

SECTION **AV**

AUDIO-VISUAL SYSTEM

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AV

PRECAUTION [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

PRECAUTION

PF0:00011

Precautions for Supplemental Restraint System (SRS) “AIR BAG” and “SEAT BELT PRE-TENSIONER”

NKS00485

The Supplemental Restraint System such as “AIR BAG” and “SEAT BELT PRE-TENSIONER”, used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. This system includes seat belt switch inputs and dual stage front air bag modules. The SRS system uses the seat belt switches to determine the front air bag deployment, and may only deploy one front air bag, depending on the severity of a collision and whether the front occupants are belted or unbelted. Information necessary to service the system safely is included in the SRS and SB section of this Service Manual.

WARNING:

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the SRS section.
- Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.

Precautions for Trouble Diagnosis AV COMMUNICATION SYSTEM

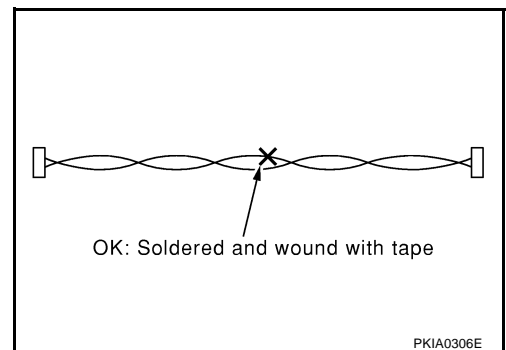
NKS00486

- Do not apply voltage of 7.0 V or higher to the measurement terminals.
- Use the tester with its open terminal voltage being 7.0 V or less.
- Be sure to turn ignition switch OFF and disconnect the battery cable from the negative terminal before checking the circuit.

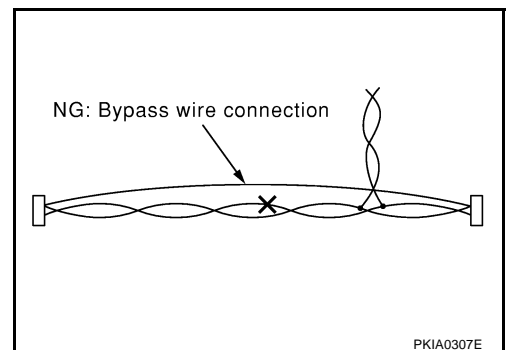
Precautions for Harness Repair AV COMMUNICATION SYSTEM

NKS00487

- Solder the repaired parts, and wrap with tape. [Frays of twisted line must be within 110 mm (4.33 in).]



- Do not perform bypass wire connections for the repair parts. (The spliced wire will become separated and the characteristics of twisted line will be lost.)



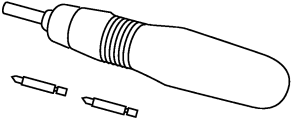
**PREPARATION
[WITHOUT MOBILE ENTERTAINMENT SYSTEM]**

PREPARATION

PFP:00002

Commercial Service Tools

NKS00488

| Tool name | Description |
|--|---------------------------------|
| <p>Power tool</p>  <p>PBIC0191E</p> | <p>Loosening bolts and nuts</p> |

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AV

SYSTEM DESCRIPTION

[WITHOUT MOBILE ENTERTAINMENT SYSTEM]

SYSTEM DESCRIPTION

PFP:00000

System Functions

NKS00489

Here is an example of functions. For details, refer to the owner's manual or navigation system owner's manual.

AUDIO

Speed Sensitive Volume (for BASE System)

- Volume level of this system goes up and down automatically in proportion to the vehicle speed. And the control level can be selected by the customer.
- The audio unit inputs the vehicle signal that is sent from unified meter and A/C amp via CAN communication through AV (NAVI) control unit.

Precision Phased Audio (for BASE System)

- It plays back the sound using the woofer (ultra-low bass and clear midrange sound) and reproduces the sound with presence.
- When the conventional BASS/TREBLE adjustment is a maximum, the sounds might be unclear because the volume of midrange sound also rises together with the bass and treble. The precision phased audio can emphasize ultra-low bass and ultra-high treble without changing the midrange sound by digital processing using DSP.

NOTE:

When the radio is played, the noise may increase more than the presence due to the characteristics of broadcasting waves. Therefore, the amplification rate while playing the radio is controlled lower than the rate while playing CD.

AudioPilot® (for BOSE System)

AudioPilot® is the sound improving system that picks up any noises and the sound of music coming into the vehicle by a microphone under the steering, and that the BOSE amp revises the frequency feature of music at real time in response to the frequency feature of the noise while driving and listening to music.

- If low frequency area noise from vehicle is loud, it adjusts low frequency element of music to be bigger than vehicle noise.
- If high frequency area noise from vehicle is loud, it adjusts all frequency element of music to be bigger than vehicle noise.

Centerpoint® (for BOSE Surround 5.1ch System)

CD and 2.0ch DVD stereo sound played at audio unit and DVD player are subjected to signal processing in BOSE amp. It can play the surround sound with presence.

VEHICLE INFORMATION SYSTEM

- The status of audio, climate control system, fuel consumption, and navigation system (if equipped) are displayed.
- AV (NAVI) control unit receives the data signal from ECM, unified meter and A/C amp and low tire pressure warning control unit via CAN communication. It calculates the values of fuel economy, tire pressure, and trip computer from the received information and displays them.

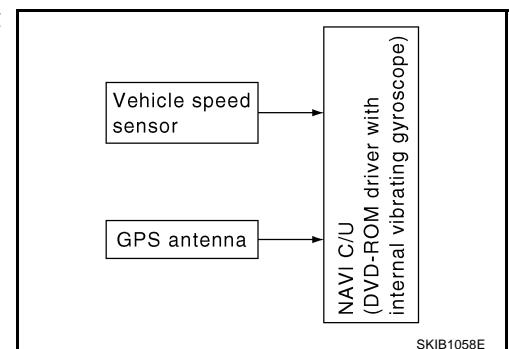
NAVIGATION SYSTEM

Location Detection Principle

The navigation system periodically calculates the vehicle's current position according to the following three signals:

- Travel distance of the vehicle as determined by the vehicle speed sensor
- Turning angle of the vehicle as determined by the gyroscope (angular velocity sensor)
- Direction of vehicle travel as determined by the GPS antenna (GPS information)

The current position of the vehicle is then identified by comparing the calculated vehicle position with map data read from the map DVD-ROM, which is stored in the DVD-ROM drive (map-matching), and



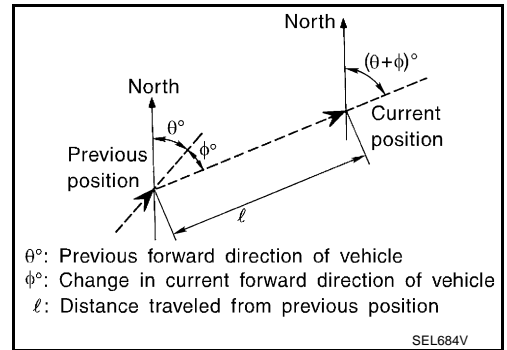
SYSTEM DESCRIPTION

[WITHOUT MOBILE ENTERTAINMENT SYSTEM]

indicated on the screen as a vehicle mark. More accurate data is judged and used by comparing vehicle position detection results found by the GPS with the result by map-matching.

The current vehicle position will be calculated by detecting the distance the vehicle moved from the previous calculation point and its direction.

- **Travel distance**
Travel distance calculations are based on the vehicle speed sensor input signal. Therefore, the calculation may become incorrect as the tires wear down. To prevent this, an automatic distance correction function has been adopted.
- **Travel direction**
Change in the travel direction of the vehicle is calculated by a gyroscope (angular velocity sensor) and a GPS antenna (GPS information). They have both advantages and disadvantages.



| Type | Advantage | Disadvantage |
|-------------------------------------|--|---|
| Gyroscope (angular velocity sensor) | Can detect the vehicle's turning angle quite accurately. | Direction errors may accumulate when vehicle is driven for long distances without stopping. |
| GPS antenna (GPS information) | Can detect the vehicle's travel direction (North/South/East/West). | Correct direction cannot be detected when vehicle speed is low. |

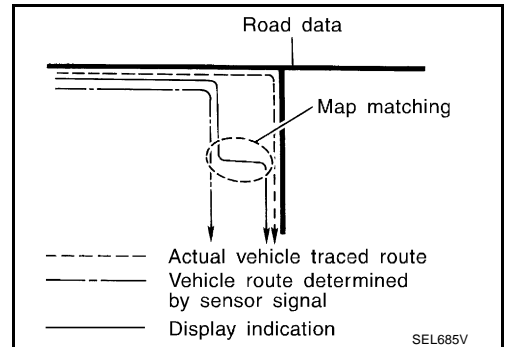
More accurate traveling direction is detected because priorities are set for the signals from these two devices according to the situation.

Map-Matching

Map-matching compares a current location detected by the method in the "Location Detection Principle" with a road map data from Map DVD-ROM stored in DVD-ROM drive.

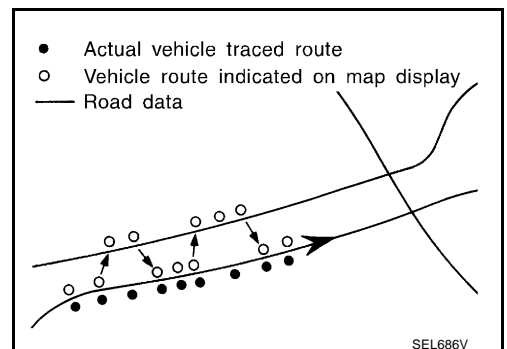
NOTE:

The road map data is based on data stored in the map DVD-ROM.



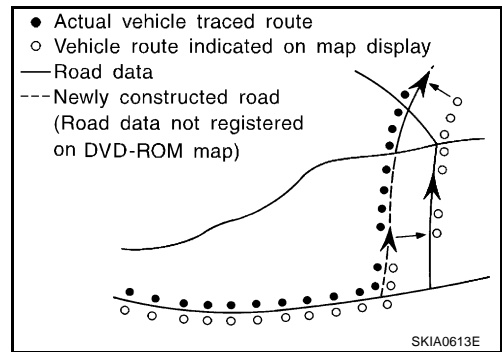
The vehicle position may not be corrected under the following circumstances and after driving for a certain time when GPS information is difficult to receive. In this case, the vehicle mark on the display must be corrected manually.

- In map-matching, alternative routes to reach the destination will be shown and prioritized, after the road on which the vehicle is currently driven has been judged and the vehicle mark has been repositioned.
If there is an error in distance and/or direction, alternative routes will be shown in different order of priority, and the incorrect road can be avoided.
If two roads are running in parallel, they are of the same priority. Therefore, the vehicle mark may appear on either of them alternately, depending on maneuvering of the steering wheel and configuration of the road.



SYSTEM DESCRIPTION [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

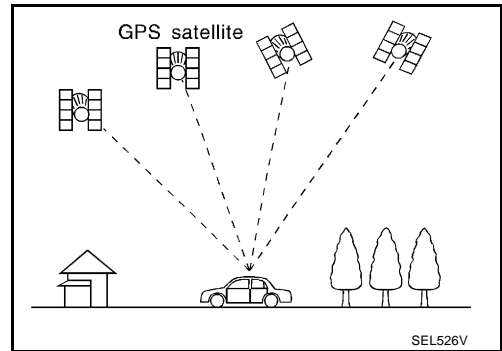
- Map-matching does not function correctly when a road on which the vehicle is driving is new and not recorded in the map DVD-ROM, or when road pattern stored in the map data and the actual road pattern are different due to repair. When driving on a road not present in the map, the map-matching function may find another road and position the vehicle mark on it. Then, when the correct road is detected, the vehicle mark may change to it.
- Effective range for comparing the vehicle position and travel direction calculated by the distance and direction with the road data read from the map DVD-ROM is limited. Therefore, when there is an excessive gap between current vehicle position and the position on the map, correction by map-matching is not possible.



GPS (Global Positioning System)

GPS (Global Positioning System) was developed for and is controlled by the US Department of Defense. The system utilizes GPS satellites (NAVSTAR), sending out radio waves while flying on an orbit around the earth at an altitude of approximately 21,000 km (13,100 miles).

The GPS receiver calculates the vehicle's position in three dimensions (latitude/longitude/altitude) according to the time lag of the radio waves received from four or more GPS satellites (three-dimensional positioning). If radio waves were received only from three GPS satellites, the GPS receiver calculates the vehicle's position in two dimensions (latitude/longitude), utilizing the altitude data calculated previously with radio waves from four or more GPS satellites (two-dimensional positioning).



Position correction by GPS is not available while the vehicle is stopped.

Accuracy of GPS will deteriorate under the following conditions:

- In two-dimensional positioning, GPS accuracy will deteriorate when altitude of the vehicle position changes.
- The accuracy can be even lower depending on the arrangement of the GPS satellites utilized for the positioning.
- Position detection is not possible when vehicle is in an area where radio waves from the GPS satellite do not reach, such as in a tunnel, parking lot in a building, and under an elevated highway. Radio waves from the GPS satellites may not be received when some object is located over the GPS antenna.

NOTE:

- Even a high-precision three dimensional positioning, the detection result has an error about 10 m (30 ft).
- Because the signals of GPS satellite is controlled by the Tracking and Control Center in the United States, the accuracy may be degraded lower intentionally or the radio waves may stop.

HANDS-FREE PHONE

- AV (NAVI) control unit has Bluetooth module. It can perform wireless hands-free telephone calls using a cellular phone in vehicle compartment.
- 5 or more portable phones can be registered into the AV (NAVI) control unit.

REAR VIEW MONITOR

- The small CCD camera is equipped into the rear end of the vehicle. The rear view monitor that displays the area behind the vehicle while backing up is equipped.
- Guiding lines indicating side and rear clearances are provided in the rear view monitor image, which allows the driver to more easily judge distances between the vehicle and objects in the display. The possible route lines that indicate the possible route according to the steering angle are provided to help backing up when parking.
- Image quality of the rear view image and of the navigation screen can be adjusted separately.

SYSTEM DESCRIPTION

[WITHOUT MOBILE ENTERTAINMENT SYSTEM]

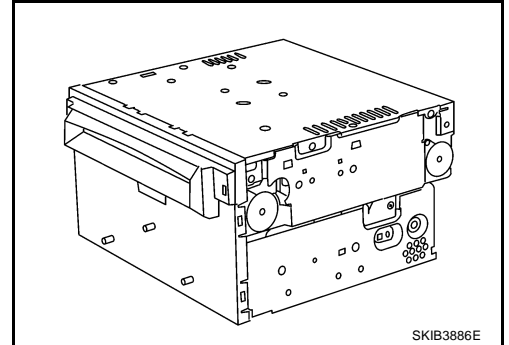
NKS0048A

Component Description

AUDIO UNIT

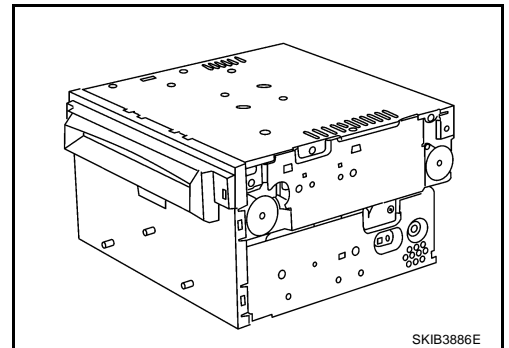
Base System

- It receives the TEL voice signal and voice guidance signal from AV (NAVI) control unit and output them to the front speaker.
- When the TEL voice and voice guidance is output, it controls the volume of each speaker.



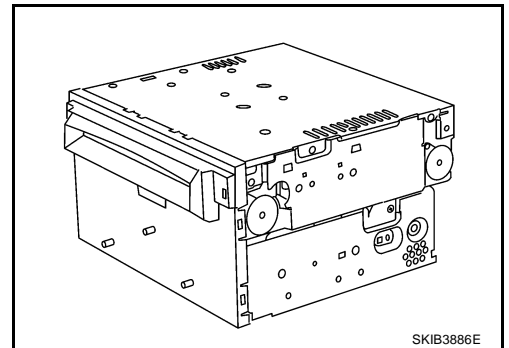
BOSE 2ch System

It receives the TEL voice signal from AV (NAVI) control unit and output it to the BOSE amp.



BOSE Surround 5.1ch System

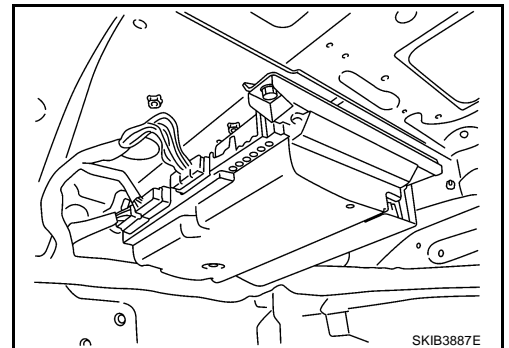
- It receives the TEL voice signal from AV (NAVI) control unit and output it to the BOSE amp.
- DVD player receives the received AUX sound and the downmix sound of DVD player, and then sends them to the BOSE amp.



BOSE AMP

BOSE 2ch System

- It amplifies the sound signal from the audio unit and output it to each speaker.
- It receives the voice guidance signal from AV (NAVI) control unit and output it to the front speaker.
- It controls sound volume of each speaker when outputting TEL voice and voice guidance.
- It subjects to AudioPilot[®] processing when receiving sound signal from microphone for AudioPilot[®].



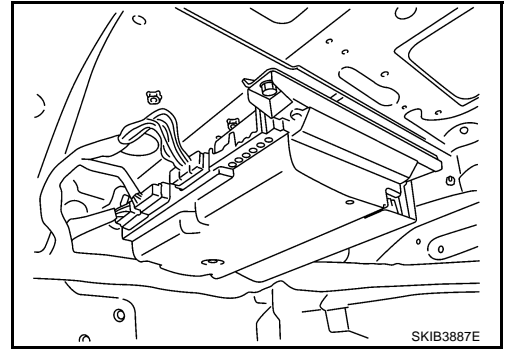
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SYSTEM DESCRIPTION

[WITHOUT MOBILE ENTERTAINMENT SYSTEM]

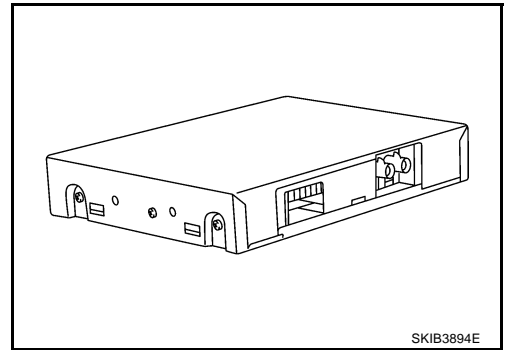
BOSE Surround 5.1ch System

- It amplifies the sound signal from the audio unit and the DVD sound signal from DVD player, and then output them to each speaker.
- It receives the voice guidance signal from AV (NAVI) control unit and output it to the front speaker.
- It controls sound volume of each speaker when outputting TEL voice and voice guidance.
- It subjects to AudioPilot[®] processing when receiving sound signal from microphone for AudioPilot[®].
- It subjects to Centerpoint[®] processing.



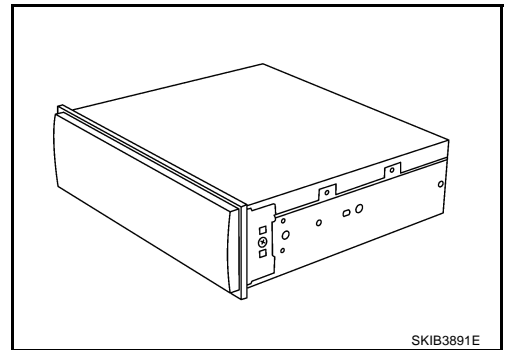
SATELLITE TUNER

- The satellite tuner is connected with the audio unit via communication line.
- It sends the received sound signal from the satellite radio antenna to the audio unit.



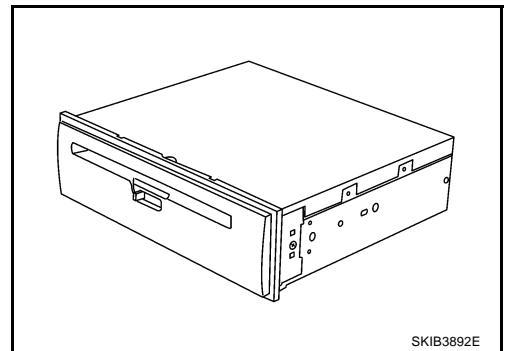
AV CONTROL UNIT (WITHOUT NAVI)

- It controls each unit of the system by the operation signal from the multifunction switch and sends the image signal of operating condition or vehicle information, etc. to the front display unit.
- It receives the TEL input voice or the input voice at voice control from the microphone. It receives the received TEL voice, and then sends it to the audio unit.
- It sends the voice guidance signal to BOSE amp (BOSE system) and audio unit (BASE system).



NAVI CONTROL UNIT (WITH NAVI)

- It controls each unit of the system by the operation signal from the multifunction switch and sends the image signal of operating condition or vehicle information, etc. to the front display unit.
- It receives the TEL input voice or the input voice at voice control from the microphone. It receives the received TEL voice, and then sends it to the audio unit.
- It sends the voice guidance signal to BOSE amp (BOSE system) and audio unit (BASE system).
- Signals are received from the gyro, the vehicle speed sensor, and the GPS antenna. Vehicle location is determined by combining this data with the data contained in the DVD-ROM map. Location information is shown on liquid crystal display panel.

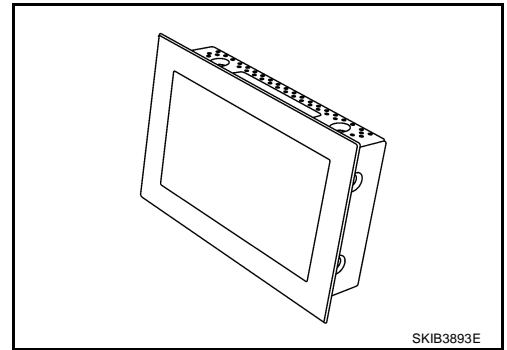


SYSTEM DESCRIPTION

[WITHOUT MOBILE ENTERTAINMENT SYSTEM]

FRONT DISPLAY UNIT

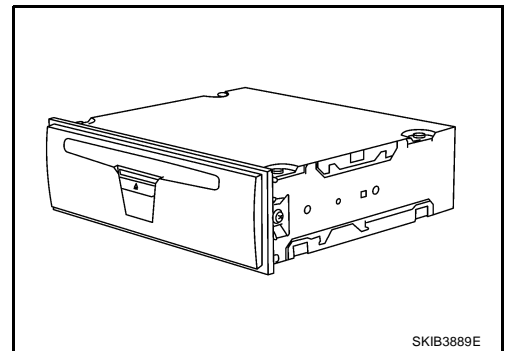
- It receives the RGB signal and the image signal of DVD player and camera control unit from AV (NAVI) control unit.
- The changing of image is controlled by the communication with AV (NAVI) control unit.



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DVD PLAYER

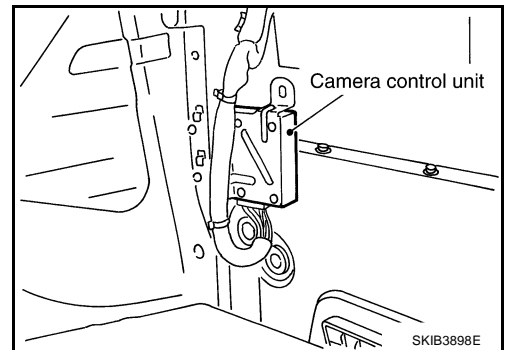
- It sends the sound signal to the BOSE amp and sends the image signal to the front display unit.
- When the downmix function is turned ON when playing DVD, the sound signal is sent to the audio unit.
- It inputs the sound signal from auxiliary input jacks, and then sends it to audio unit.



E
F
G
H

CAMERA CONTROL UNIT

- When the reverse signal is input, the power is supplied to the rear view camera, and then the image signal from the rear view camera is sent to the front display unit.
- The camera control unit displays the guiding lines and possible route lines, and then it synthesizes them to the camera image.



I
J
AV
L

CAN Communication System Description

CAN (Controller Area Network) is a serial communication line for real time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Many electronic control units are equipped onto a vehicle, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN H line, CAN L line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.

NKS0048B

CAN Communication Unit

Refer to [LAN-50, "CAN System Specification Chart"](#).

