimedia and car information are displayed on the monitor.
- Networked electronic parts : Efficient information transmission through CAN communications.
- Up-to-date technologies integrated : Voice recognition : This function recognizes the user's voice commands to manipulate the system. The user can issue voice commands to operate AV system, Bluetooth phone and navigation and connect to Cubis call center. Bluetooth hands-free calling : This is compliant with the international wireless communication standards and uses bluetooth technology adopted in most currently launched mobile phone s. Once connected, the driver is automatically connected every time he/she gets in the car. USB connectivity : Outside music player devices such as USB memory stick or Walkman can be connected and played with the car speakers.
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System Block Diagram



- B-CAN : Body Controller Area Network
 - MM-CAN : Multi-Media Controller Area Network
- Limitations of The Navigation System

GPS Signal Reception State

- Tunnels
- Basement parking structures
- Underneath an overpass
- Roads within forested areas
- Areas near high rise buildings
- Roads within canyons

Vehicle Position Display

- If multipass errors occur due to reflections from buildings or related causes, the current position mark on the navigation may differ from the actual position of the vehicle.
- The position of the vehicle on the navigation may be different from the actual position if the vehicle is under the occur, driving for a short period of time will vehicle through map matching or GPS information (several minutes may be necessary in certain cases). When driving on a Y-shaped road with a narrow angle, the

current position may be displayed in the opposite direction. If the vehicle is loaded onto a car transport vehicle, the current position mark may be stalled on the last position prior to loading. When driving on a spiral-shaped road. When driving in mountain regions with sharp turns or sudden brakes. When entering a road after having been in an underground parking structure, building parking structure, or turnable with many rotations. When the tires have recently been replaced (Especially upon use of spare or studless tires) If the battery terminal is removed. When driving in city streets, the current position may be displayed on the opposite side or on an off-road position. When changing the zoom level from the maximum zoom in level to a different zoom level, the current position mark may be displayed on a different road. When driving in heavy traffic with frequent go - stops in traffic or intersections. When driving under slippery conditions, such as heavy sand, snow, etc. When driving with the tire chain in place. When using a tire with an incorrect size specification. When the tire pressure for the 4 tires are different. When the replacement tire is a worn or used tire (Especially studless tires having passed a 2nd seasons, etc.) When driving near high-rise buildings If a roof carrier has been installed When driving under high speeds or having calculated a long-distance route.

- When driving on a Y-shaped road with a narrow angle, the current position may be displayed in the opposite direction.

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- When the replacement tire is a worn or used tire (Especially studless tires having passed a 2nd seasons, etc.)

- When driving near high-rise buildings

- If a roof carrier has been installed

- When driving under high speeds or having calculated a long-distance route.

Route Guidance

- Guidance to go straight may be given while driving on a straight road.

- Guidance may not be given even when having turned at an intersection.

- There are certain intersections in which guidance may not occur.

- A route guidance signaling entrance into a no enter zone may occur (No enter zone, road under construction, etc.)

- Guidance may be given to a position removed from the actual destination if roads to reach the actual destination do not exist or are too narrow.

- Faulty voice guidance may be given if the vehicle breaks from the designated route (ex : if a turn is made at an intersection while the navigation provided guidance to go straight).

- Map Data may be missing or incorrect causing route guidance to not be given.

Route Re-calculation

- Guidance may be given to a position differing from the current position when turning at an intersection.

- Route recalculation may take a longer period of time when driving under high speeds.

- A route guidance signaling for a U-Turn in a No U-Turn location may occur.

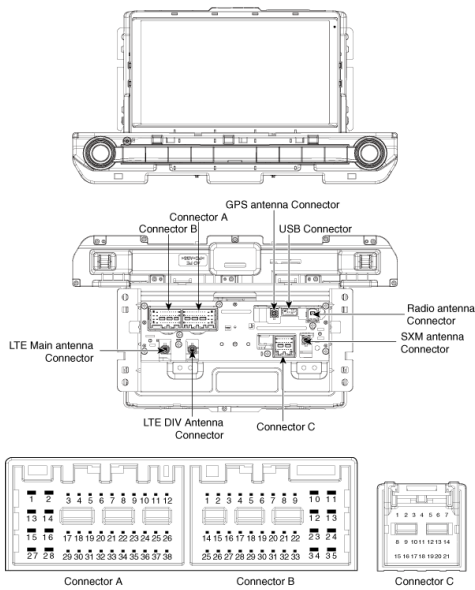
- A route guidance signaling entrance into a no enter zone may occur (No enter zone, road under construction, etc).

- Guidance may be given to a position removed from the actual destination do not exist or are too narrow.