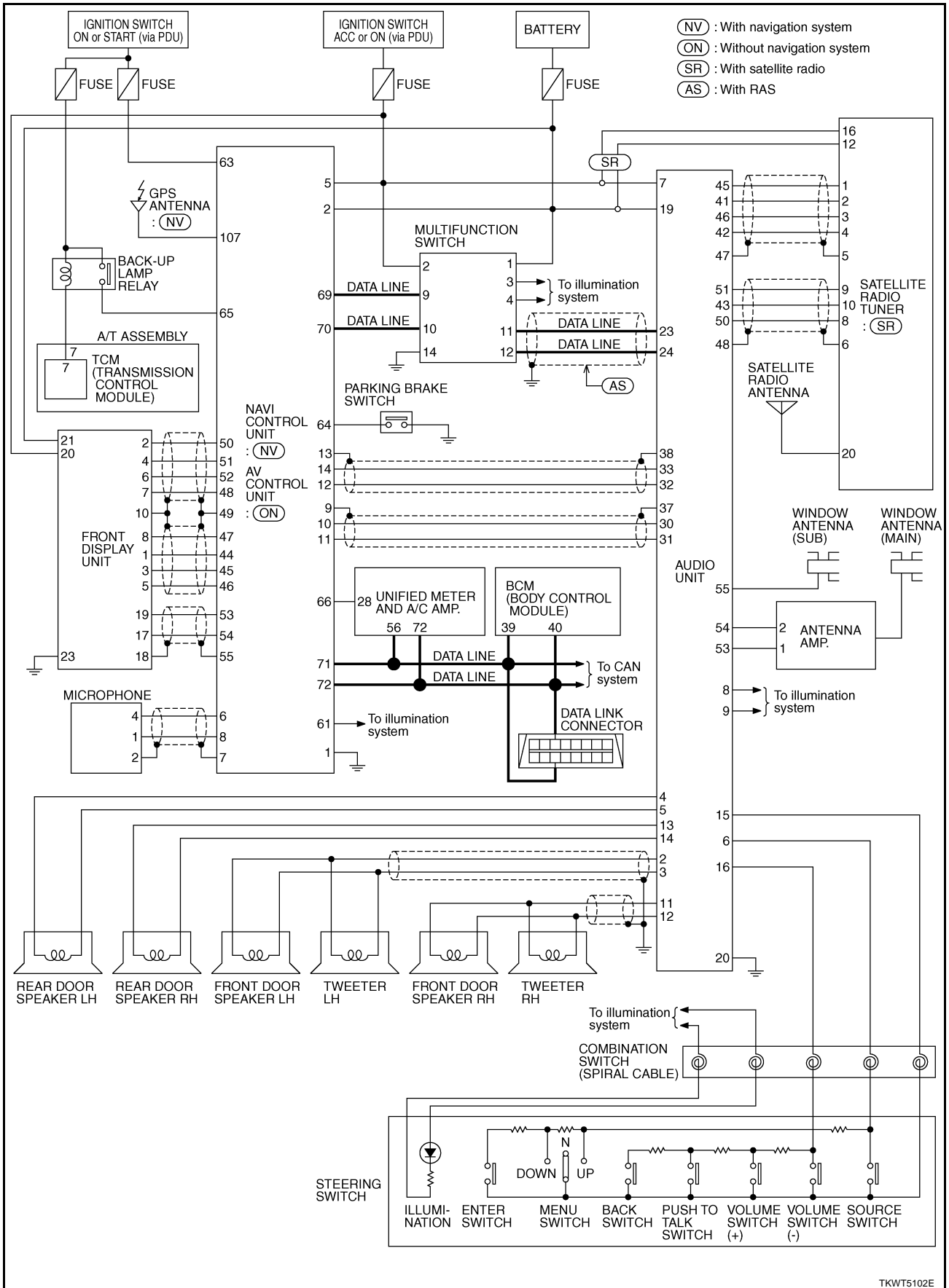
NKS0048C

M

SYSTEM DESCRIPTION [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

Schematic — Base Audio System —

NKS0048D



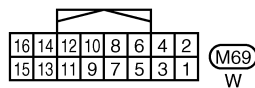
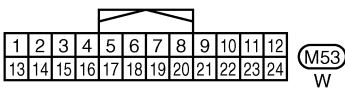
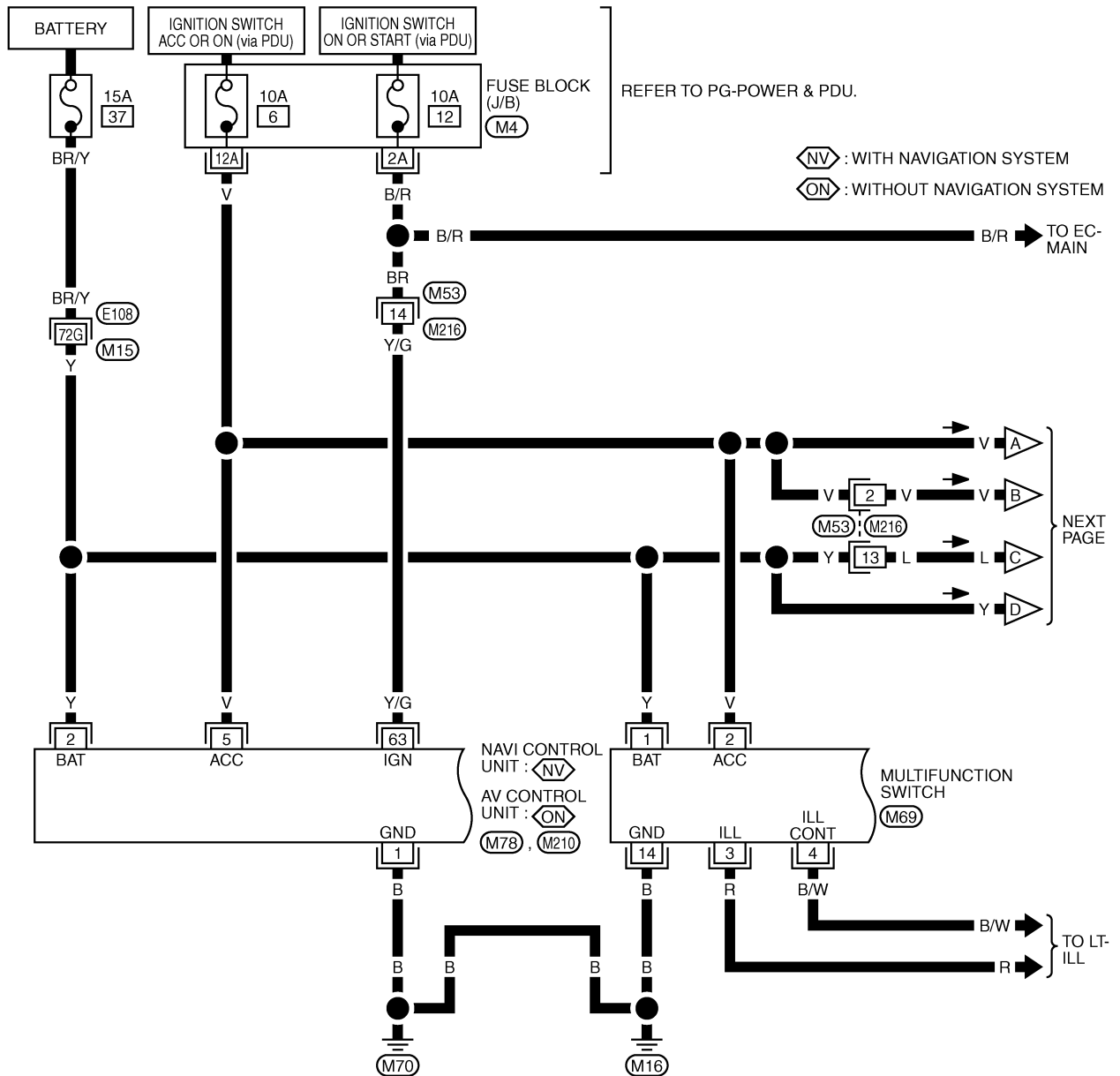
TKWT5102E

SYSTEM DESCRIPTION [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

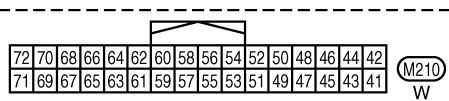
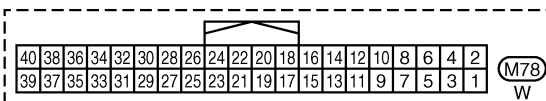
Wiring Diagram — AV — / Base Audio System

NKS0048E

AV-AV-01



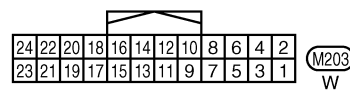
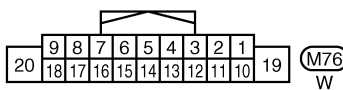
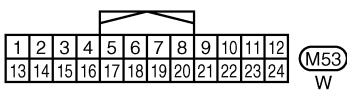
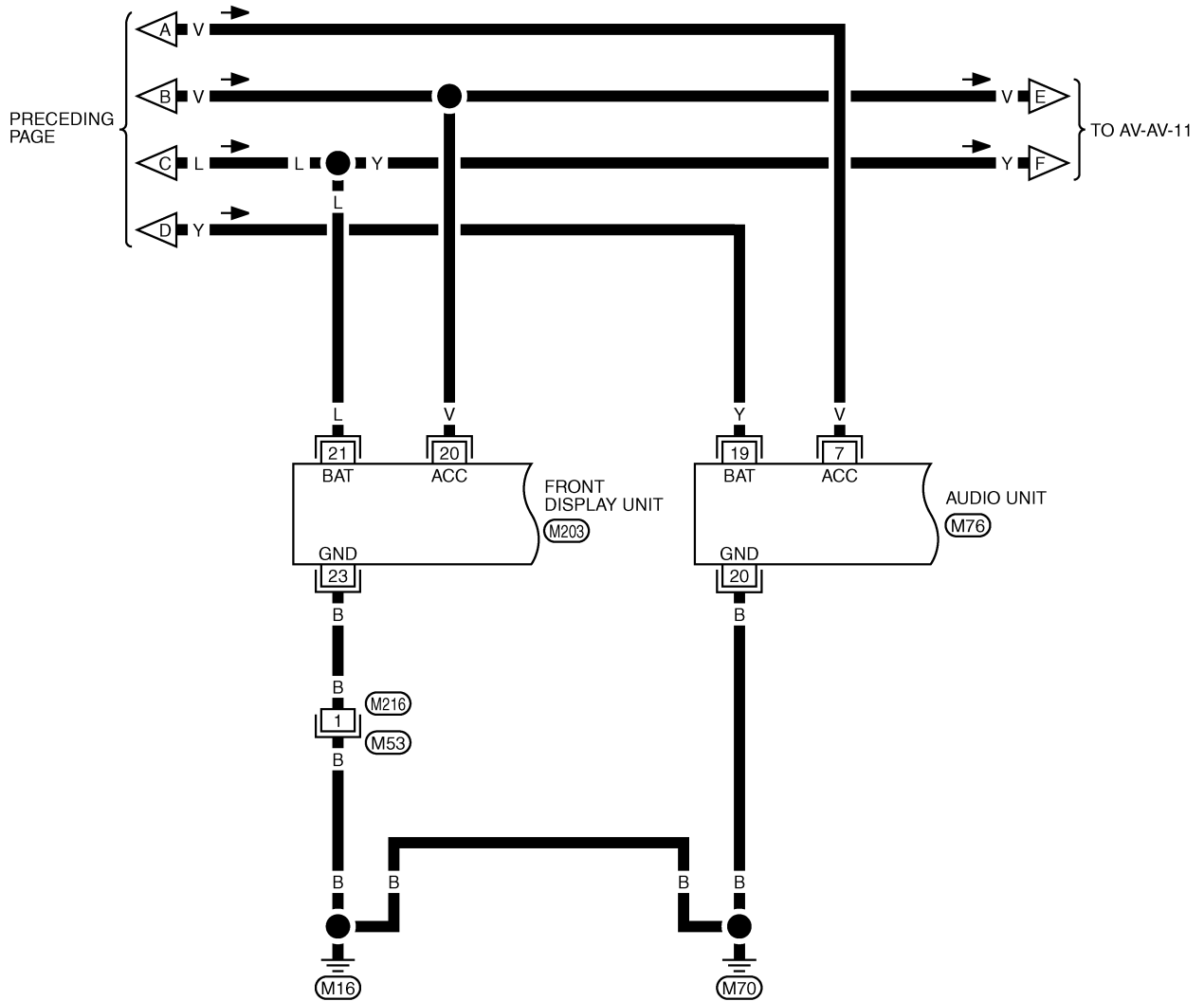
REFER TO THE FOLLOWING.
 (E108) -SUPER MULTIPLE JUNCTION (SMJ)
 (M4) -FUSE BLOCK-JUNCTION BOX (J/B)



AV

SYSTEM DESCRIPTION [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

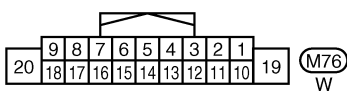
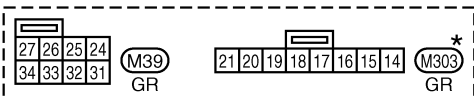
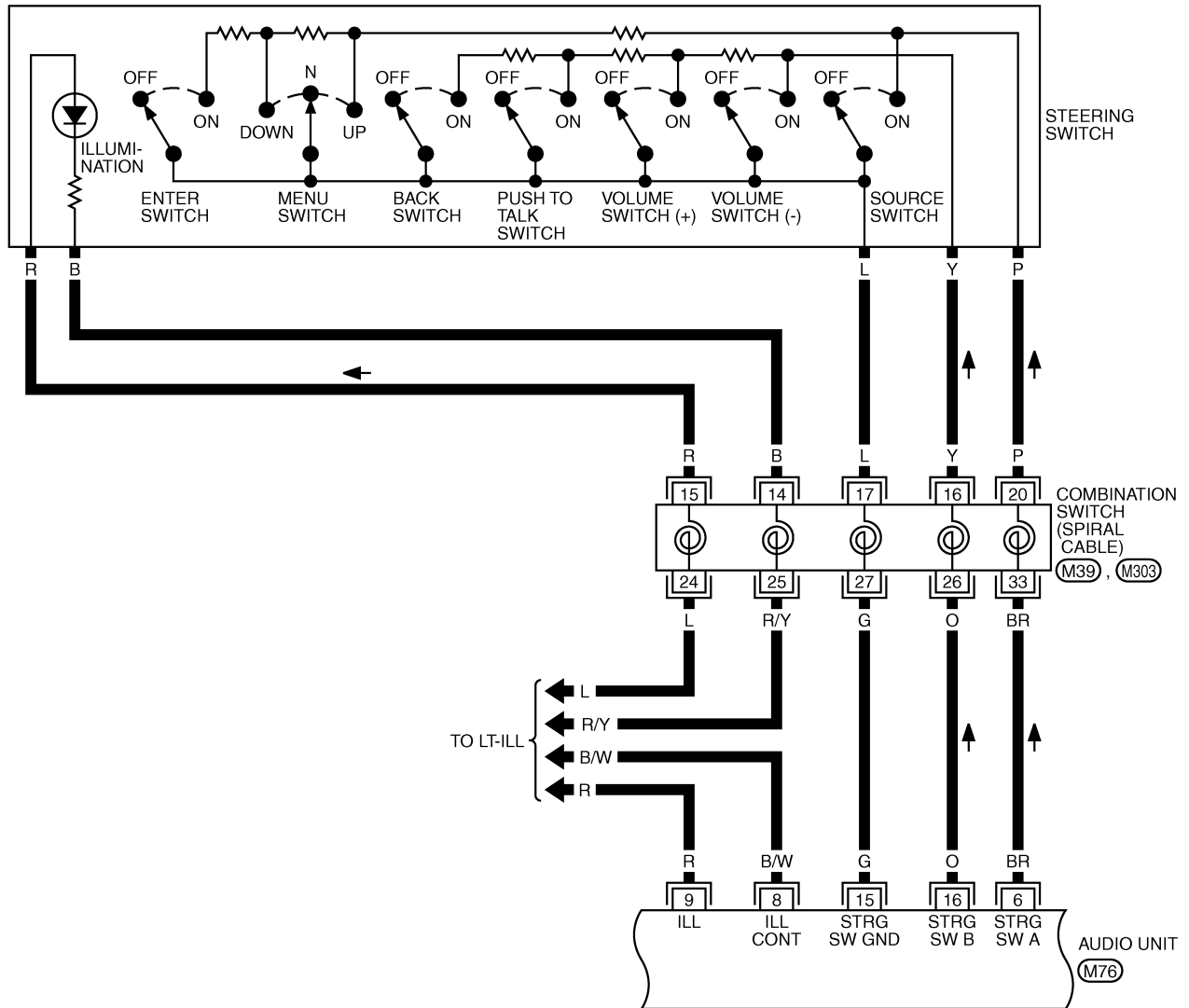
AV-AV-02



TKWT3492E

SYSTEM DESCRIPTION [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

AV-AV-03

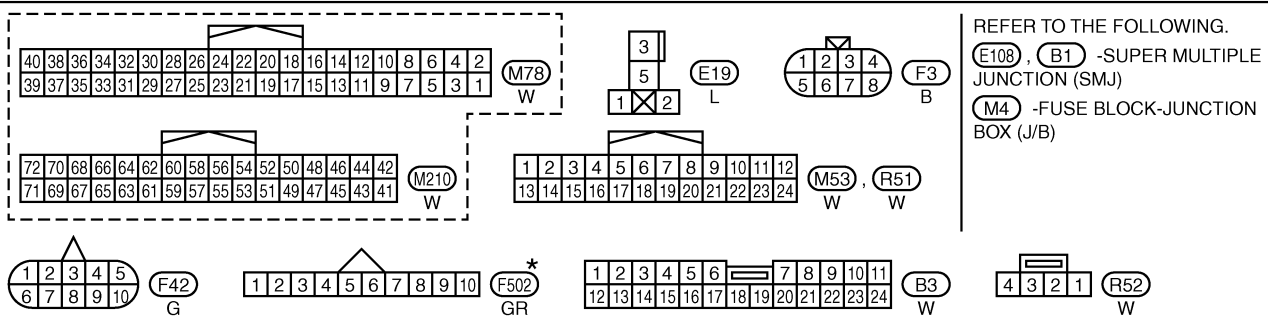
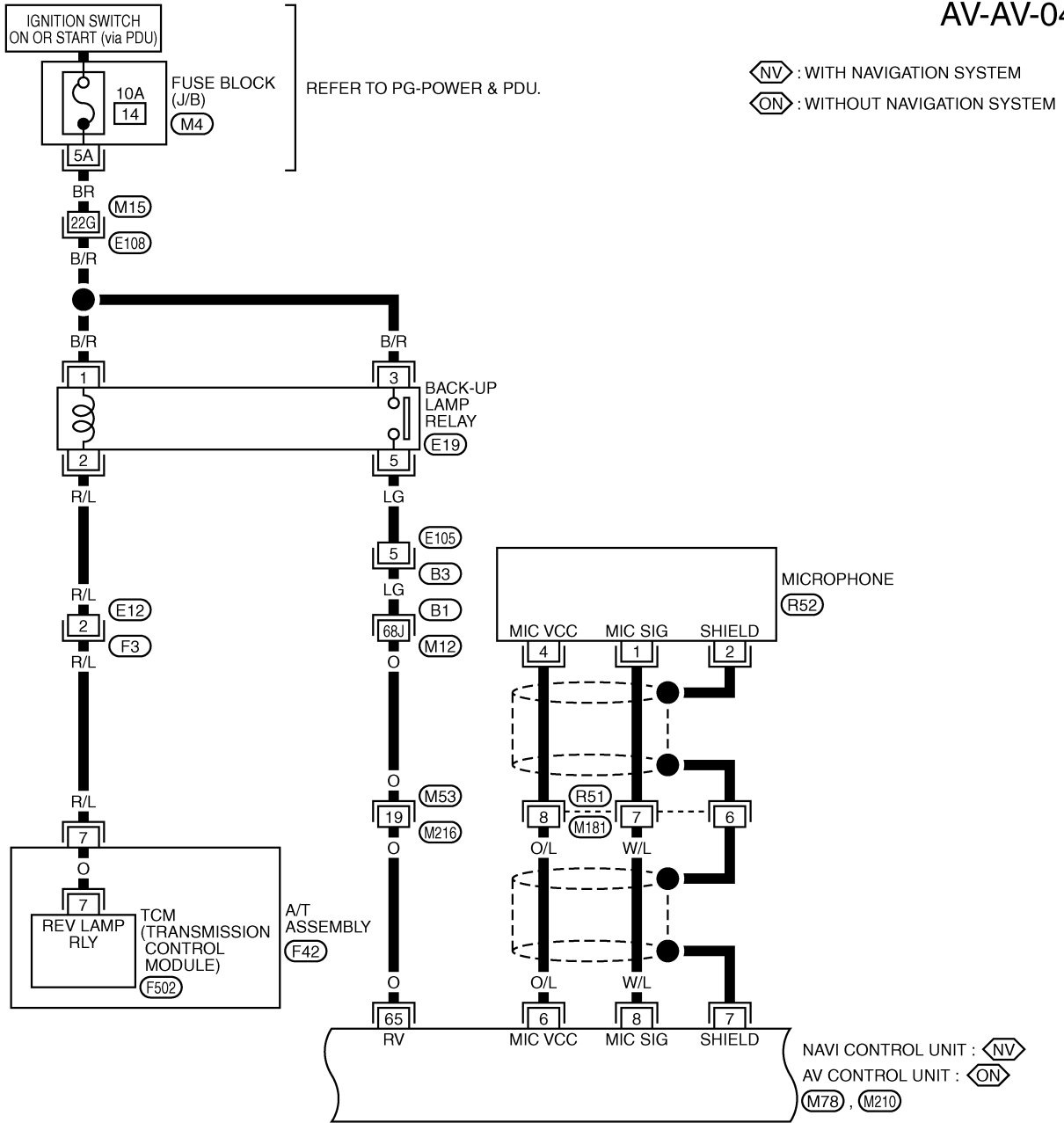


*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

TKWT5308E

SYSTEM DESCRIPTION [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

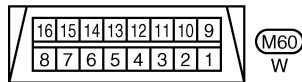
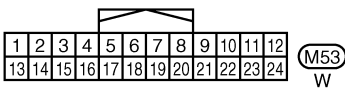
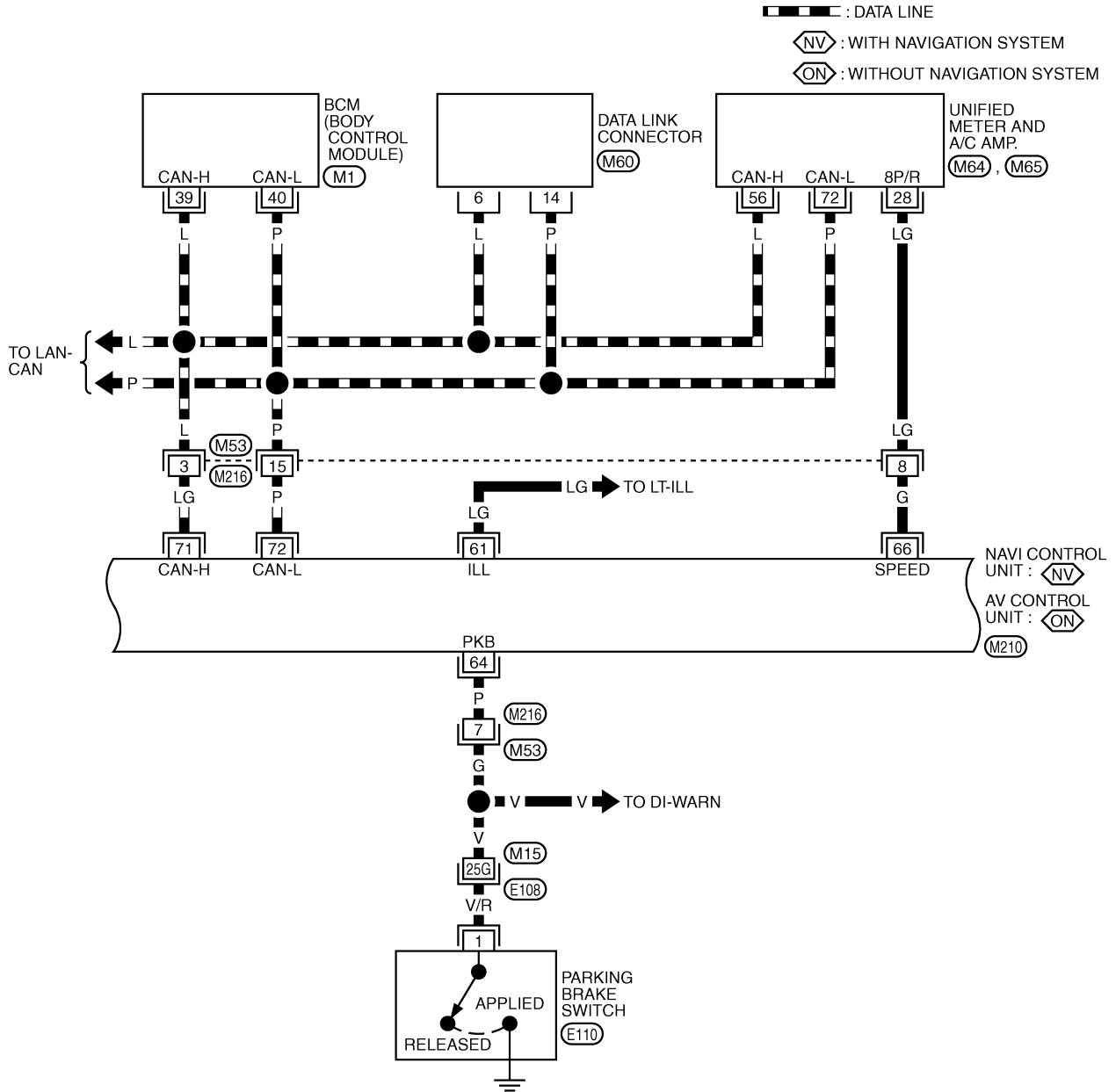
AV-AV-04



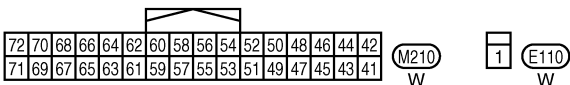
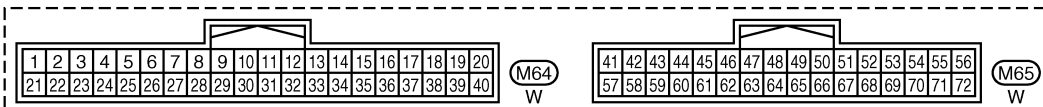
TKWT3494E

SYSTEM DESCRIPTION [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

AV-AV-05



REFER TO THE FOLLOWING.
E108 -SUPER MULTIPLE JUNCTION (SMJ)
M1 -ELECTRICAL UNITS



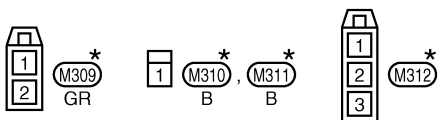
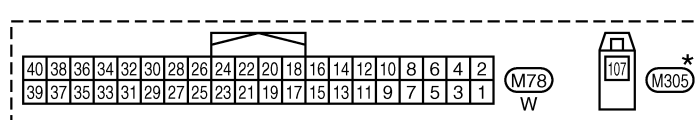
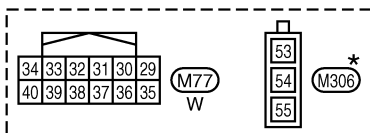
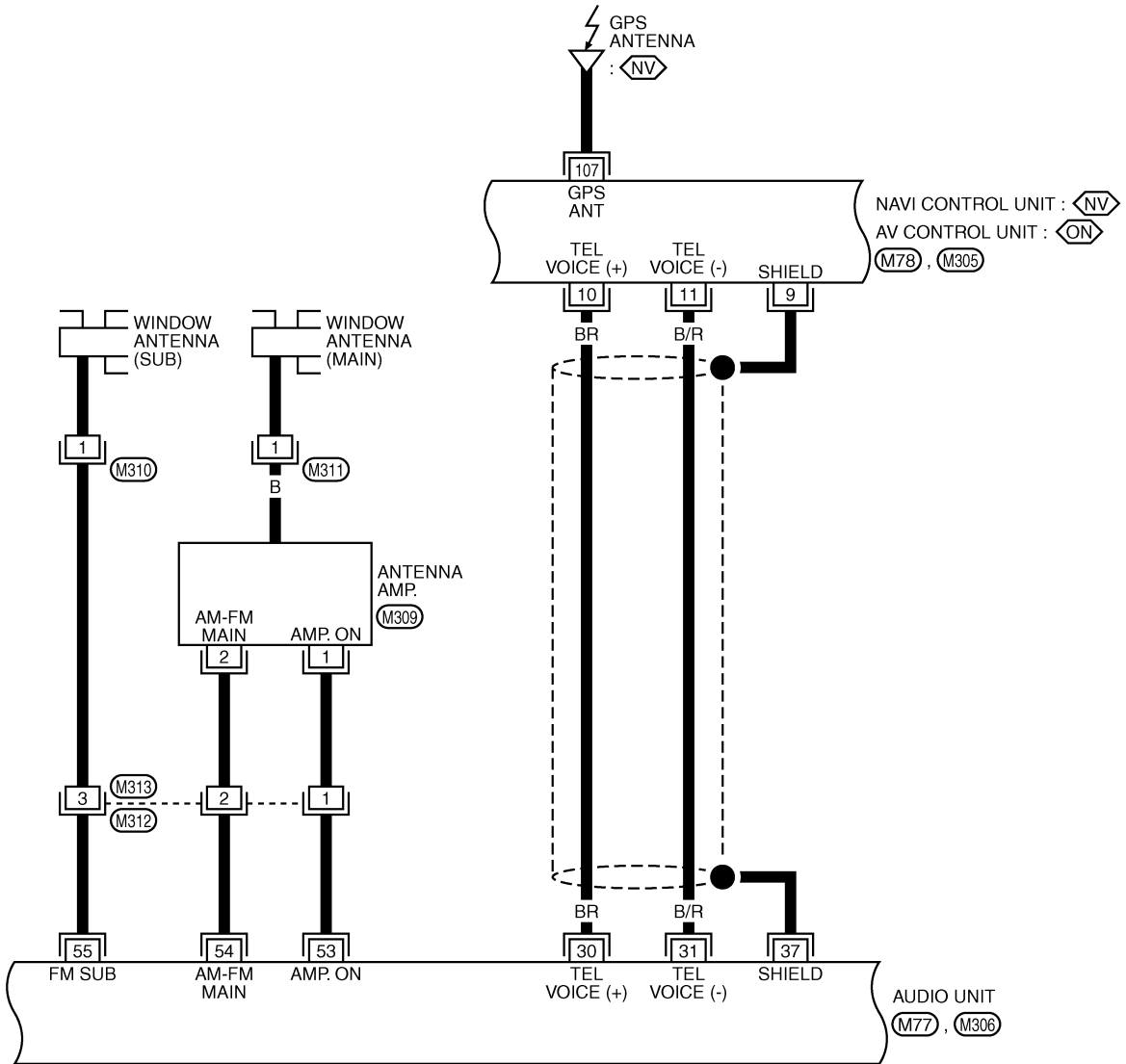
TKWT3495E

SYSTEM DESCRIPTION [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

AV-AV-06

(NV) : WITH NAVIGATION SYSTEM

(ON) : WITHOUT NAVIGATION SYSTEM

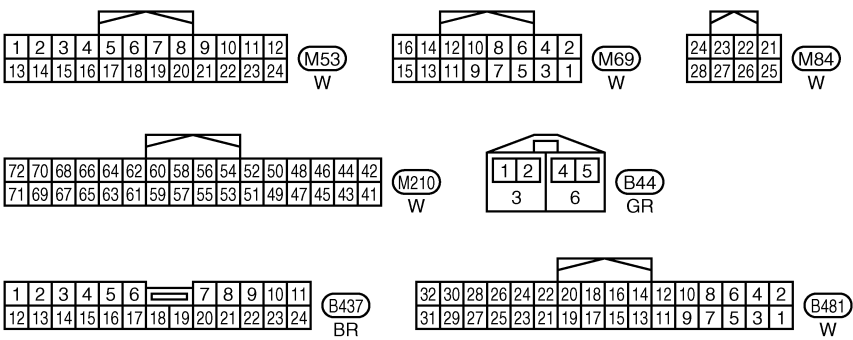
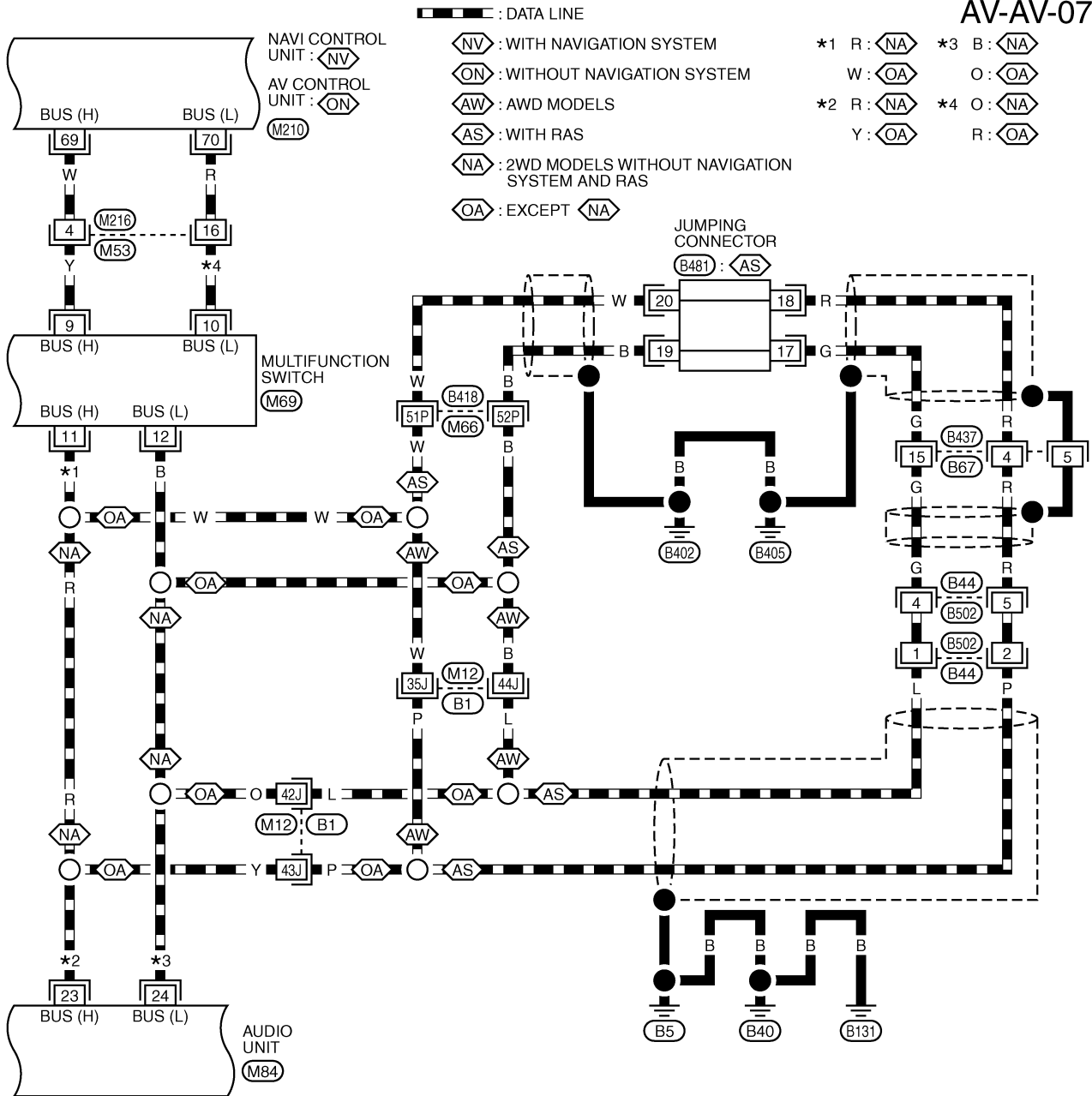


*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

TKWT5103E

SYSTEM DESCRIPTION [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

AV-AV-07

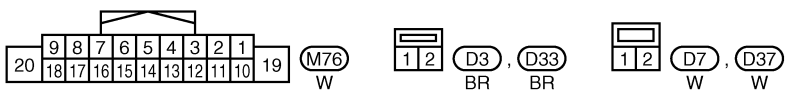
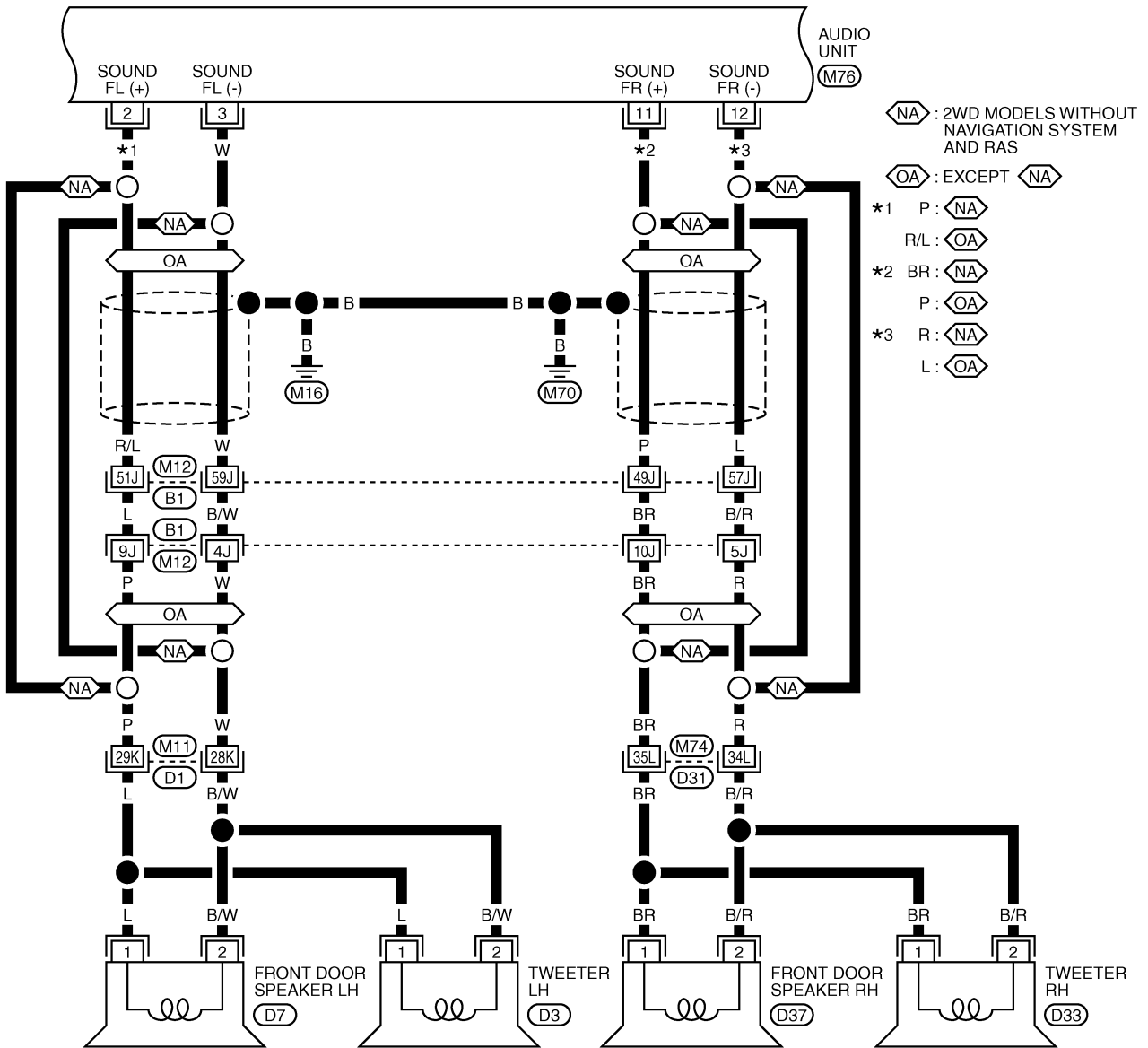


REFER TO THE FOLLOWING.
 (B1), (B418) -SUPER MULTIPLE JUNCTION (SMJ)

TKWT5104E

SYSTEM DESCRIPTION [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

AV-AV-09



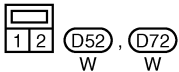
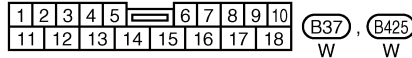
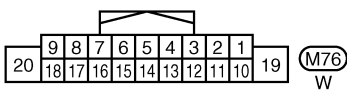
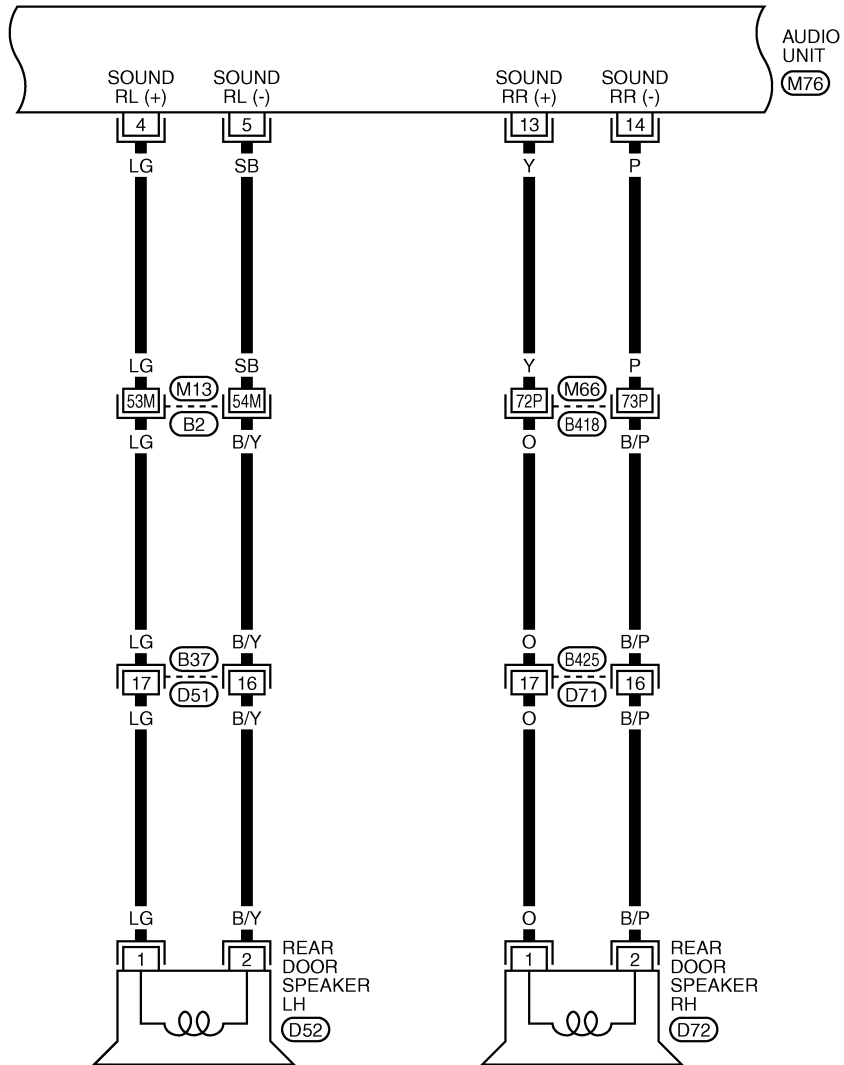
REFER TO THE FOLLOWING.
 (B1), (D1), (D31) -SUPER
 MULTIPLE JUNCTION (SMJ)

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AV

SYSTEM DESCRIPTION [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

AV-AV-10



REFER TO THE FOLLOWING.
(B2), (B418) -SUPER MULTIPLE JUNCTION (SMJ)

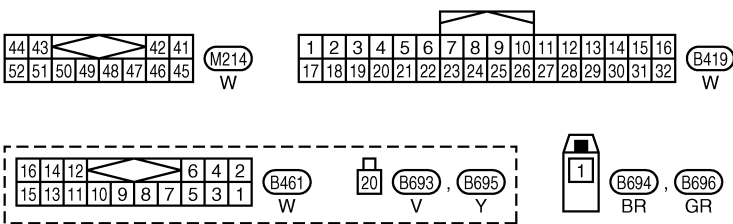
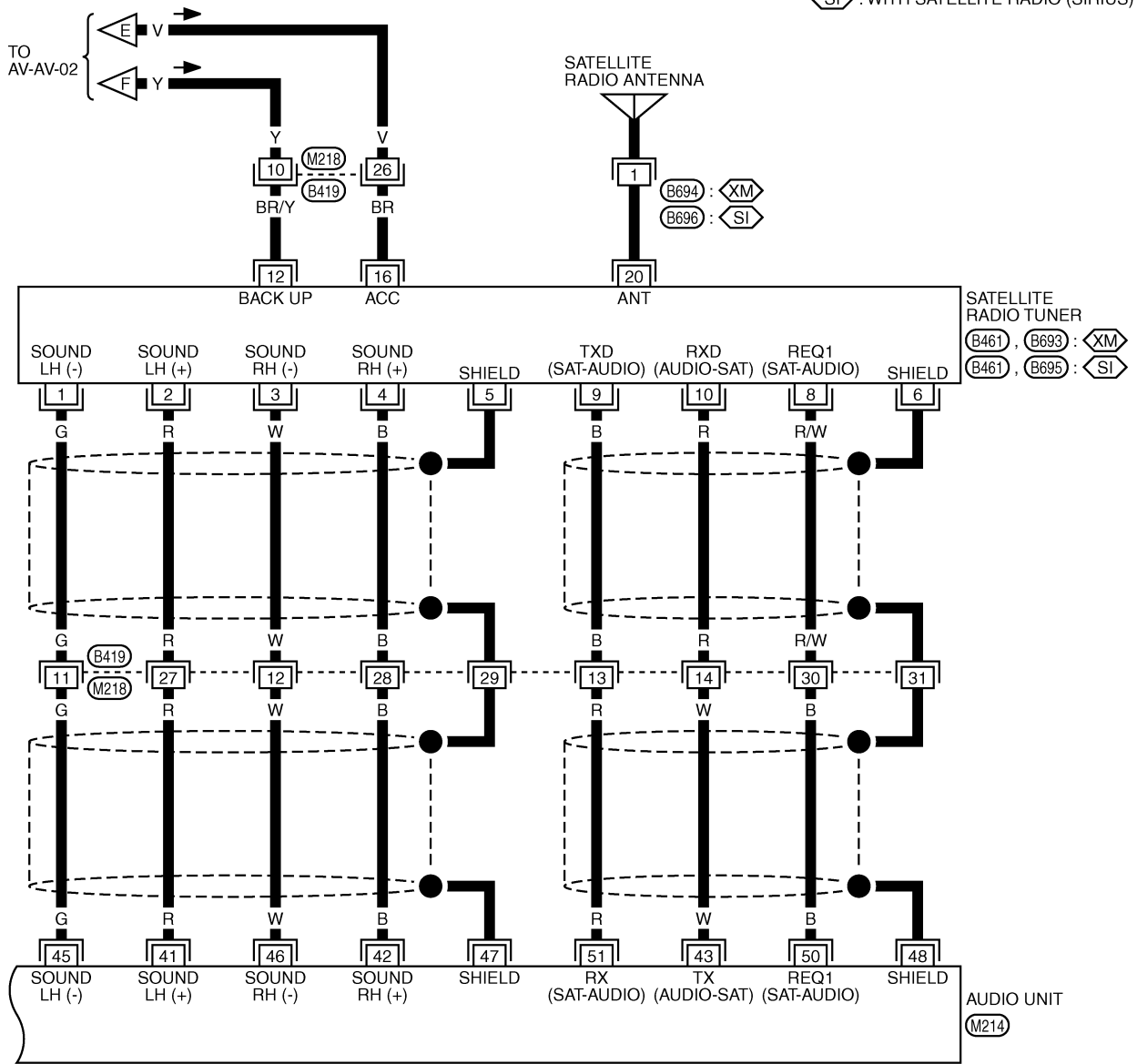
TKWT5106E

SYSTEM DESCRIPTION [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

AV-AV-11

: WIHT SATELLITE RADIO (XM)

: WITH SATELLITE RADIO (SIRIUS)



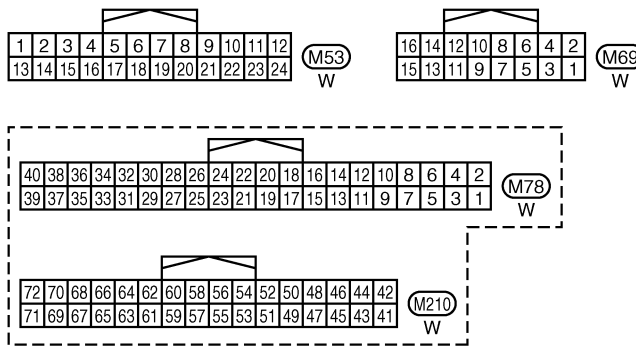
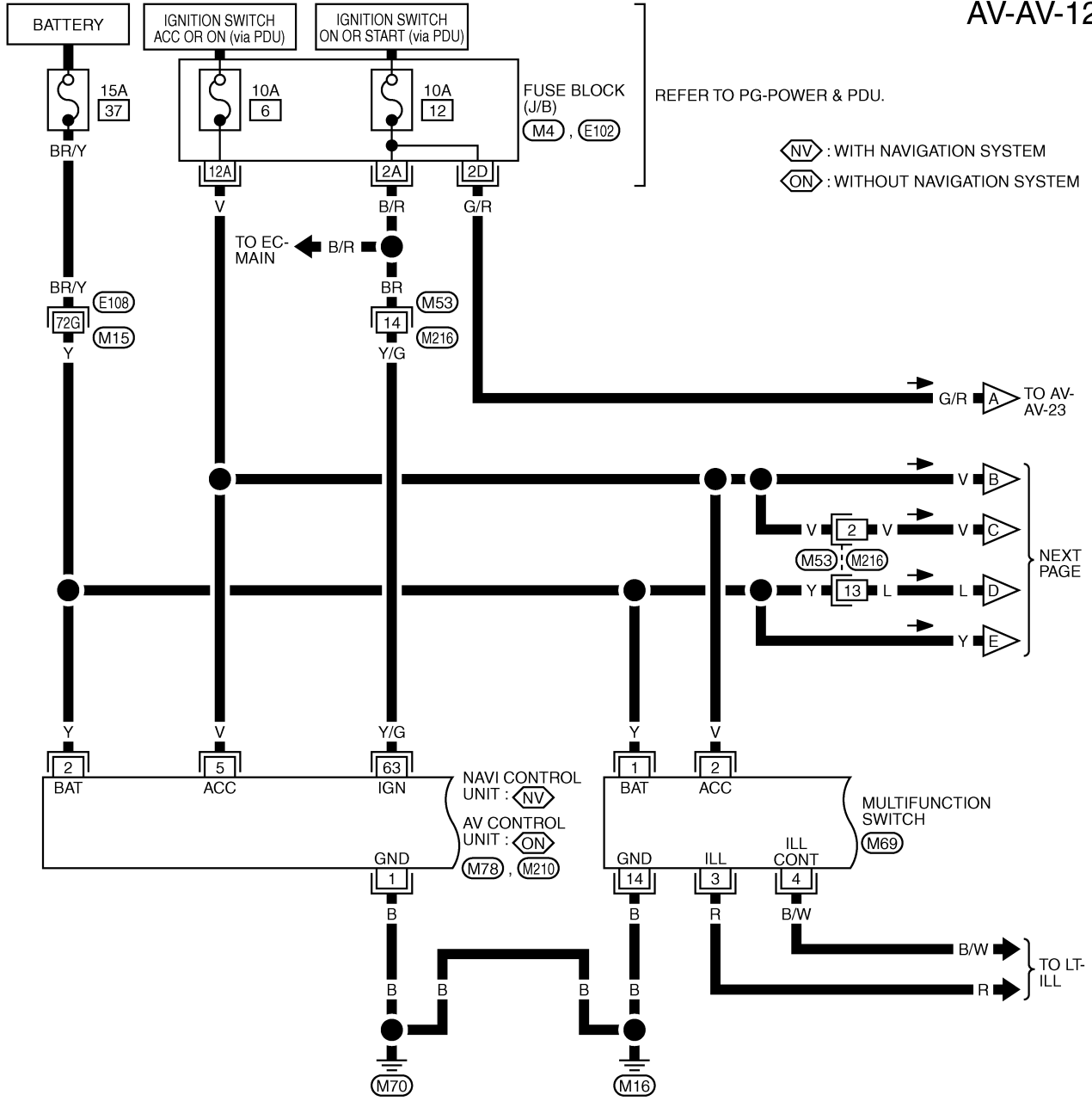
TKWT5107E

SYSTEM DESCRIPTION [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

NKS0048G

Wiring Diagram — AV — / BOSE Audio 2ch System

AV-AV-12



REFER TO THE FOLLOWING.