- Faulty voice guidance may be given if the vehicle breaks from the designated route (ex : if a turn is made at an intersection while the navigation provided guidance to go straight)

AVN (Audio Video Navigation) Head Unit - Components and Components Location (Article 44750)

- Components



Connector Pin Information







No Connector A (Int AMP) Connector A (Ext AMP) Connector B Connector C

- 1 Rear left speaker (+) - - Body CAN (HI)
- 2 Rear left speaker (-) - MIC Signal (+) Chassis CAN (HI)
- 3 - AMP Navi Voice (+) - -
- 4 - AMP SPDIF (HI) - -
- 5 - - Antenna Powr -
- 6 Camera Power Camera Power ILL (+) -
- 7 Camera Video Camera Video MM CAN (HI) -
- 8 - - - Body CAN (LOW)
- 9 - - - Chassis CAN (LOW)
- 10 AUX Audio (RH) AUX Audio (RH) B+ -
- 11 AUX Detect AUX Detect B+ -
- 12 Steering wheel remote Steering wheel remote GND -
- 13 Front lift speaker (+) - GND -
- 14 Front lift speaker (-) - MIC GND -
- 15 Front right speaker (-) - MIC Signal (-) -
- 16 Front right speaker (+) - - MTS Key
- 17 - AMP Navi Voice (-) - -
- 18 - AMP SPDIF (LOW) - -
- 19 - AMP SPDIF GND - -
- 20 Camera Power GND Camera Power GND MM CAN (LOW) -
- 21 Camera Video GND Camera Video GND - -
- 22 - - ACC
- 23 - - -
- 24 AUX Audio (LH) AUX Audio (LH) -
- 25 AUX Audio GDN AUX Audio GDN -
- 26 Steering wheel remote GND Steering wheel remote GND -
- 27 Rear right speaker (-) - -
- 28 Rear right speaker (+) - -
- 29 - - -
- 30 - - -
- 31 - - -
- 32 - - -
- 33 - - IGN 1
- 34 - - -
- 35 - - -

36 - -

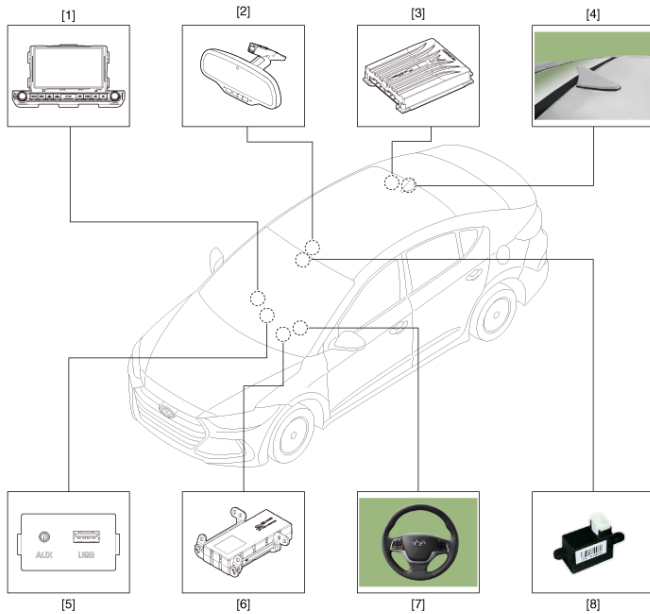
37 - -

38 Speed Speed

	PIN	Description	PIN	Description
	1	USB VOD 5V	3	USB (+)
	2	USB (-)	4	USB GND
	PIN	Description	PIN	Description
	1	Signal	2	GND
	PIN	Description	PIN	Description
	1	FM1/AM	2	-
	PIN	Description	PIN	Description
	1	Signal	2	Ground
	PIN	Description	PIN	Description
	1	Signal	2	Ground
	PIN	Description	PIN	Description
	1	Signal	2	Ground

AVN System - Components and Components Location (Article 44748)

- Component Location



1. AVN4.0 head unit (8inch) 2. Bluemlink keyboard [4.0 (8inch)] 3. External amplifier [4.0 (8inch)] 4. Roof antenna 5. Multimedia jack 6. Wif & LTE Antenna [4.0 (8inch)] 7. Steering wheel remote control 8. Hands-free mic (Built-in overhead console)