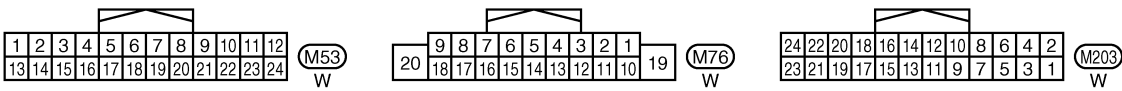
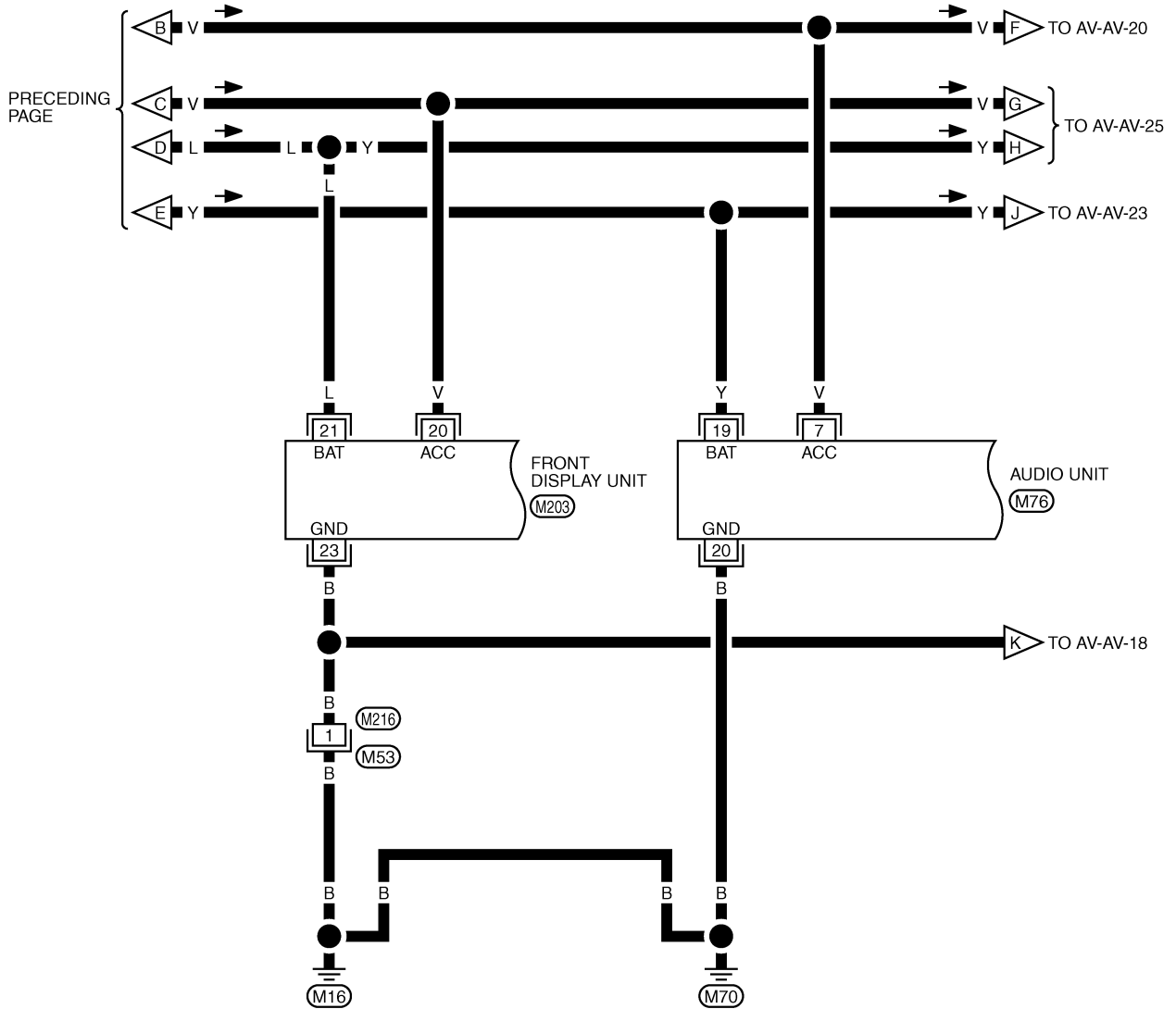
E108 -SUPER MULTIPLE JUNCTION (SMJ)

M4 , E102 -FUSE BLOCK-JUNCTION BOX (J/B)

TKWT5310E

SYSTEM DESCRIPTION [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

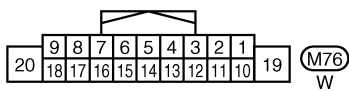
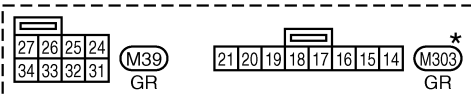
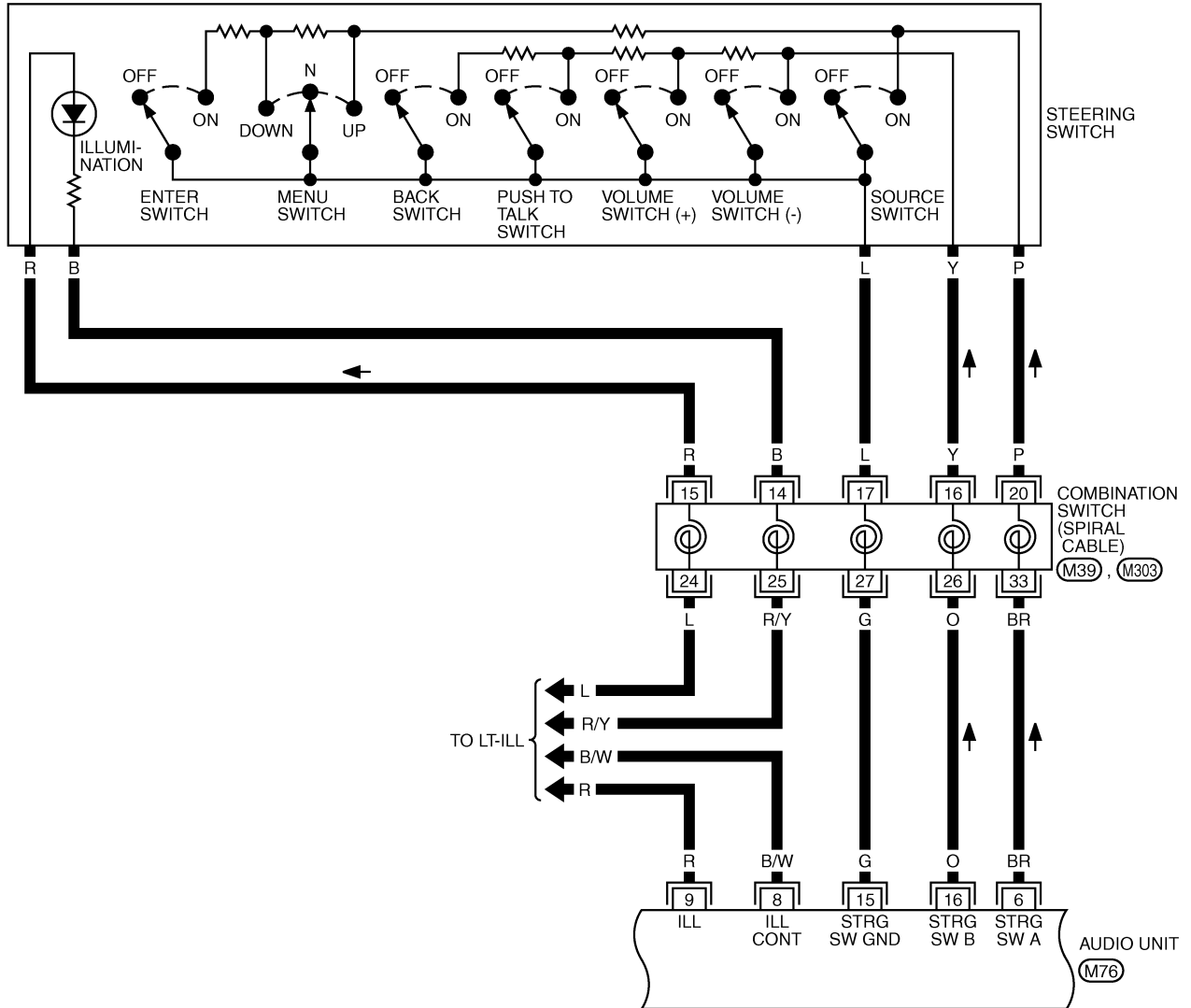
AV-AV-13



TKWT5311E

SYSTEM DESCRIPTION [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

AV-AV-14

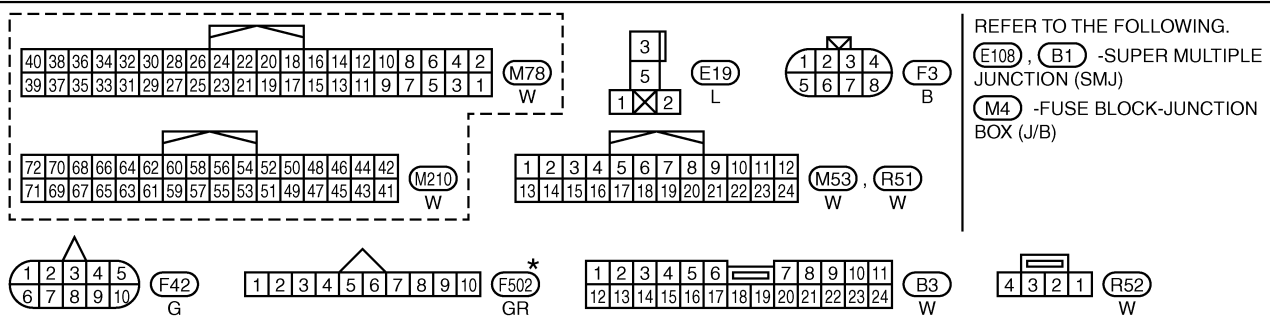
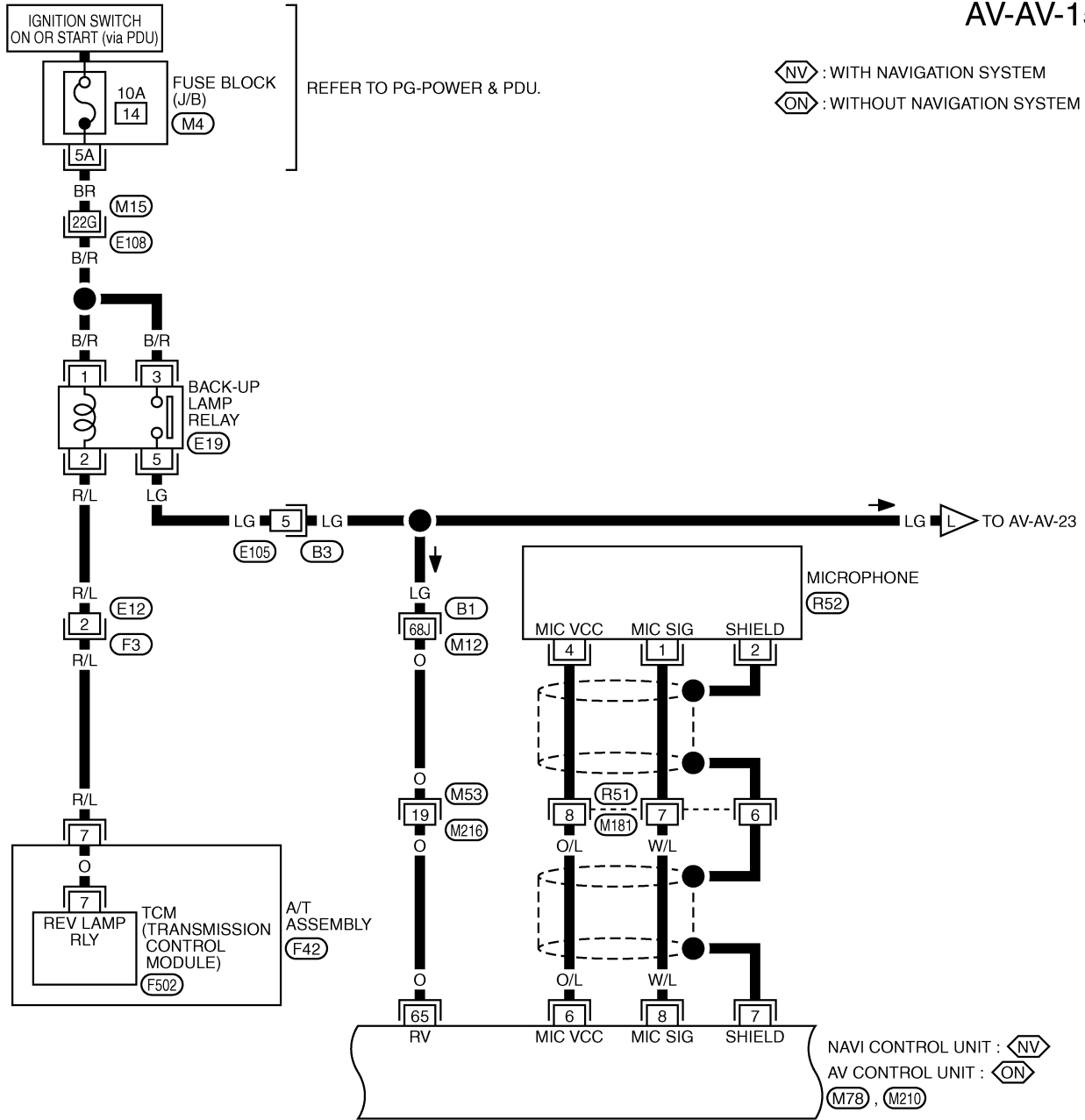


★: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

TKWT5312E

SYSTEM DESCRIPTION [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

AV-AV-15

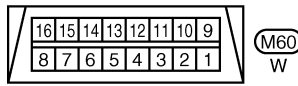
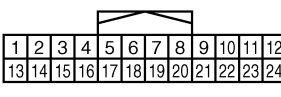
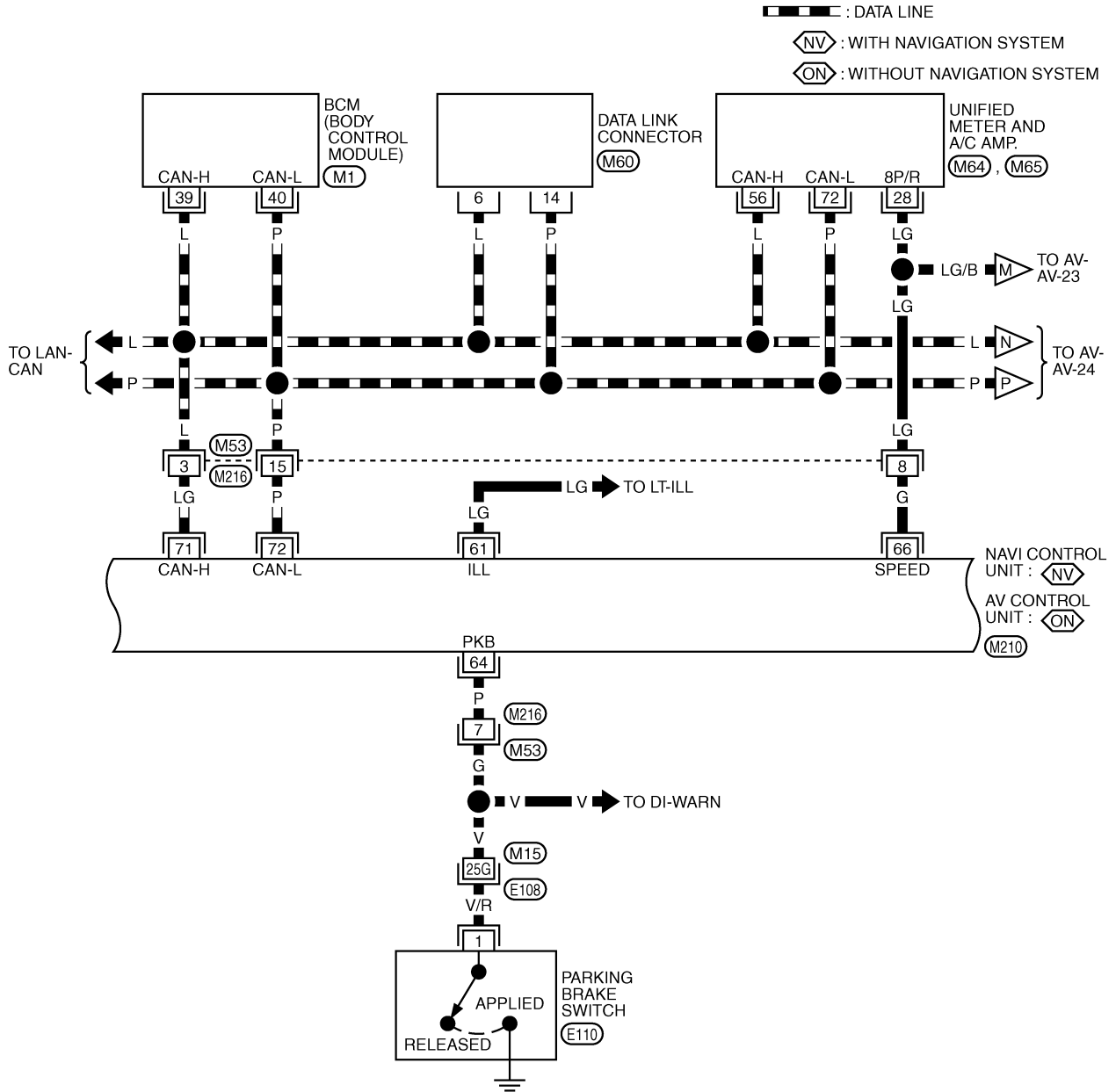


*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

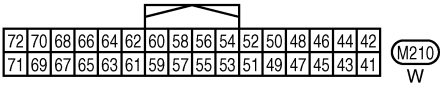
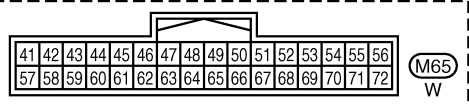
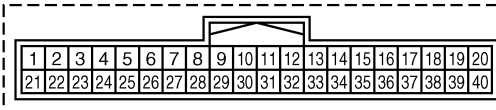
TKWT5313E

SYSTEM DESCRIPTION [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

AV-AV-16



REFER TO THE FOLLOWING.
E108 -SUPER MULTIPLE JUNCTION (SMJ)
M1 -ELECTRICAL UNITS



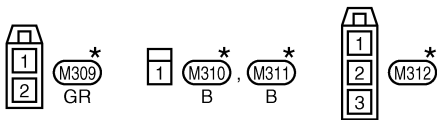
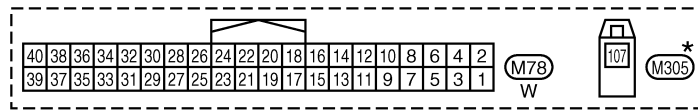
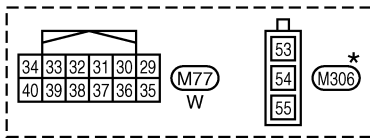
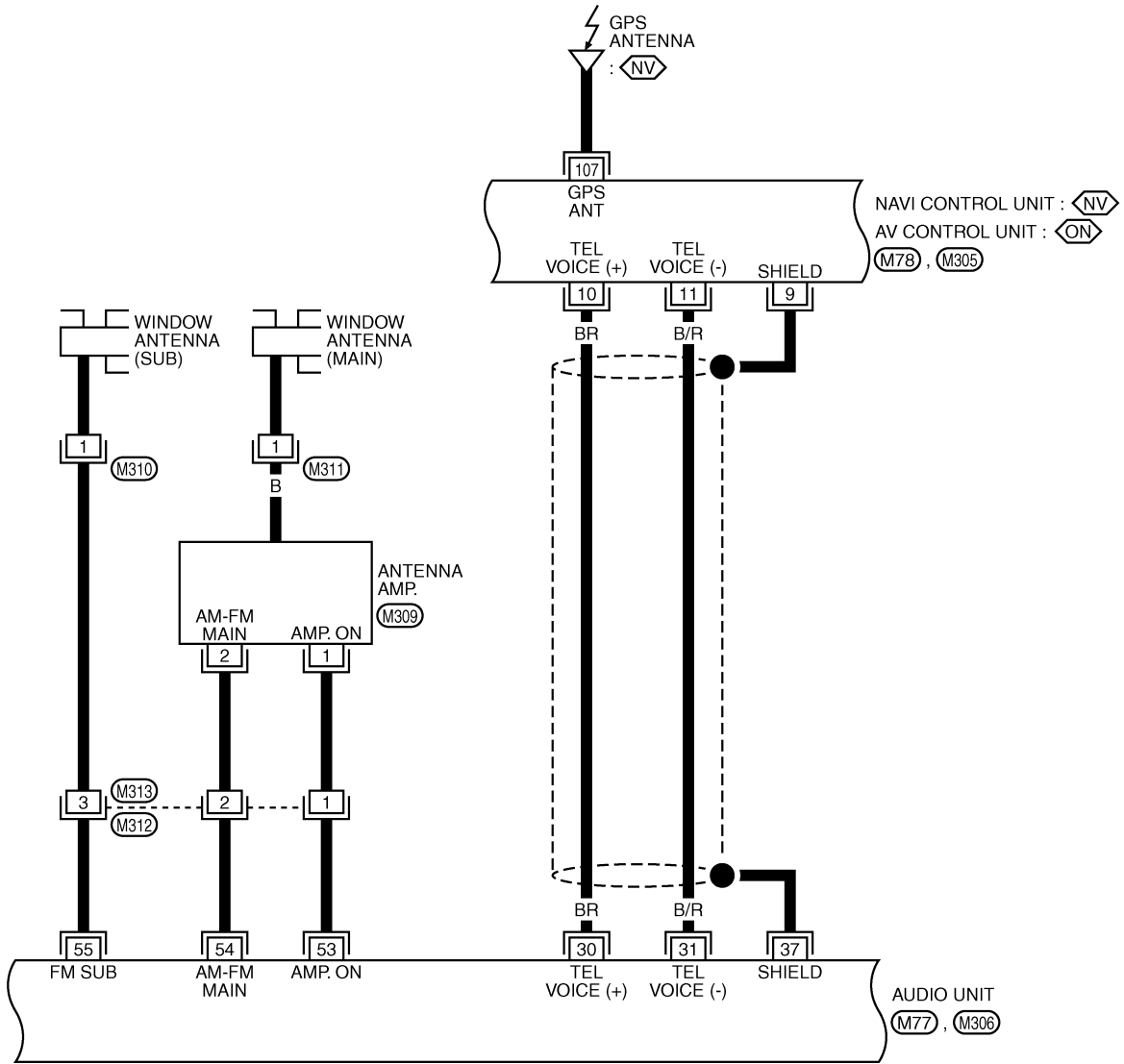
TKWT5314E

SYSTEM DESCRIPTION [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

AV-AV-17

(NV) : WITH NAVIGATION SYSTEM

(ON) : WITHOUT NAVIGATION SYSTEM

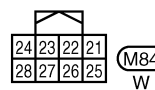
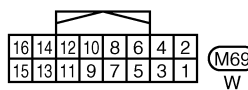
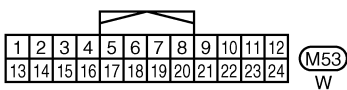
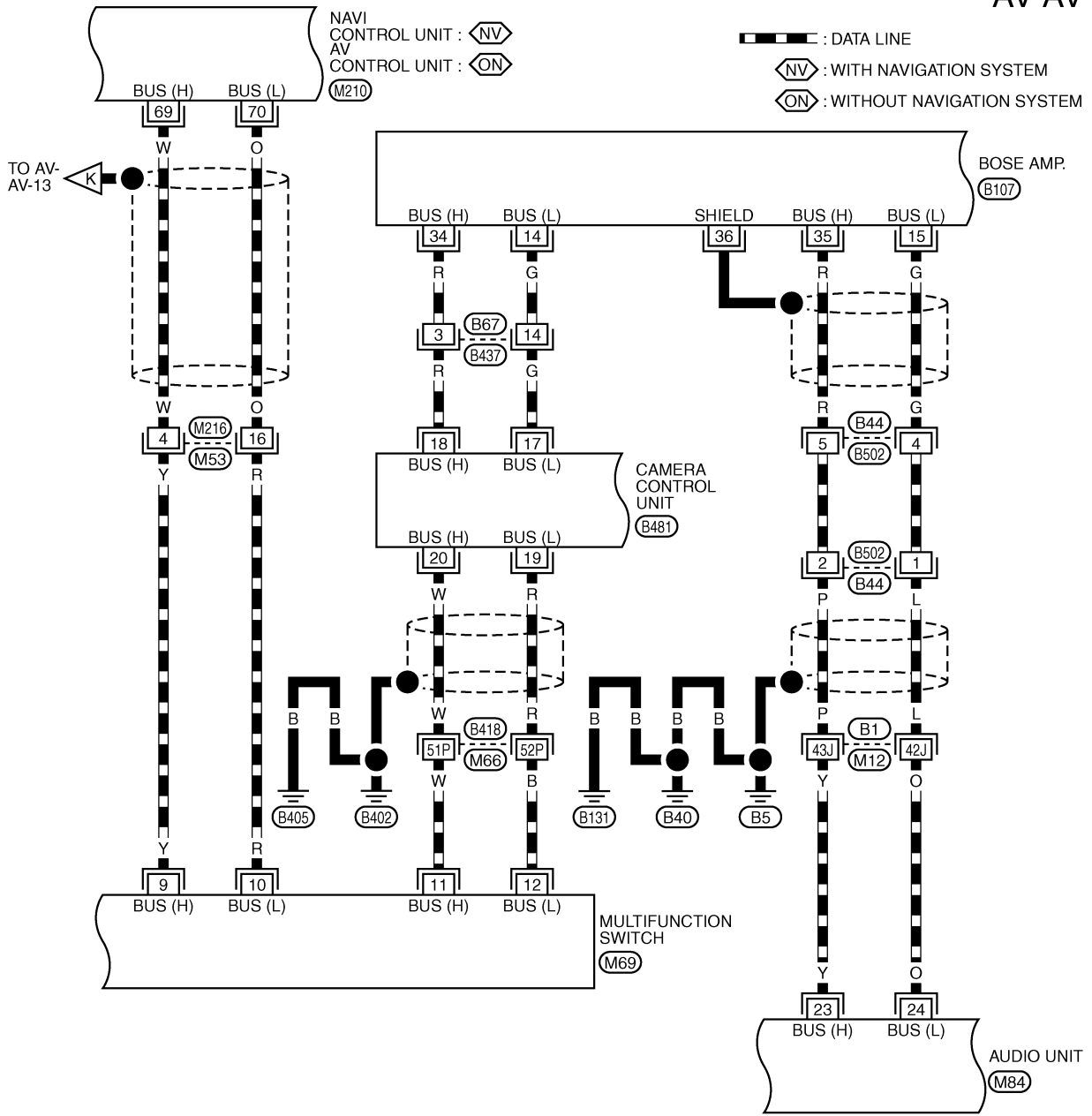


*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

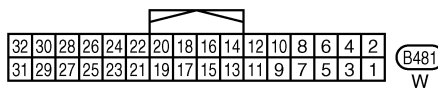
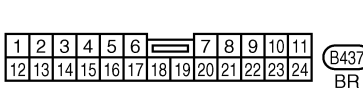
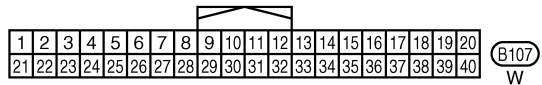
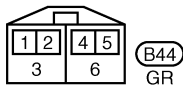
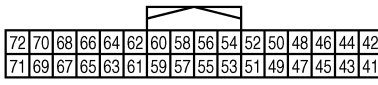
TKWT5109E

SYSTEM DESCRIPTION [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

AV-AV-18



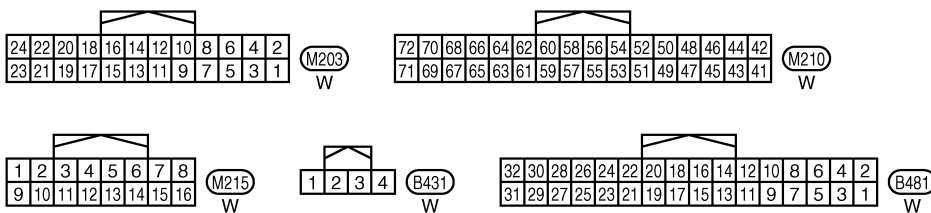
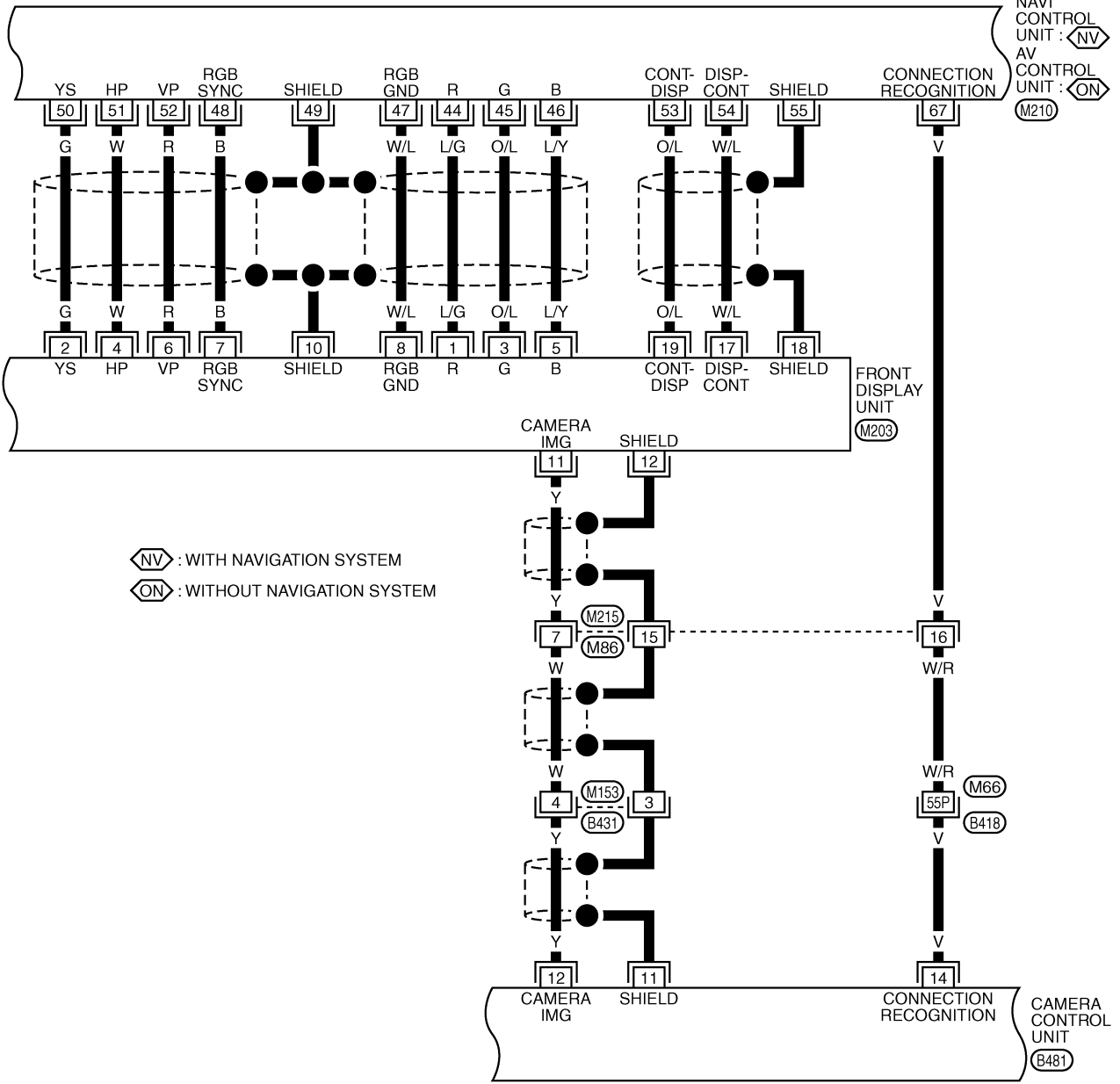
REFER TO THE FOLLOWING.
B1, **B418** -SUPER MULTIPLE JUNCTION (SMJ)



TKWT5110E

SYSTEM DESCRIPTION [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

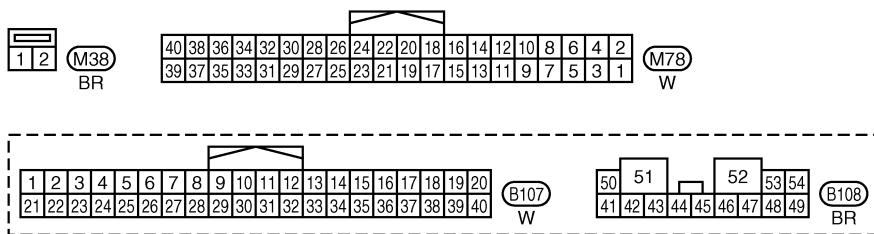
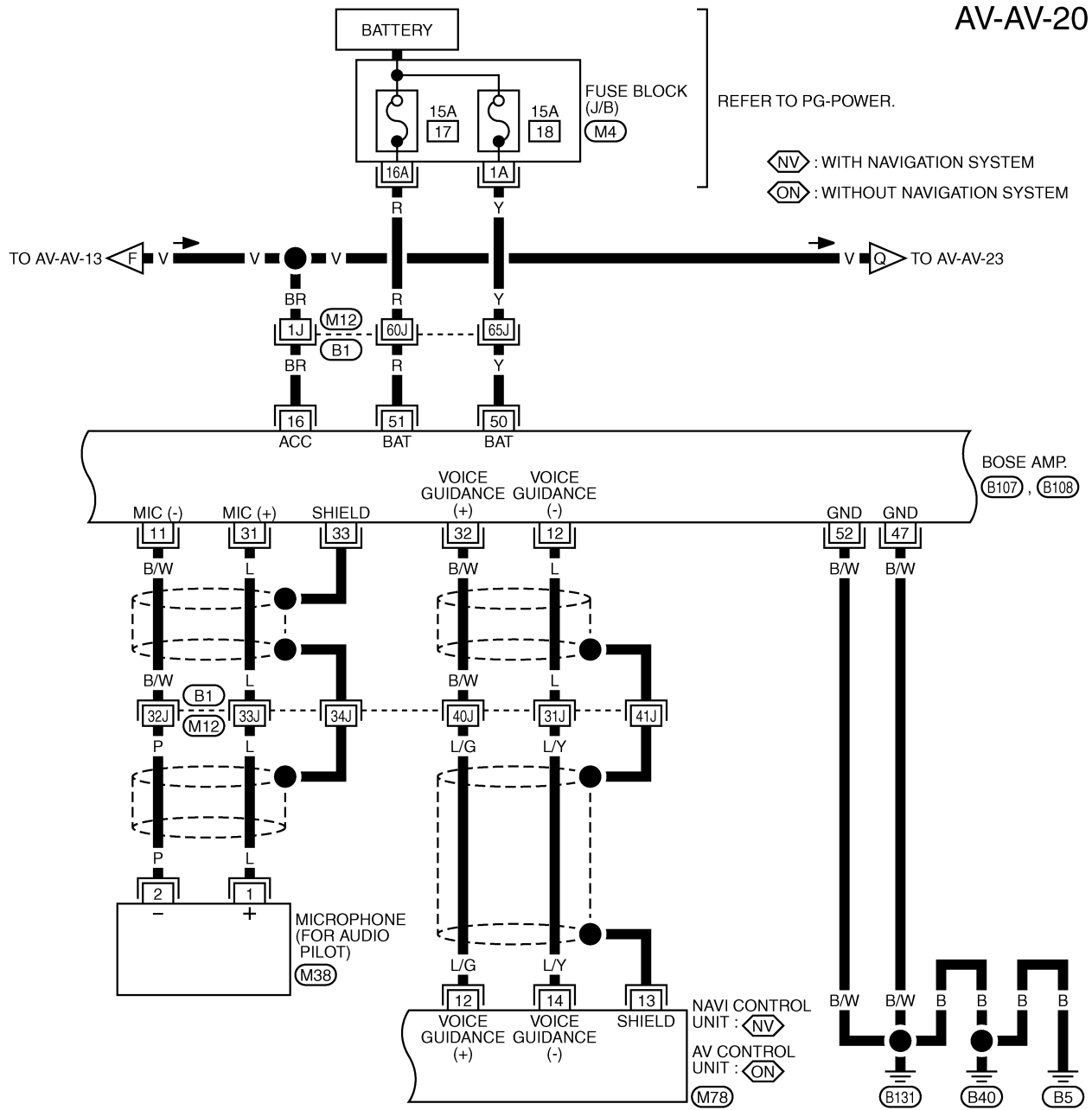
AV-AV-19



REFER TO THE FOLLOWING.
(B418) -SUPER MULTIPLE JUNCTION (SMJ)

SYSTEM DESCRIPTION [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

AV-AV-20



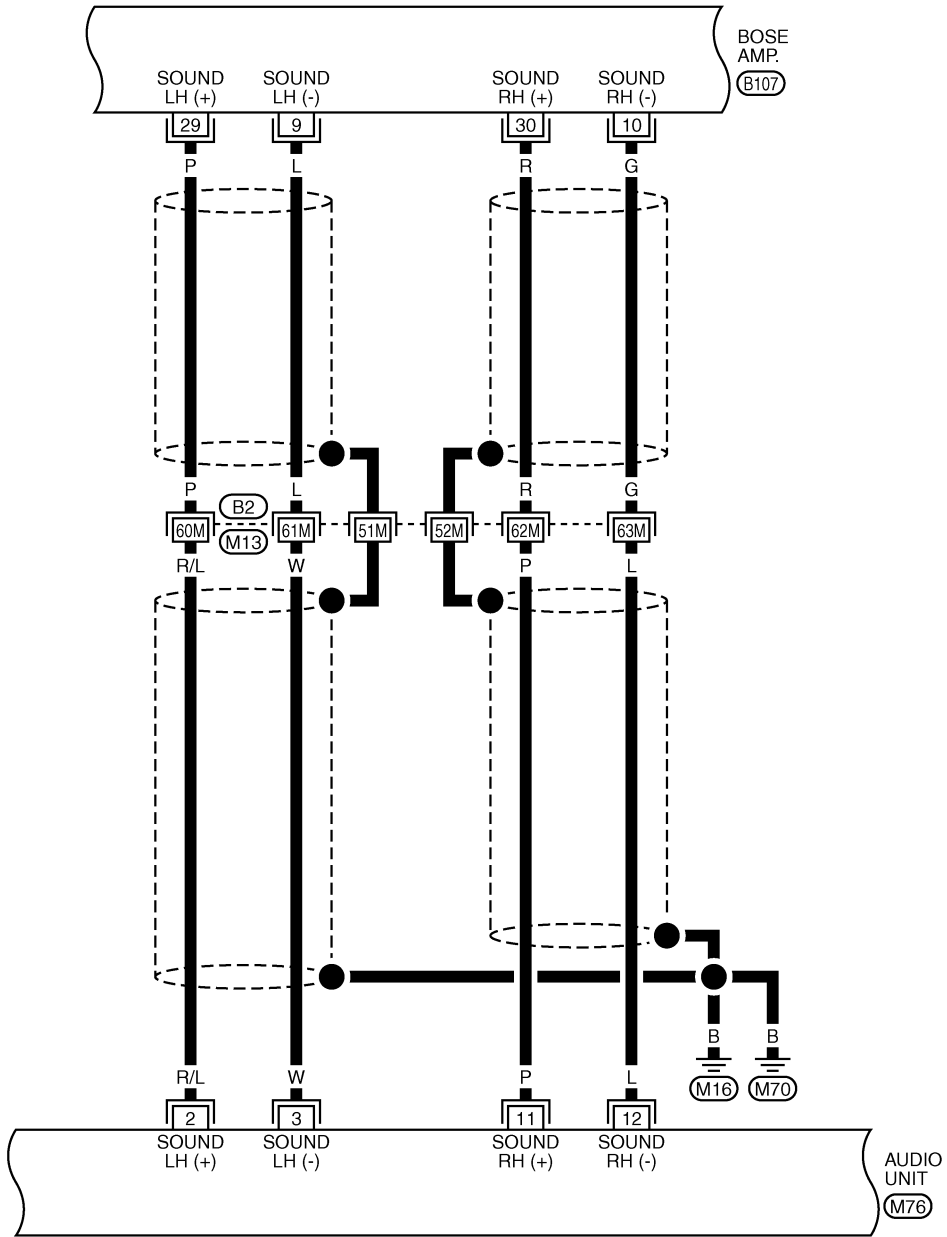
REFER TO THE FOLLOWING.

- (B1) -SUPER MULTIPLE JUNCTION (SMJ)
- (M4) -FUSE BLOCK-JUNCTION BOX (J/B)

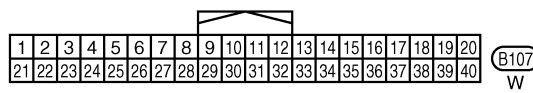
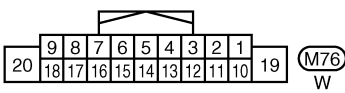
TKWT5111E

SYSTEM DESCRIPTION [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

AV-AV-21



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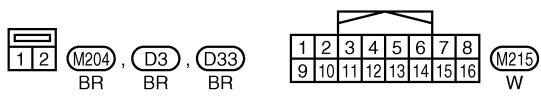
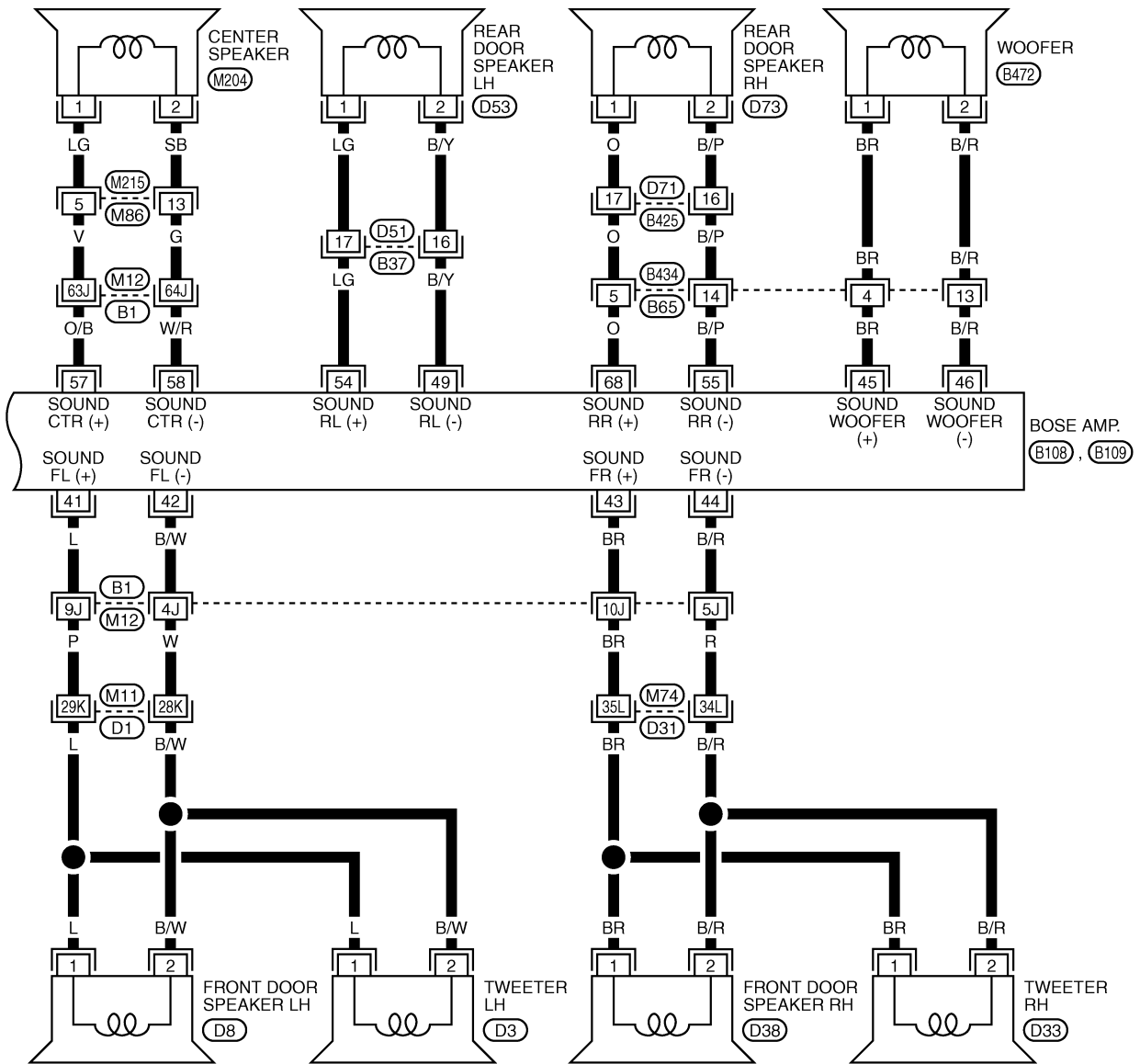


REFER TO THE FOLLOWING.
B2 -SUPER MULTIPLE JUNCTION (SMJ)

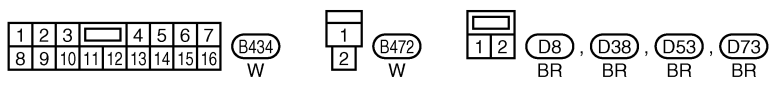
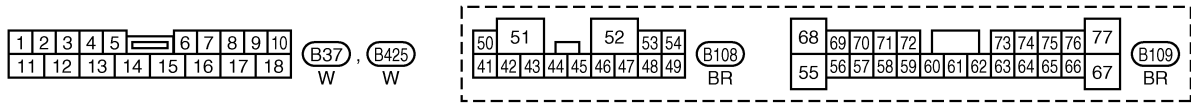
TKWT6612E

SYSTEM DESCRIPTION [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

AV-AV-22



REFER TO THE FOLLOWING.
(B1), (D1), (D31) -SUPER
MULTIPLE JUNCTION (SMJ)

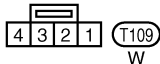
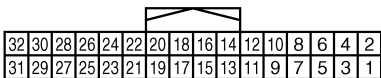
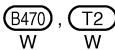
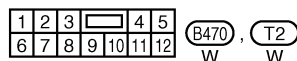
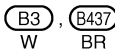
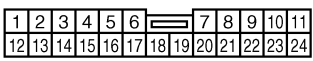
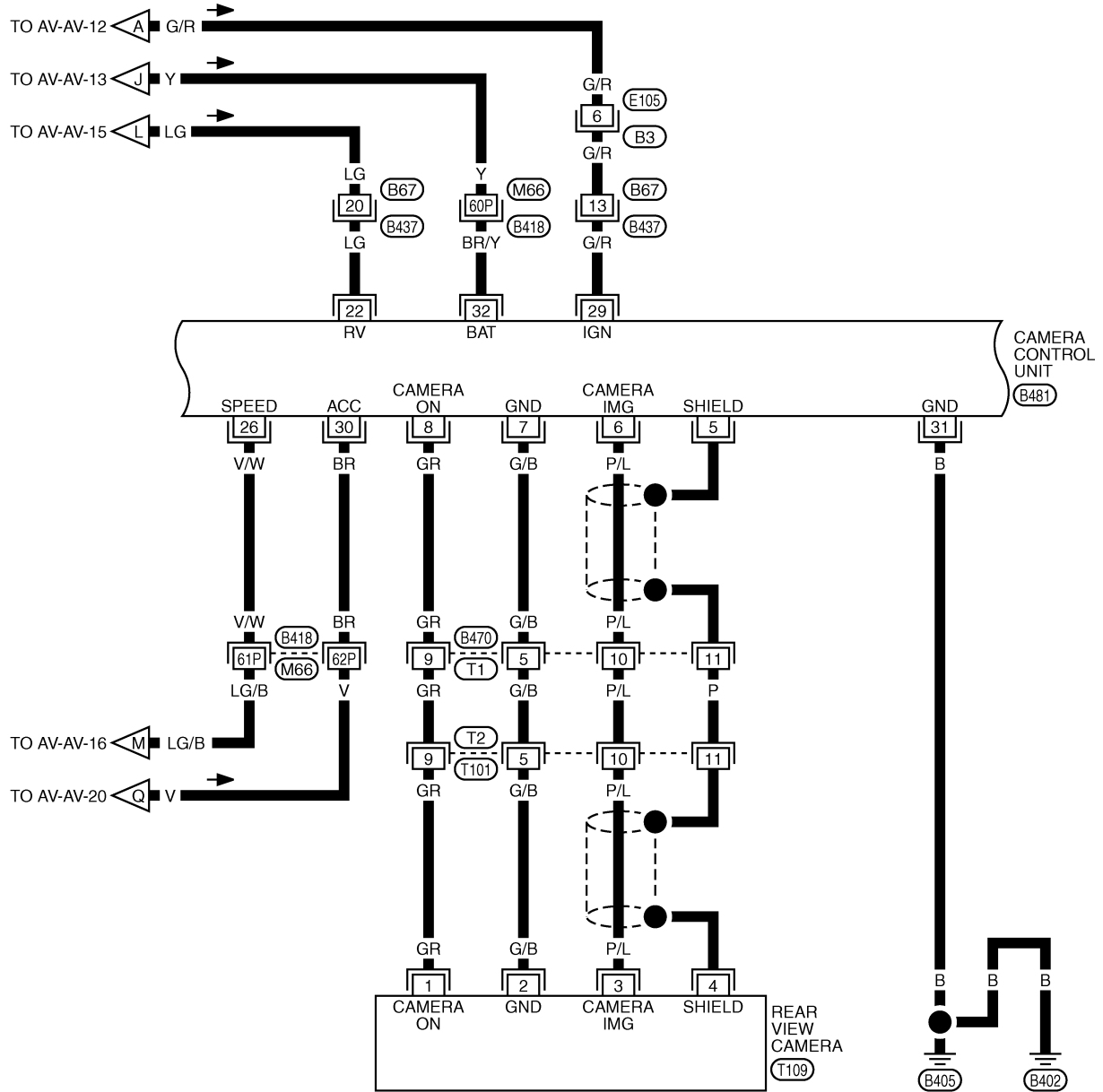


TKWT5316E

SYSTEM DESCRIPTION [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

AV-AV-23

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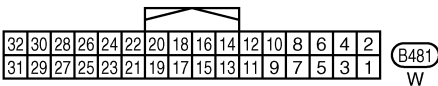
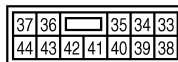
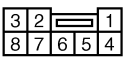
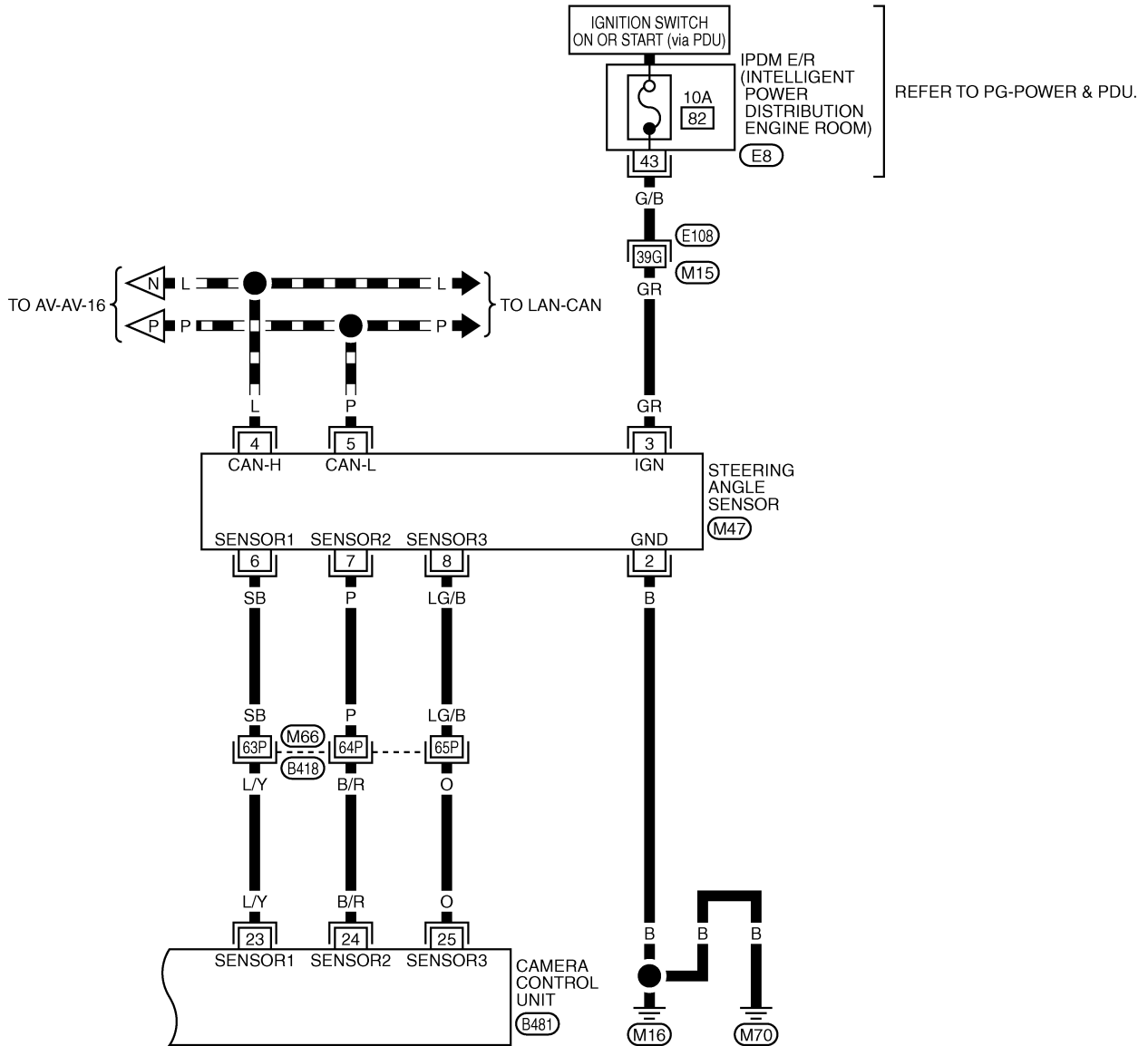
REFER TO THE FOLLOWING.
(B418) -SUPER MULTIPLE JUNCTION (SMJ)