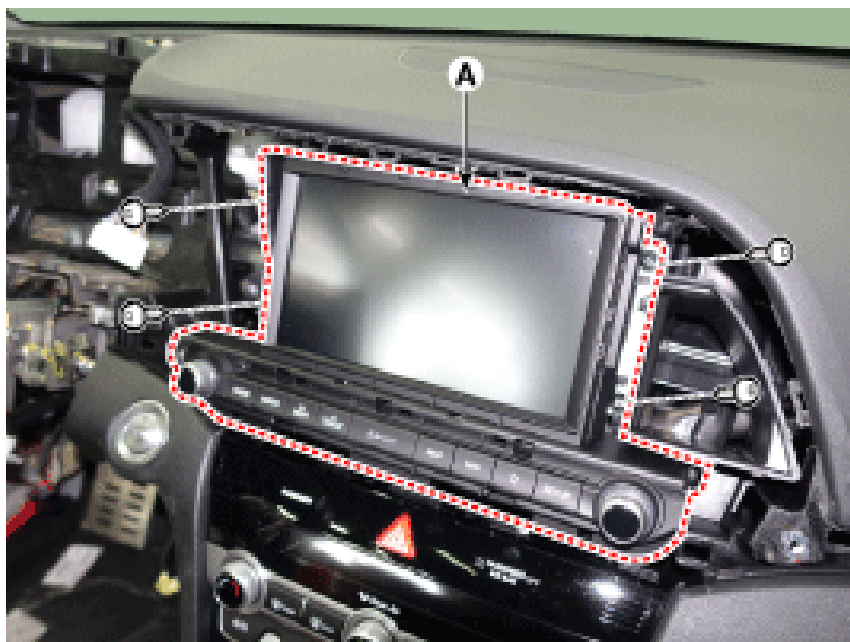
AVN (Audio Video Navigation) Head Unit - Repair Procedures (Article 44752)

- Removal

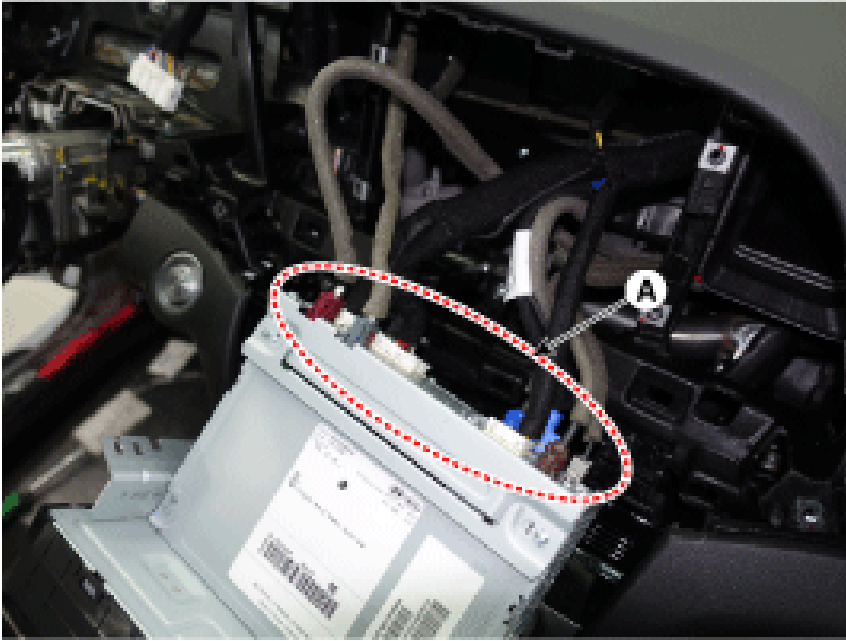
Take care not to scratch the cluster fascia panel and related parts. Eject all the disc before removing the AVN head unit to prevent damaging the DVD player's load mechanism. Wrap the protective tape on the tool to disassemble with the screwdriver or remover. Use caution in keeping and handling during disassembling/assembling because it is easily contaminated with lubricant and oil.

⚠ CAUTION

- Take care not to scratch the cluster fascia panel and related parts.
- Eject all the disc before removing the AVN head unit to prevent damaging the DVD player's load mechanism.
- Wrap the protective tape on the tool to disassemble with the screwdriver or remover.
- Use caution in keeping and handling during disassembling/assembling because it is easily contaminated with lubricant and oil.
- Disconnect the negative (-) battery terminal.
- Remove the center fascia panel. (Refer to Body - "Center Fascia Panel")
- Remove the AVN head unit (A) after loosening the mounting bolts.



- Remove the AVN head unit connectors and cables (A). If DVD does not eject, don't try to remove it. The DVD player may get damaged. Contact the nearest dealer for assistance.



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- If DVD does not eject, don't try to remove it.
- The DVD player may get damaged.
- Contact the nearest dealer for assistance.
- Installation
- Install the AVN head unit after connecting the AVN head unit connectors and cable.
- Install the center fascia panel.
- Connect the negative (-) battery terminal. Make sure that the cables and connectors are plugged in properly. Check the AVN system.
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- Make sure that the cables and connectors are plugged in properly.
- Check the AVN system.

All New Technical Service Bulletins (itype_432)

Tsbs

- SERVICE GUIDE FOR USB MULTI-TERMINAL DIAGNOSIS (24-BE-006H, 2024/06/13)

All Technical Service Bulletins (itype_100)

Tsbs

- SERVICE GUIDE FOR USB MULTI-TERMINAL DIAGNOSIS (24-BE-006H, 2024/06/13)
- USB MULTI-BOX DIAGNOSTIC GUIDELINES (20-BE-001H, 2020/01/15)

OEM Policies and Procedures (itype_120)

Tsbs

- USB MULTI-BOX DIAGNOSTIC GUIDELINES (20-BE-001H, 2020/01/15)