TKWT5317E

SYSTEM DESCRIPTION [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

AV-AV-24

▬ : DATA LINE



REFER TO THE FOLLOWING.
(E108), (B418) -SUPER MULTIPLE JUNCTION (SMJ)

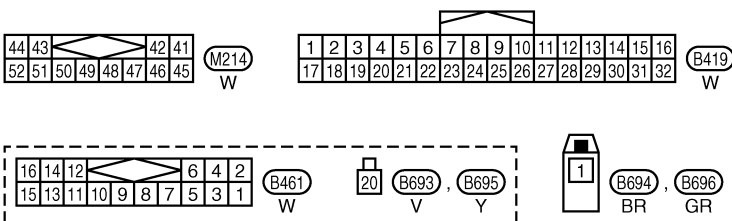
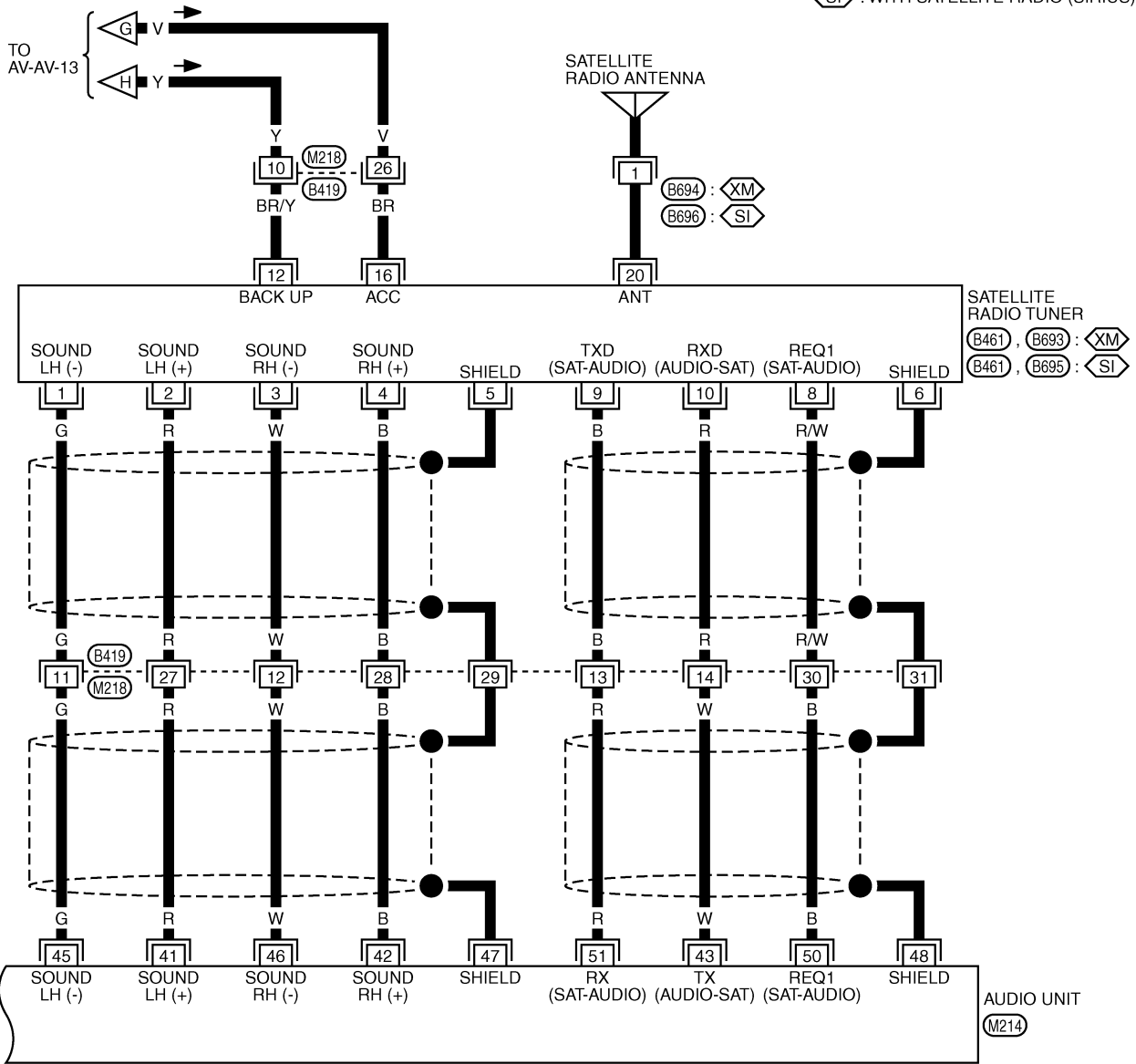
TKWT5318E

SYSTEM DESCRIPTION [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

AV-AV-25

: WITH SATELLITE RADIO (XM)

: WITH SATELLITE RADIO (SIRIUS)

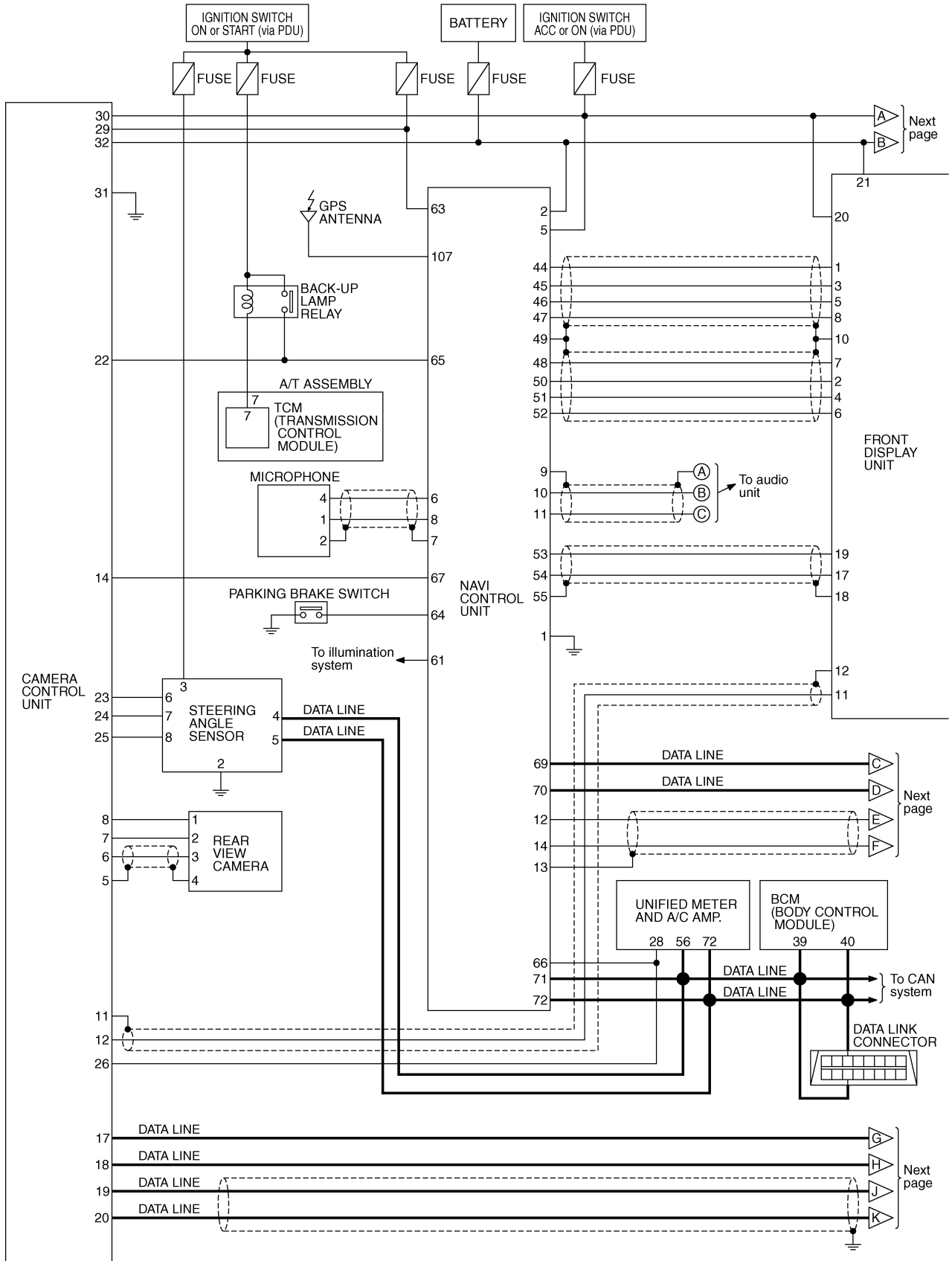


TKWT5112E

SYSTEM DESCRIPTION [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

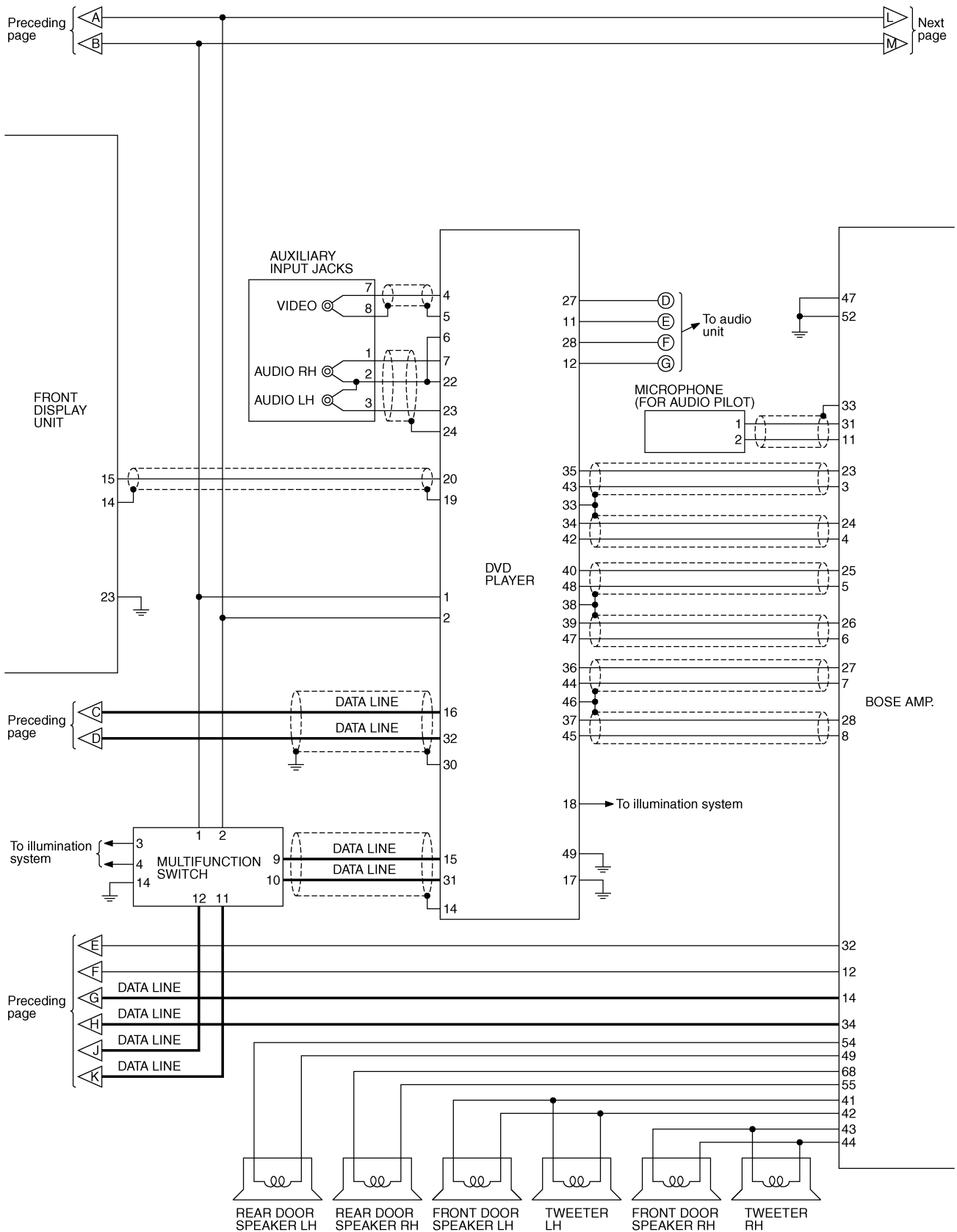
Schematic — BOSE Surround Audio 5.1ch System —

NKS0048H



TKWT3518E

SYSTEM DESCRIPTION [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

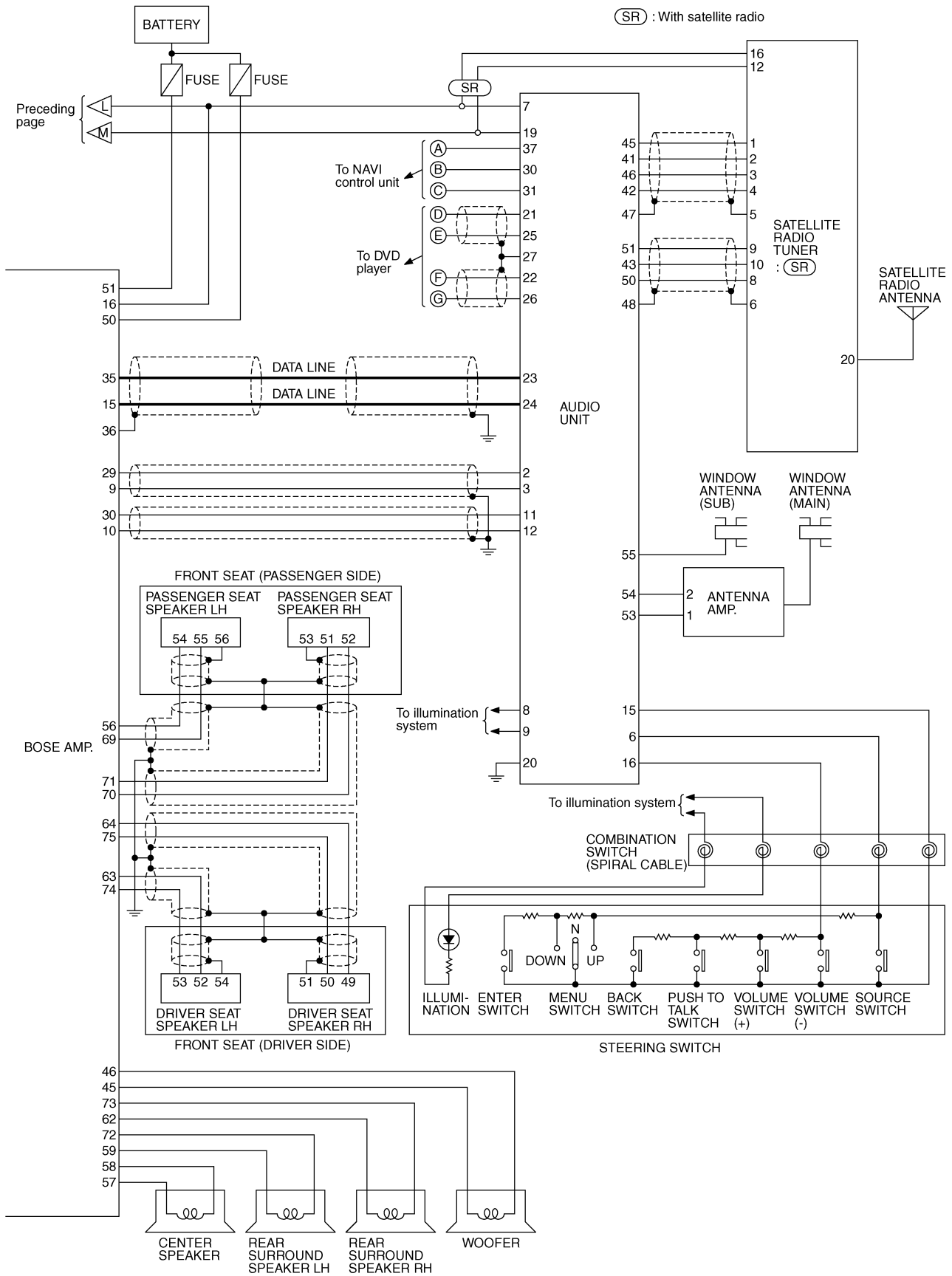


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TKWT5113E

SYSTEM DESCRIPTION [WITHOUT MOBILE ENTERTAINMENT SYSTEM]



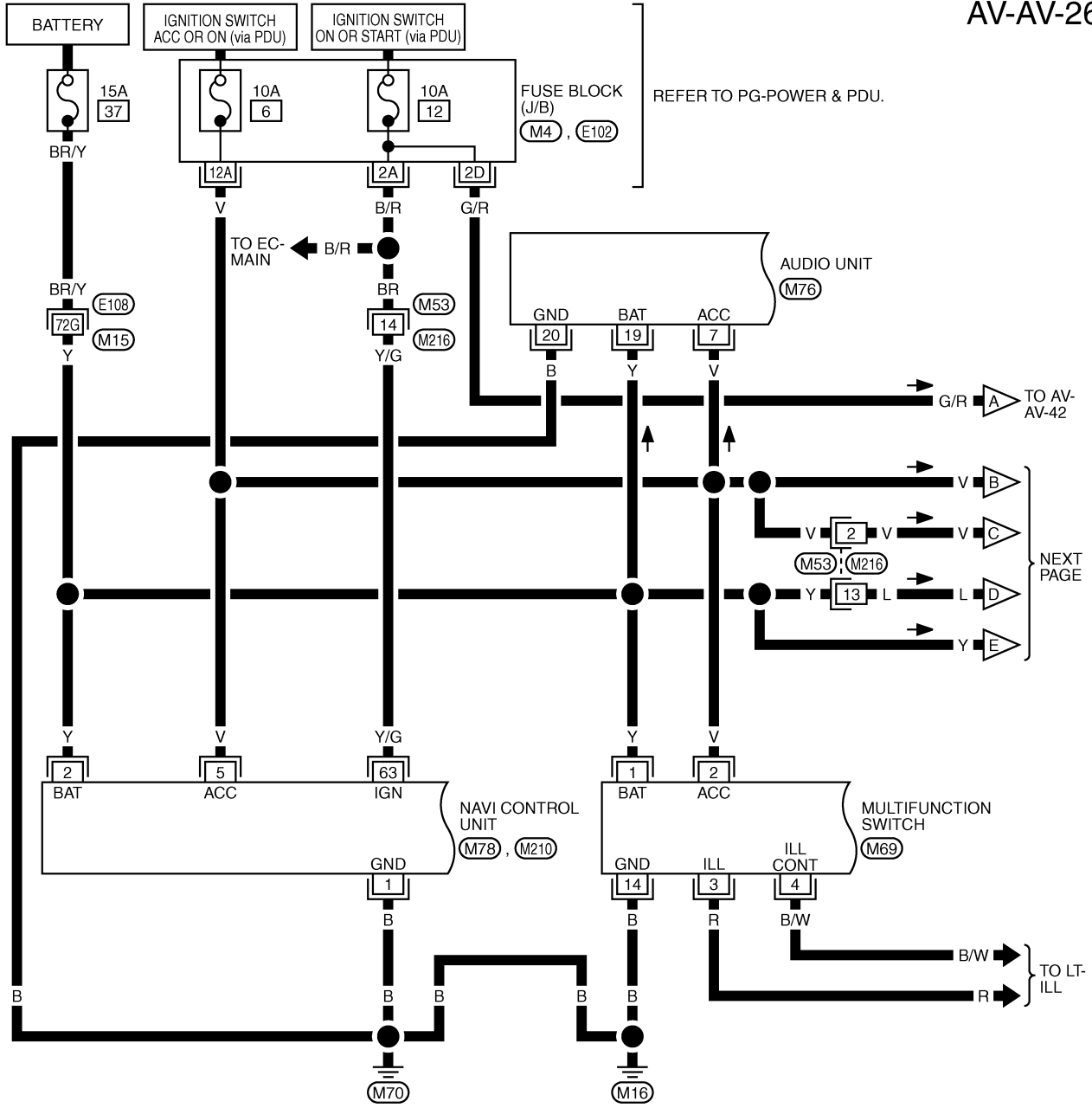
TKWT5114E

SYSTEM DESCRIPTION [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

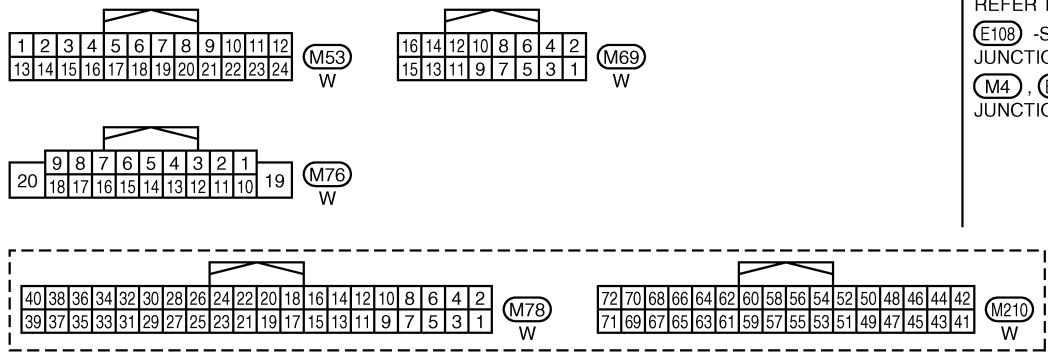
Wiring Diagram — AV — / BOSE Surround Audio 5.1ch System

NKS00481

AV-AV-26

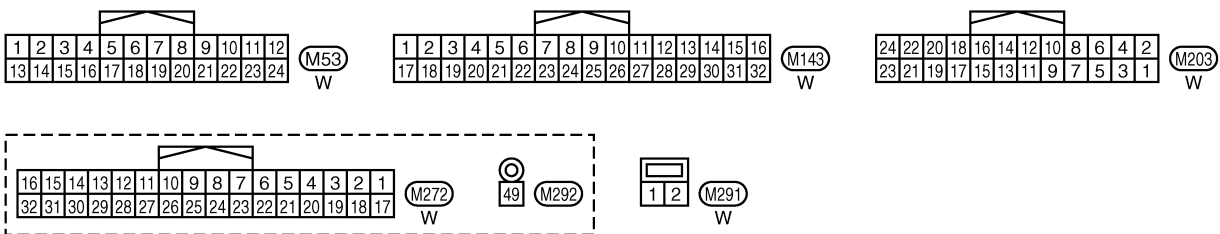
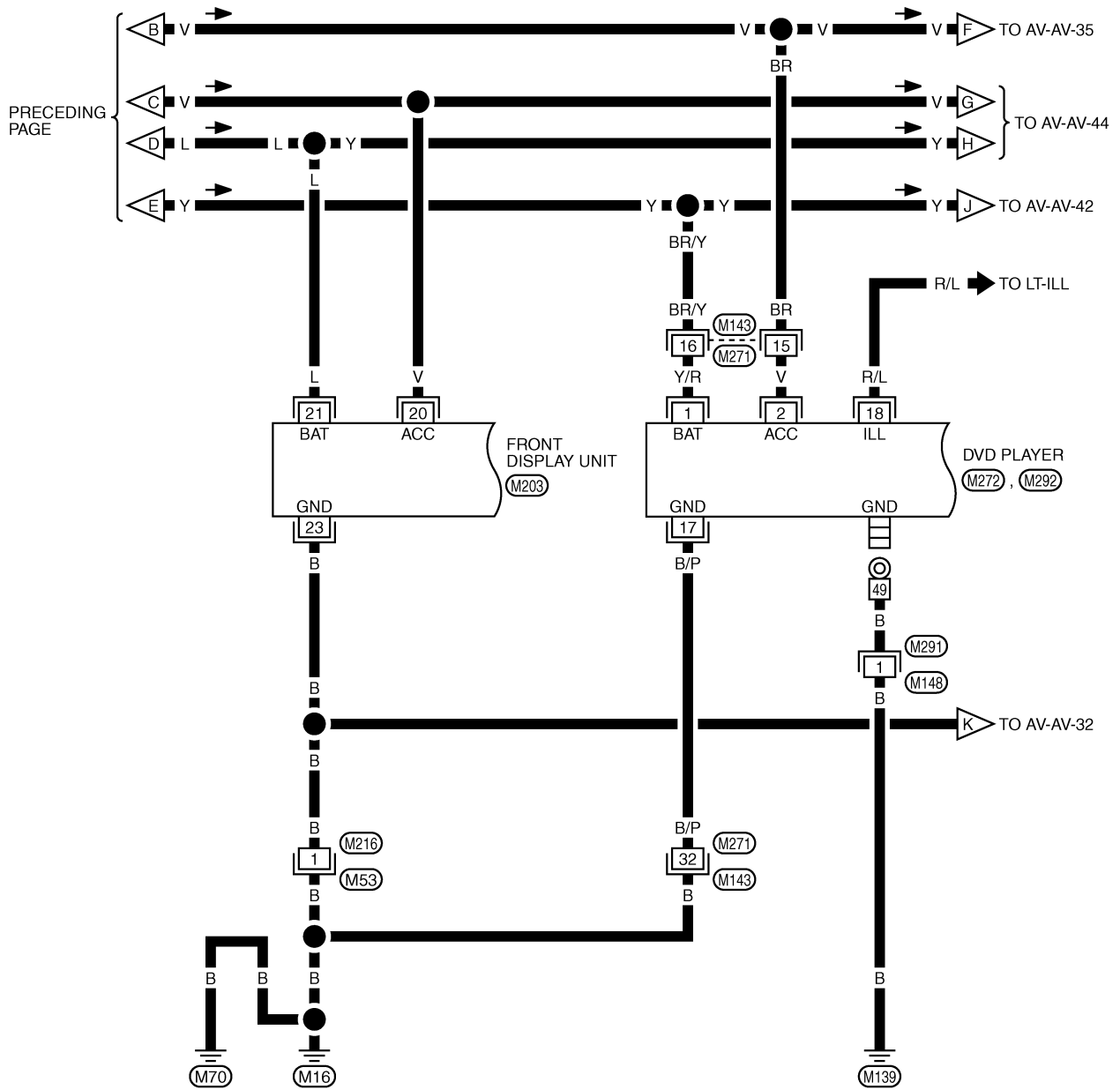


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SYSTEM DESCRIPTION [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

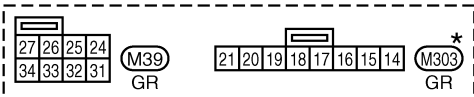
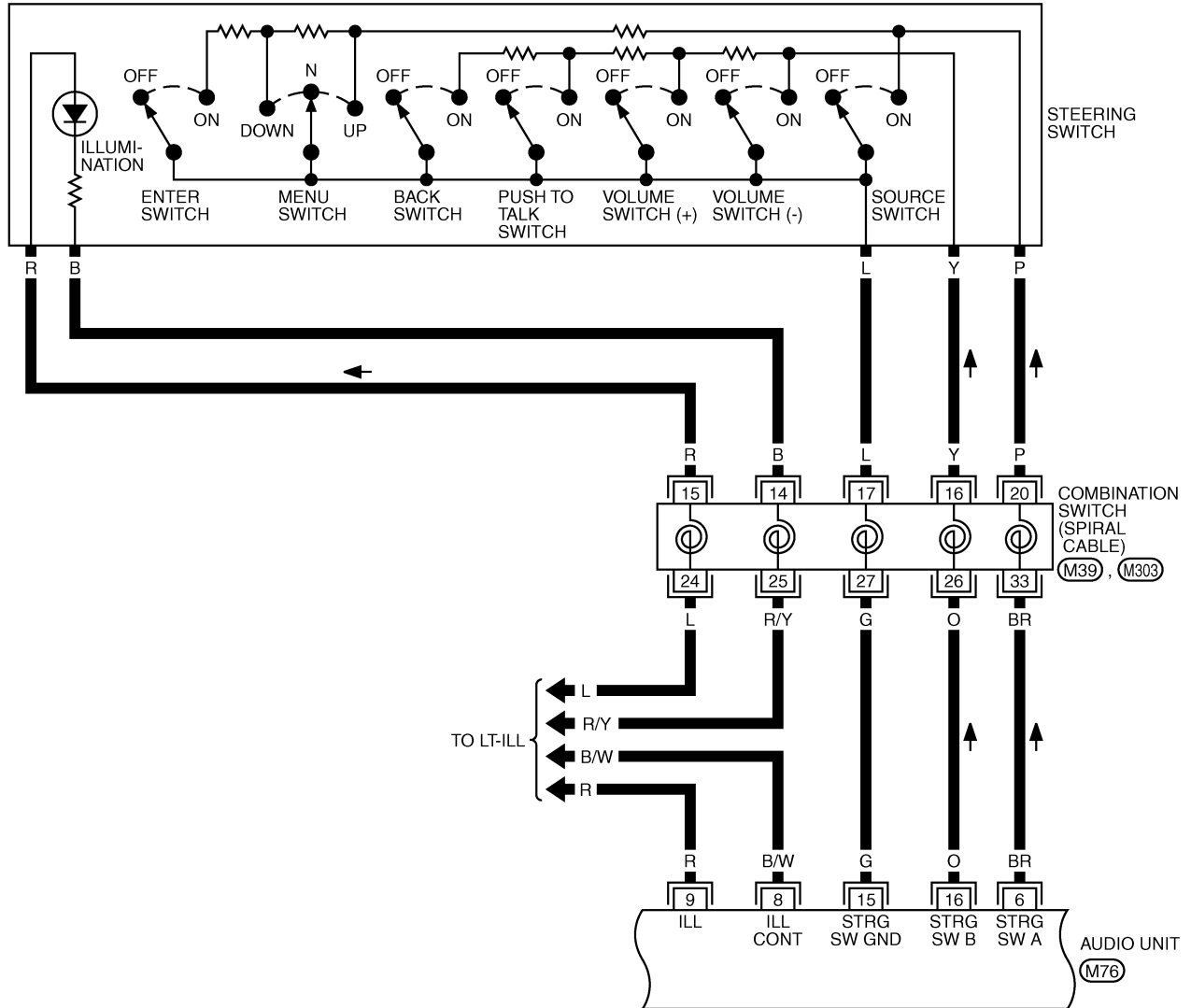
AV-AV-27



TKWT5115E

SYSTEM DESCRIPTION [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

AV-AV-28

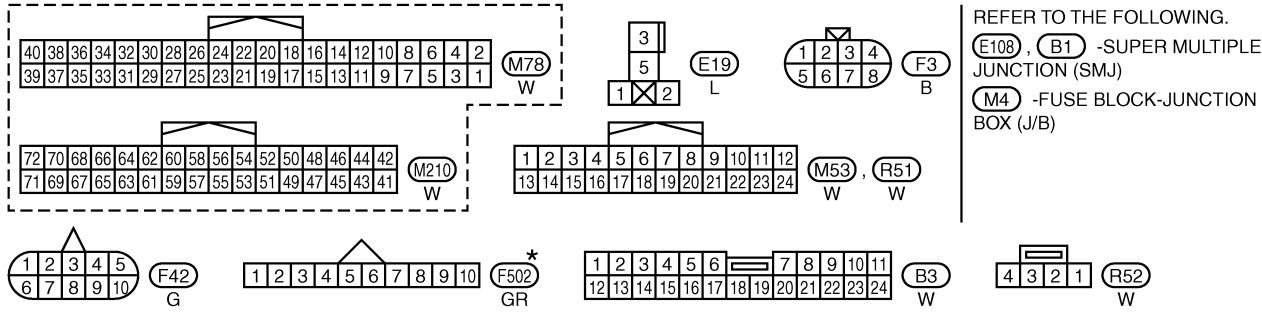
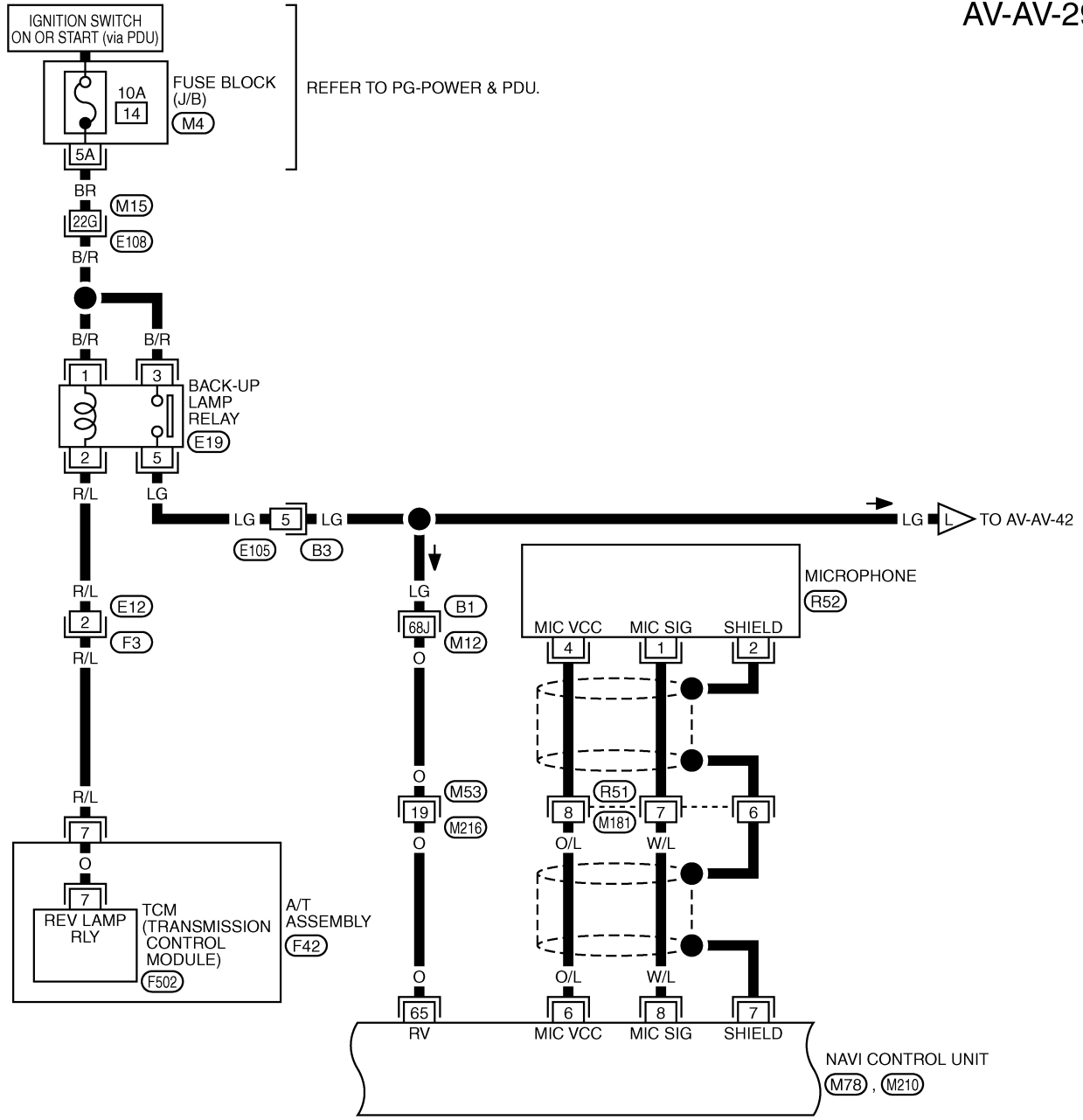


★: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

TKWT5320E

SYSTEM DESCRIPTION [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

AV-AV-29



REFER TO THE FOLLOWING.
 (E108), (B1) -SUPER MULTIPLE JUNCTION (SMJ)
 (M4) -FUSE BLOCK-JUNCTION BOX (J/B)

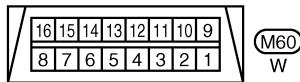
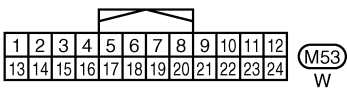
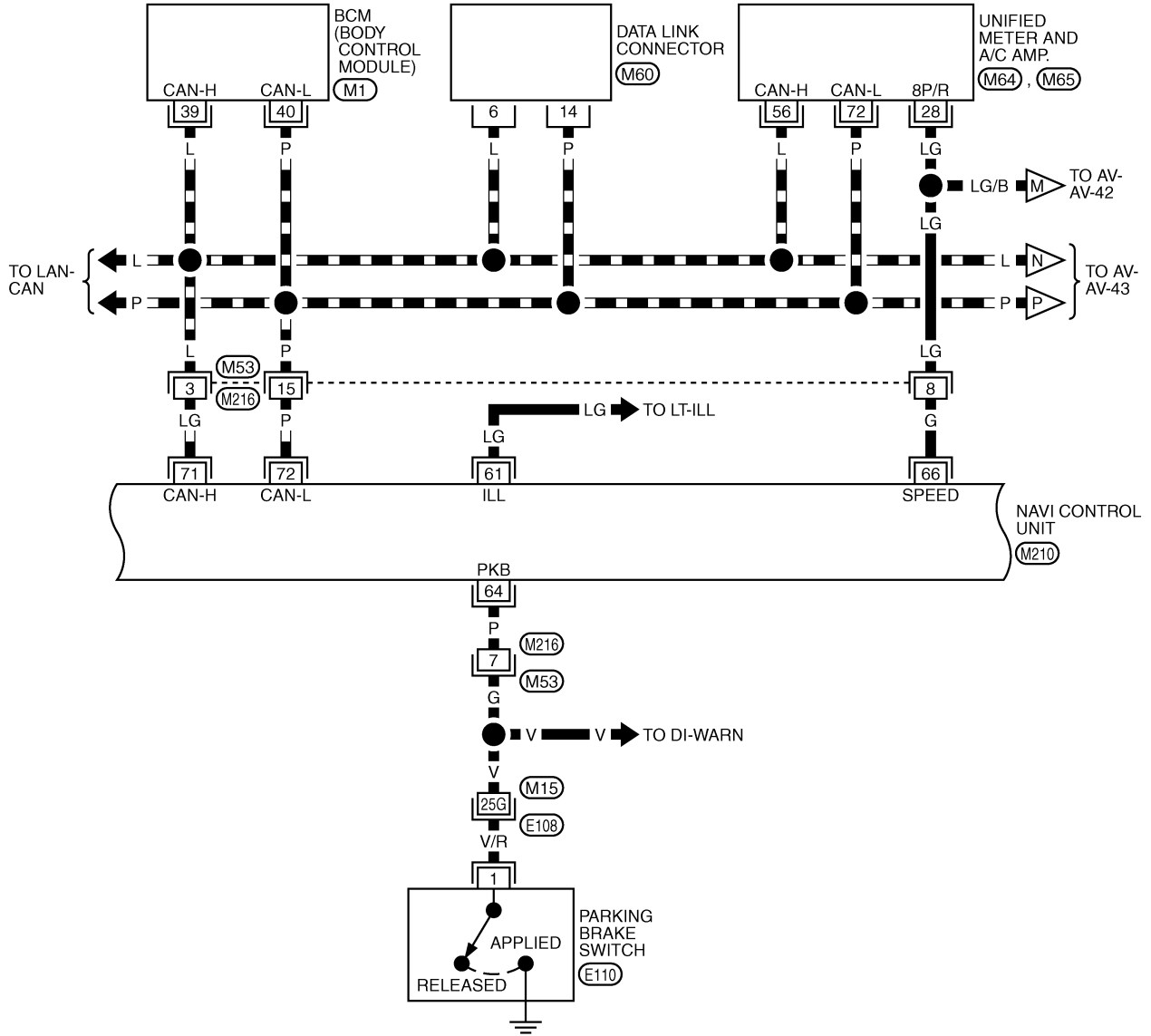
*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

TKWT5116E

SYSTEM DESCRIPTION [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

AV-AV-30

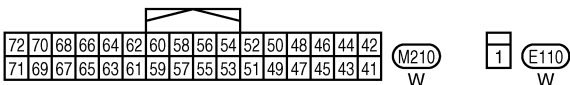
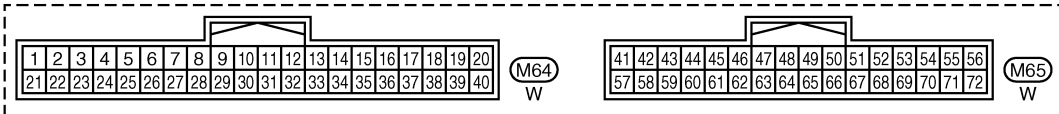
▬▬▬▬ : DATA LINE



REFER TO THE FOLLOWING.

E108 -SUPER MULTIPLE JUNCTION (SMJ)

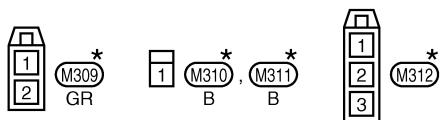
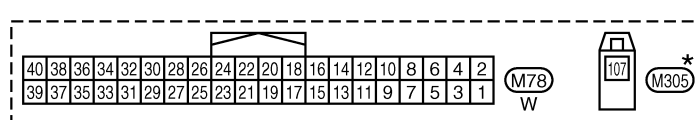
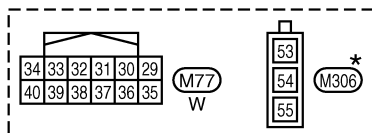
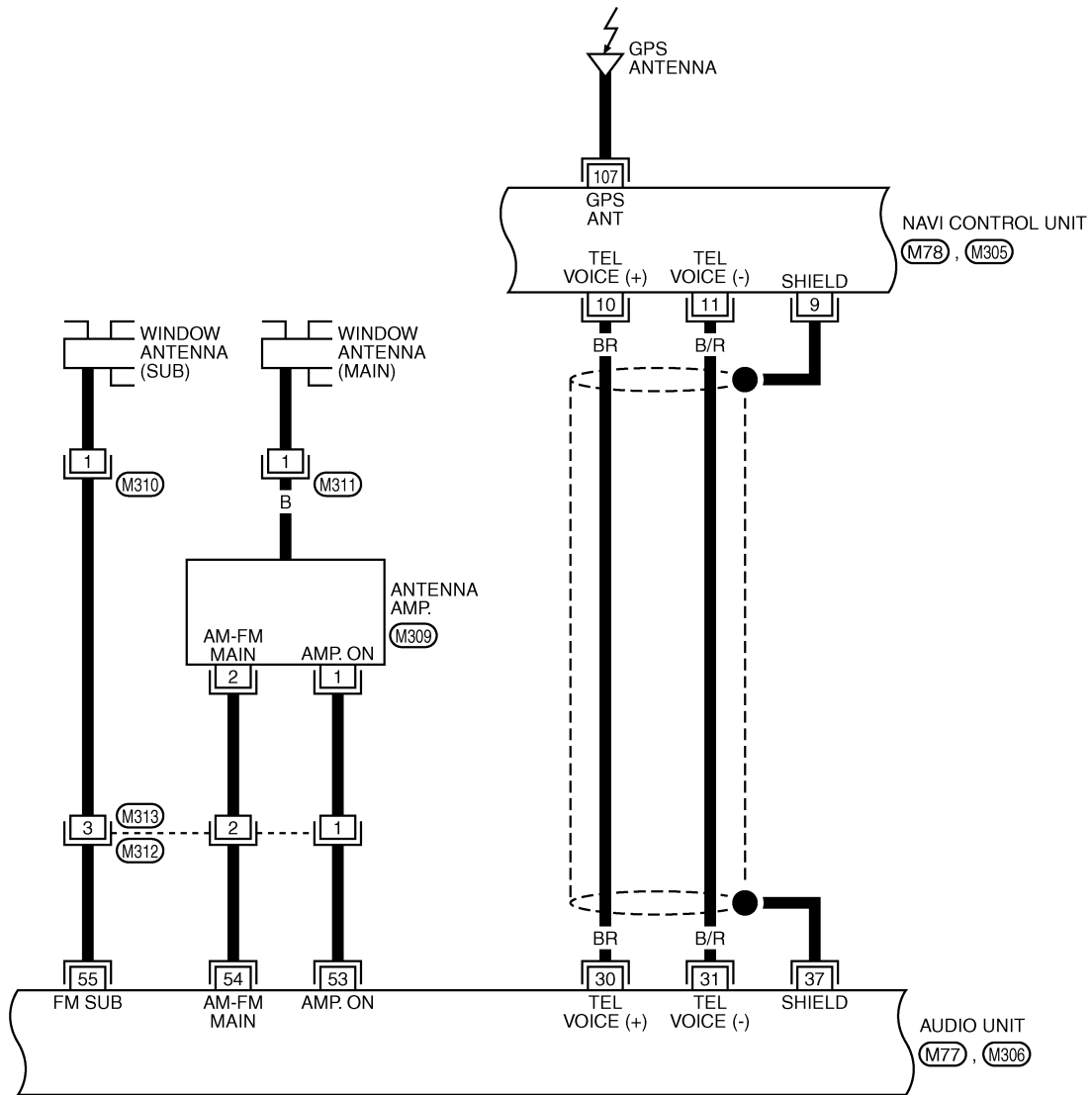
M1 -ELECTRICAL UNITS



TKWT5117E

SYSTEM DESCRIPTION [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

AV-AV-31



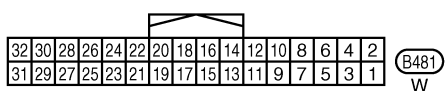
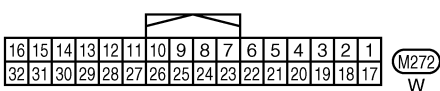
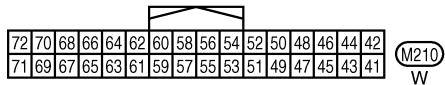
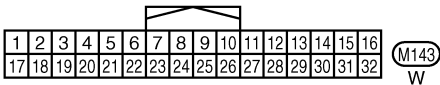
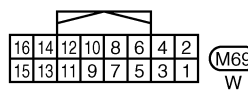
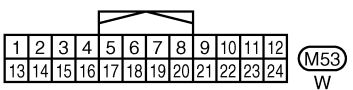
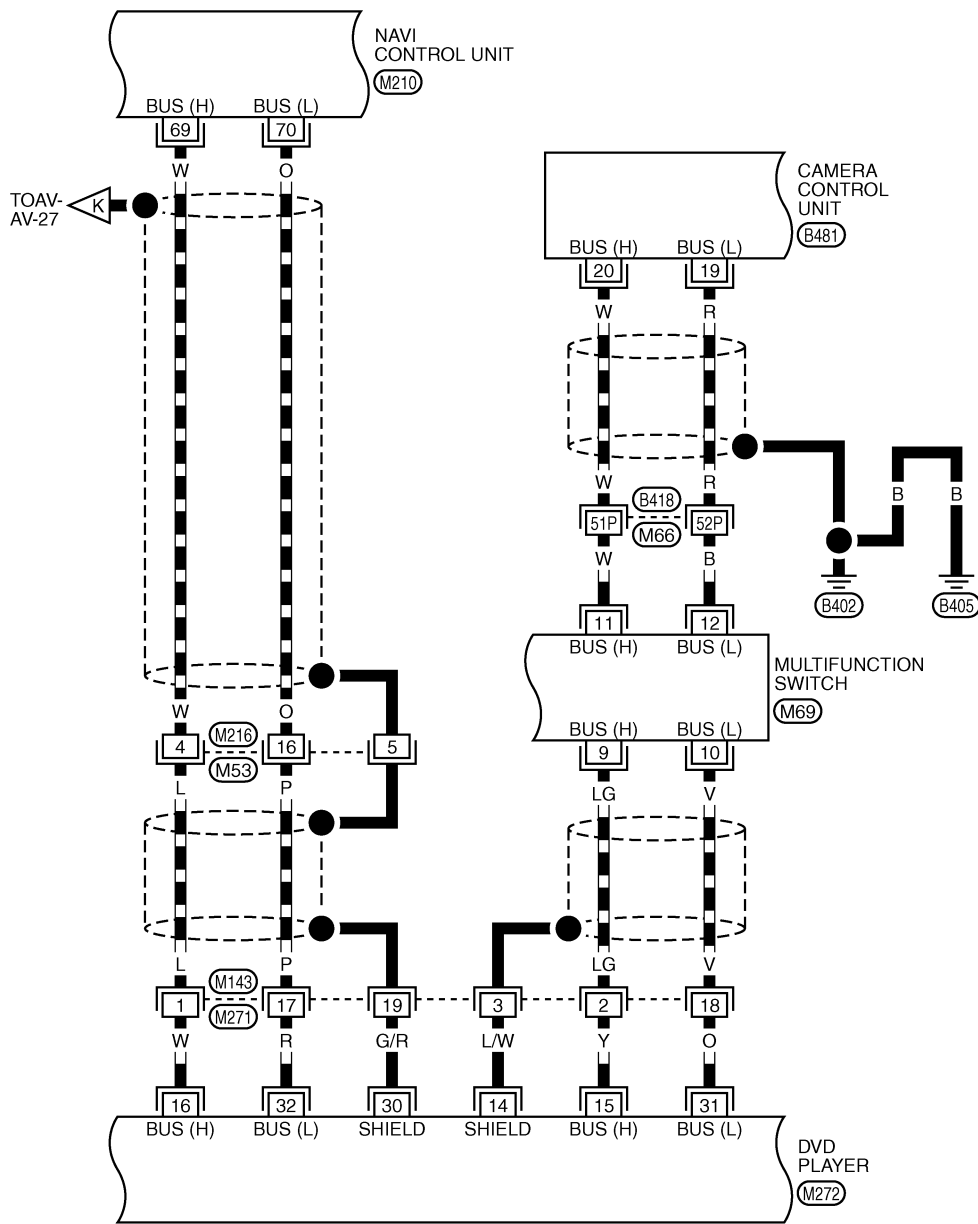
*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

TKWT5118E

SYSTEM DESCRIPTION [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

AV-AV-32

▬ : DATA LINE



REFER TO THE FOLLOWING.

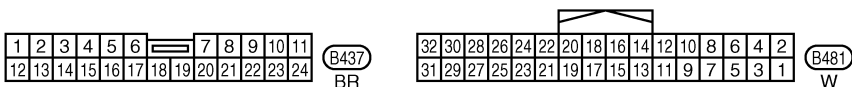
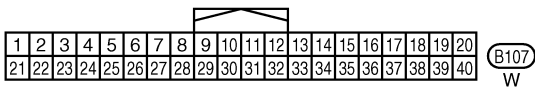
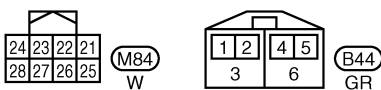
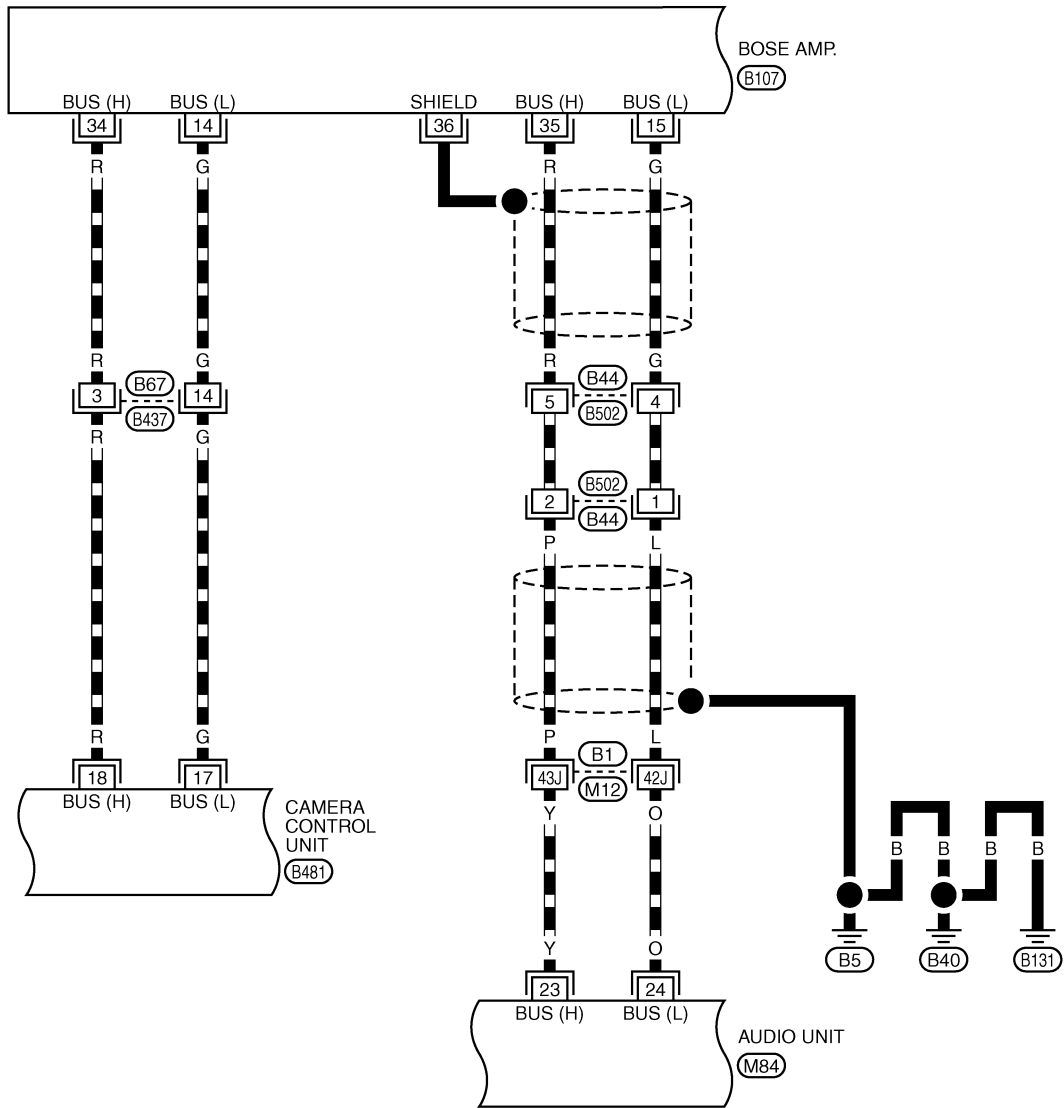
(B418) -SUPER MULTIPLE JUNCTION (SMJ)

TKWT5119E

SYSTEM DESCRIPTION [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

AV-AV-33

▬ : DATA LINE



REFER TO THE FOLLOWING.

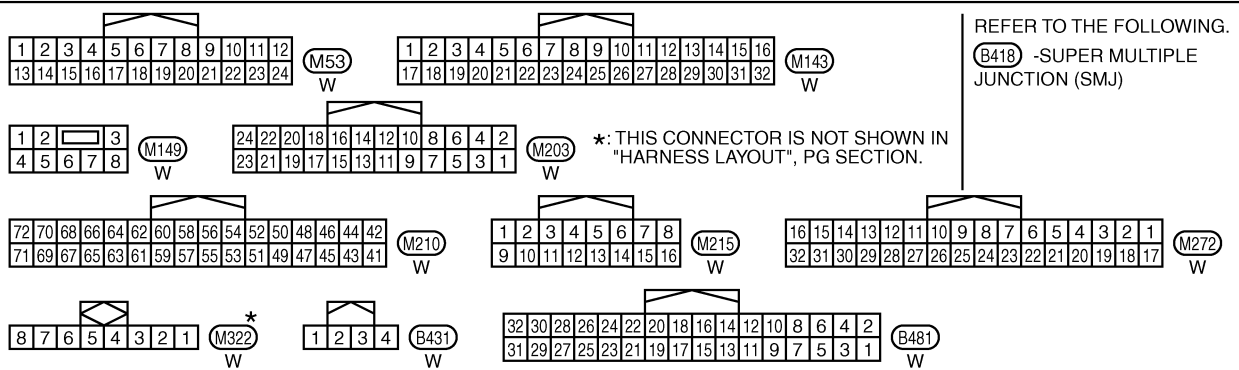
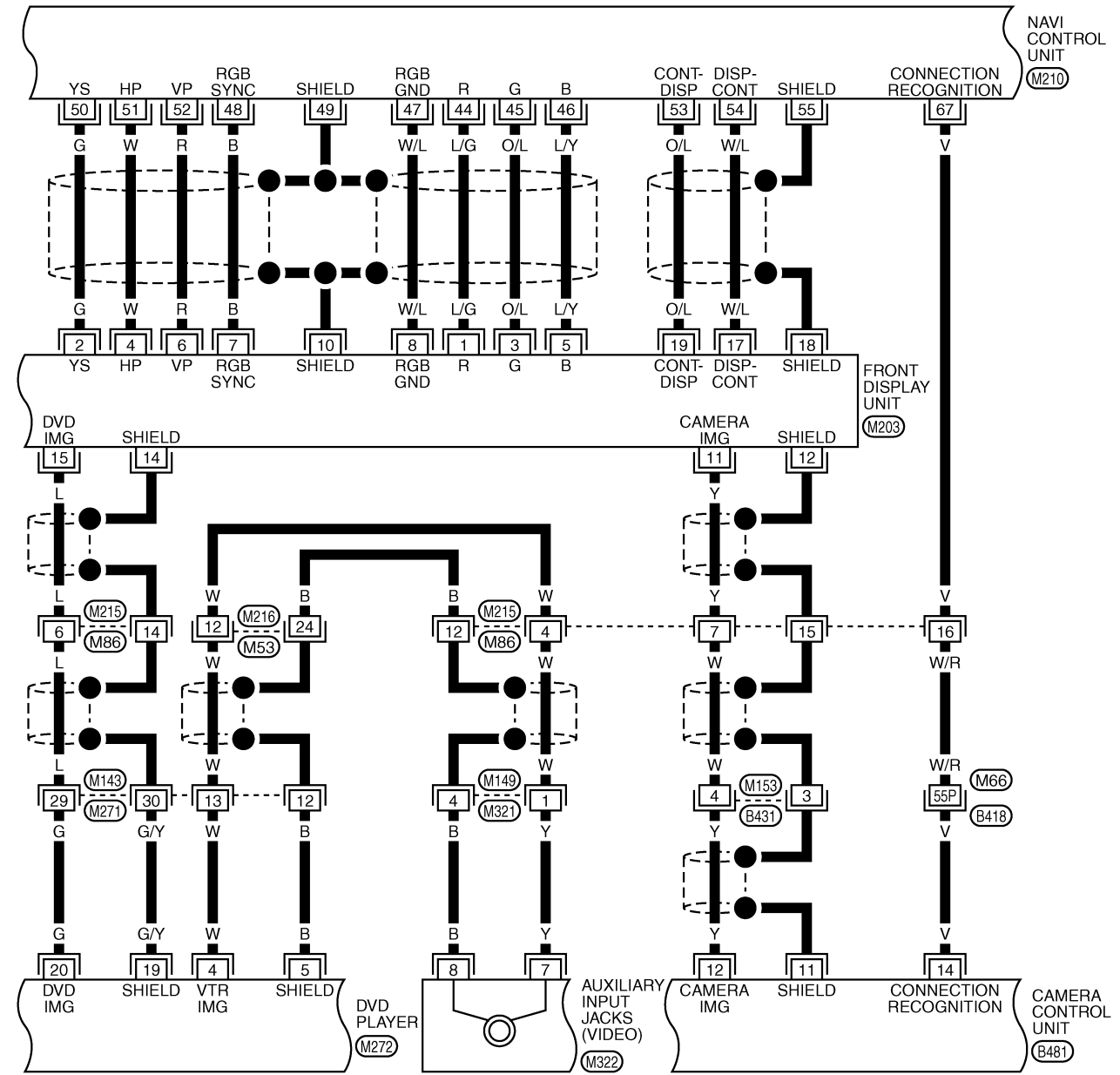
(B1) -SUPER MULTIPLE JUNCTION (SMJ)

TKWT5321E

SYSTEM DESCRIPTION [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

AV-AV-34

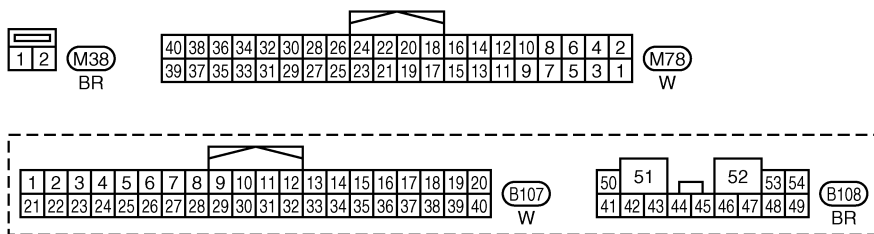
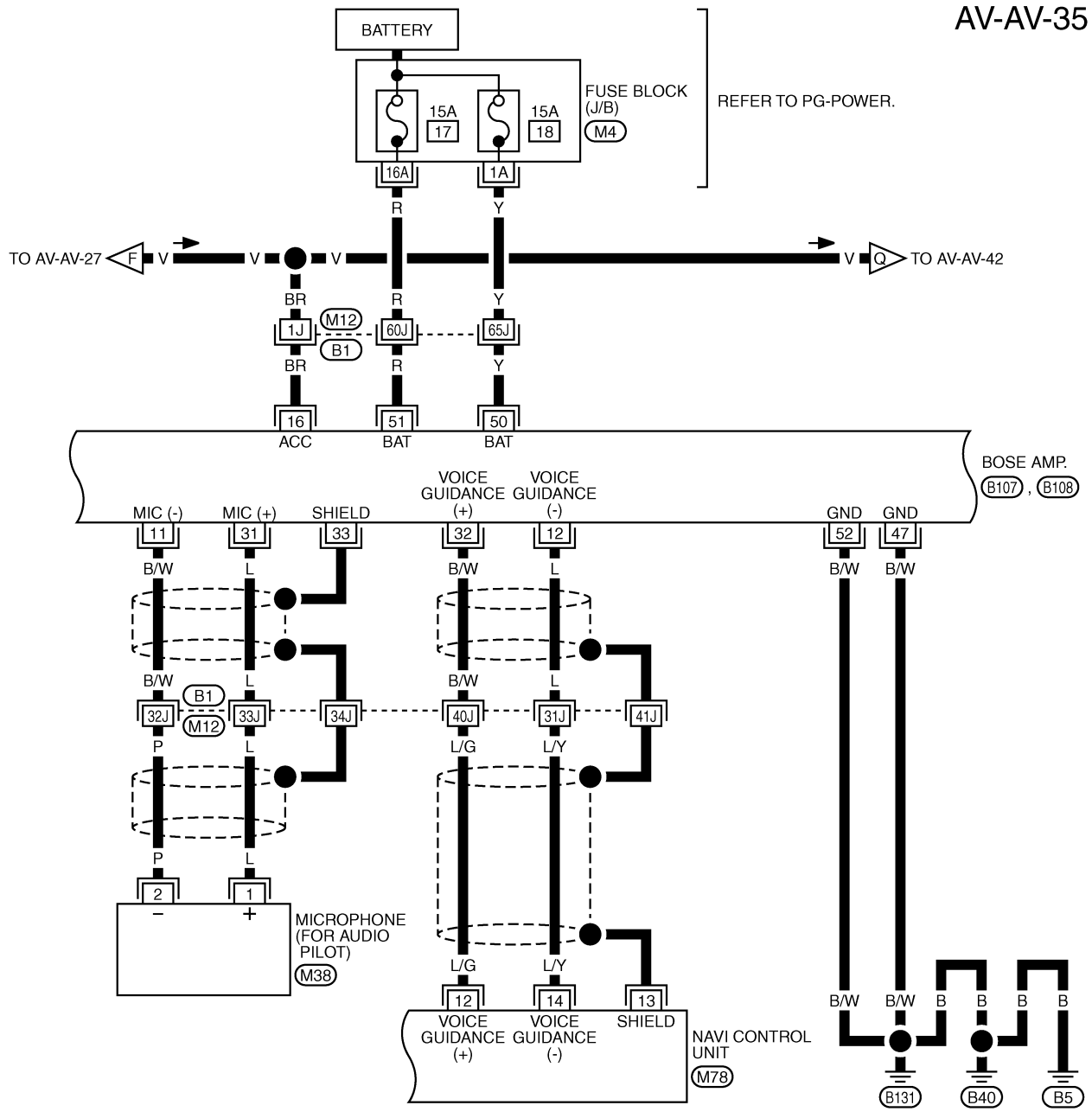
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TKWT5120E

SYSTEM DESCRIPTION [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

AV-AV-35

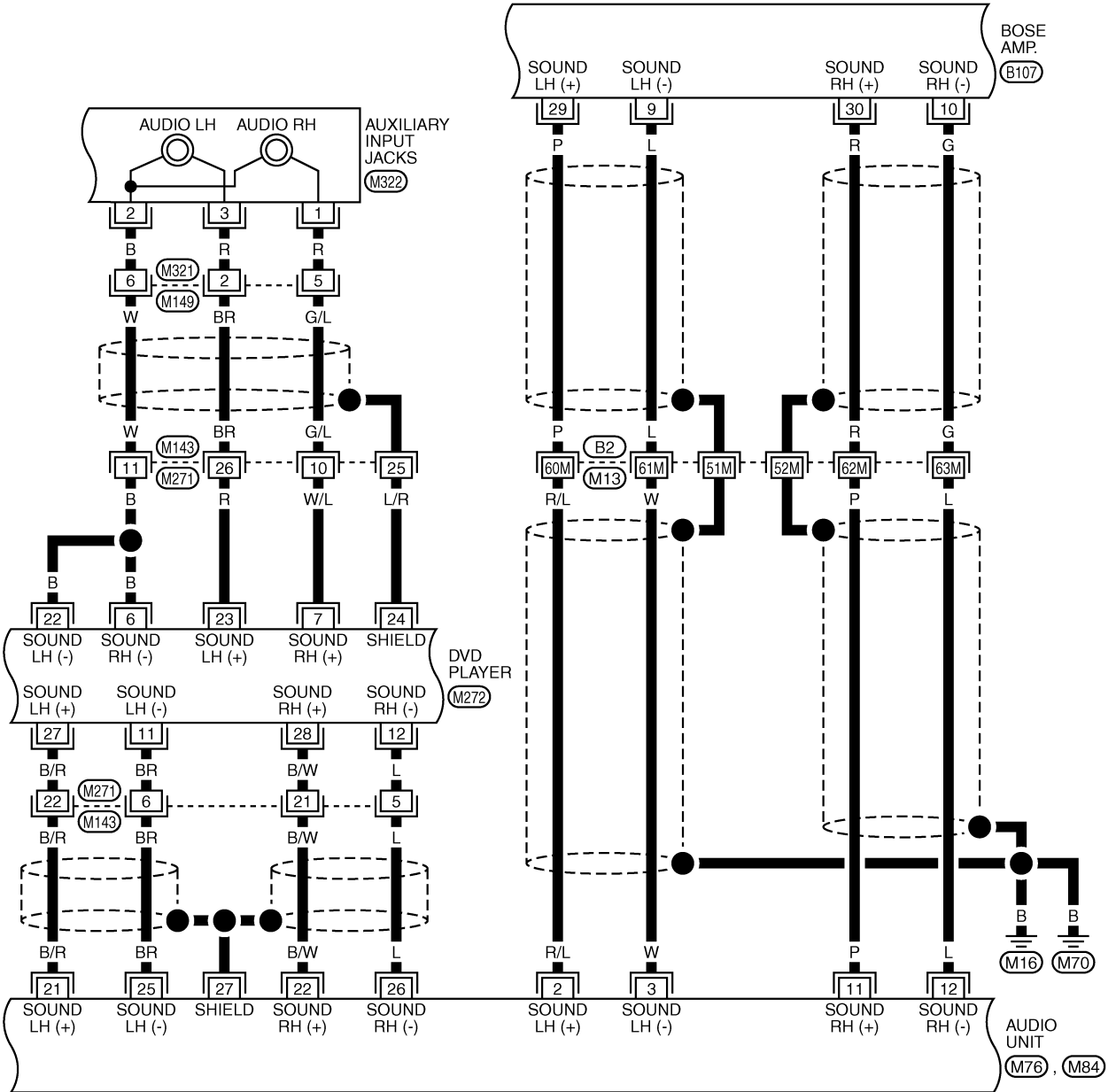


REFER TO THE FOLLOWING.
 (B1) -SUPER MULTIPLE JUNCTION (SMJ)
 (M4) -FUSE BLOCK-JUNCTION BOX (J/B)

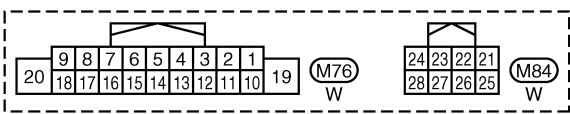
TKWT5121E

SYSTEM DESCRIPTION [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

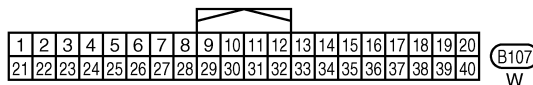
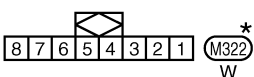
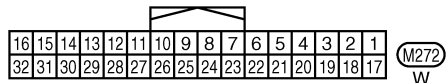
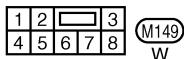
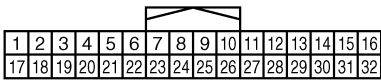
AV-AV-36



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REFER TO THE FOLLOWING.
B2 -SUPER MULTIPLE JUNCTION (SMJ)

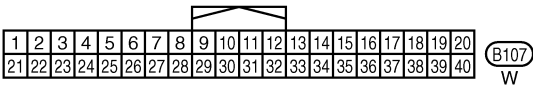
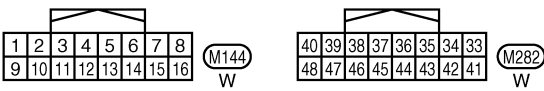
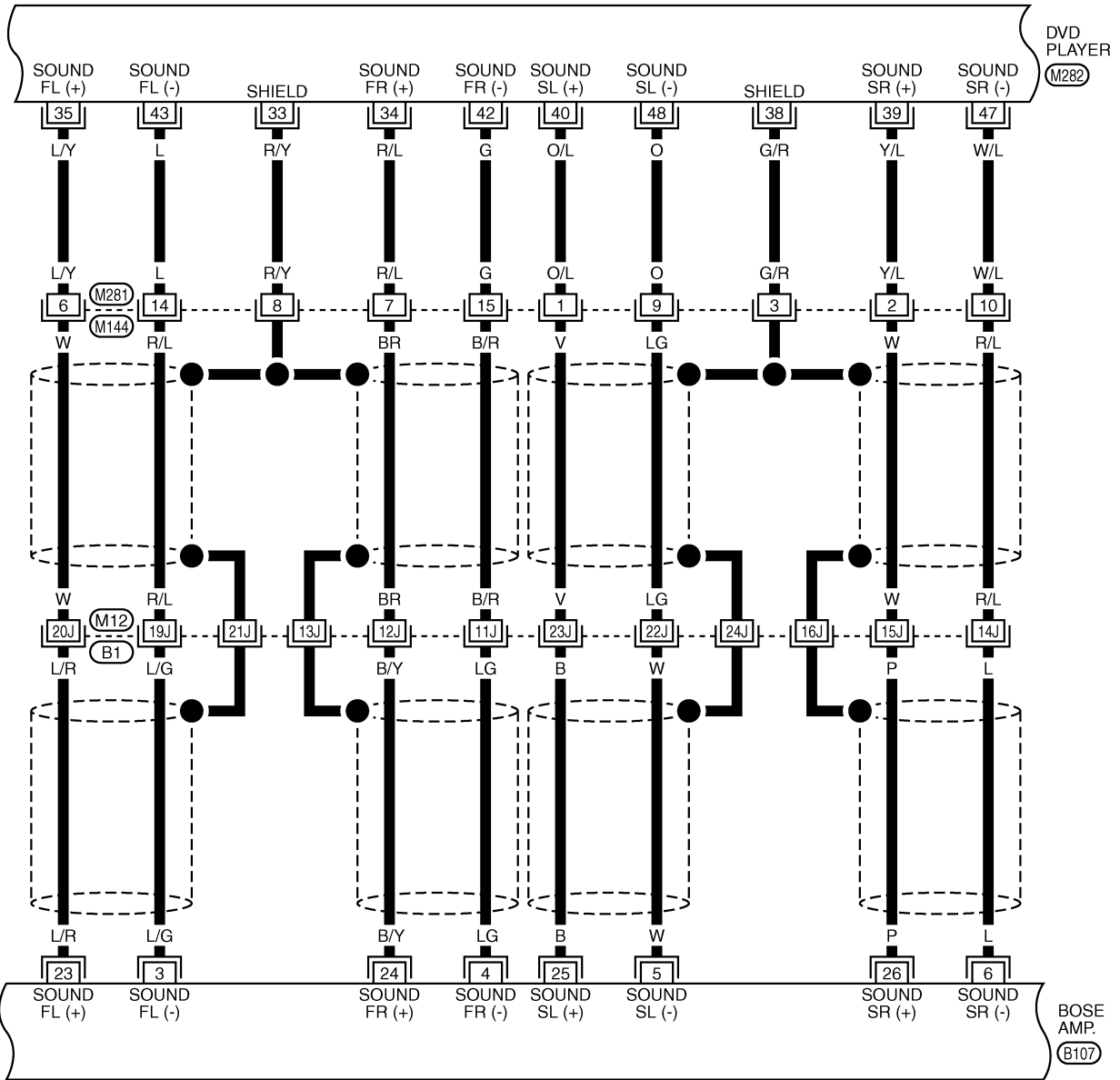


*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

TKWT6613E

SYSTEM DESCRIPTION [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

AV-AV-37

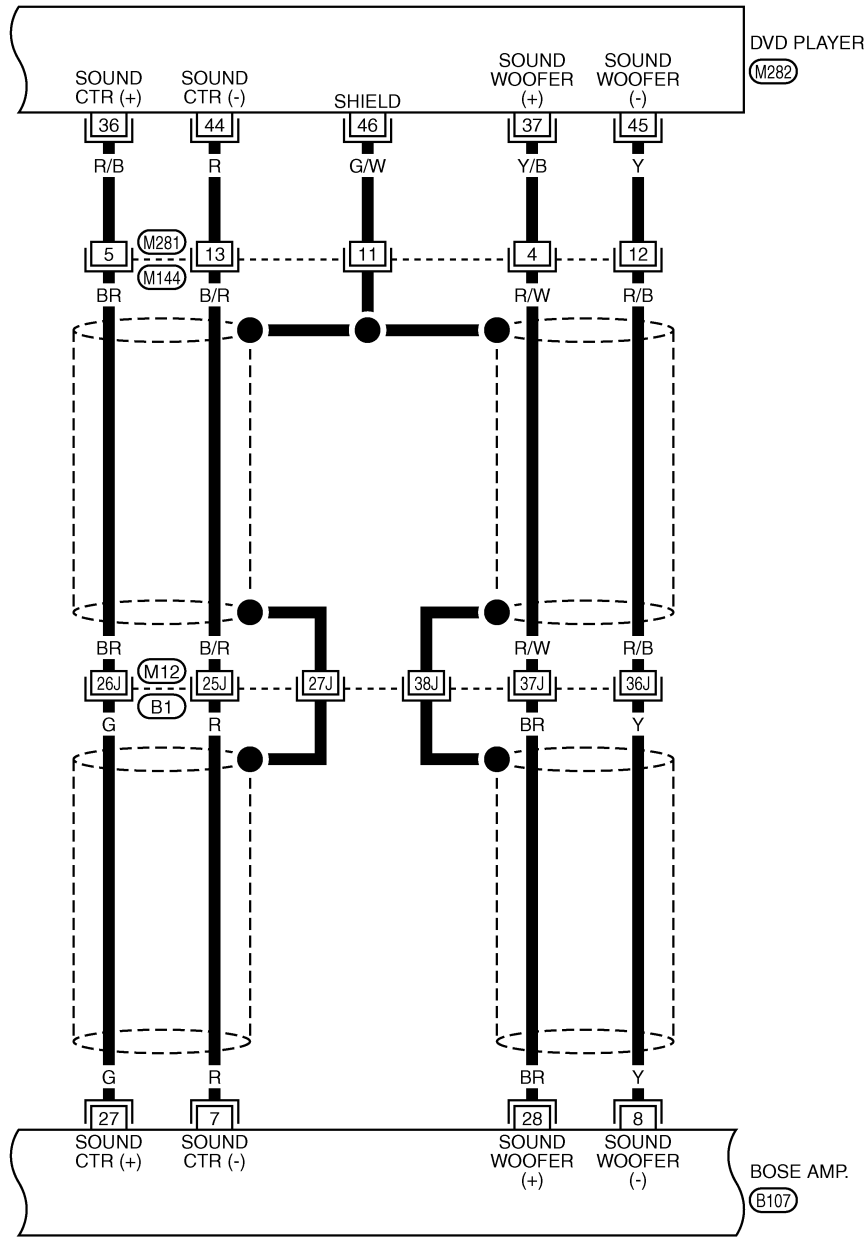


REFER TO THE FOLLOWING.
(B1) -SUPER MULTIPLE JUNCTION (SMJ)

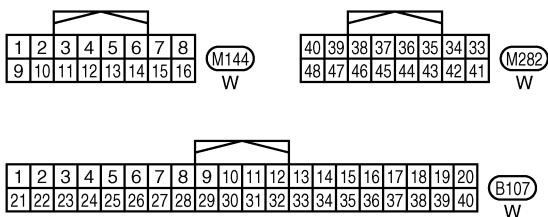
TKWT5123E

SYSTEM DESCRIPTION [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

AV-AV-38



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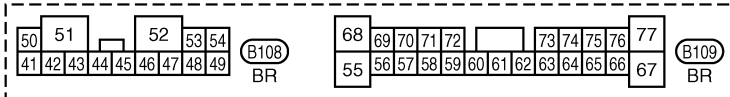
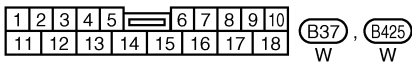
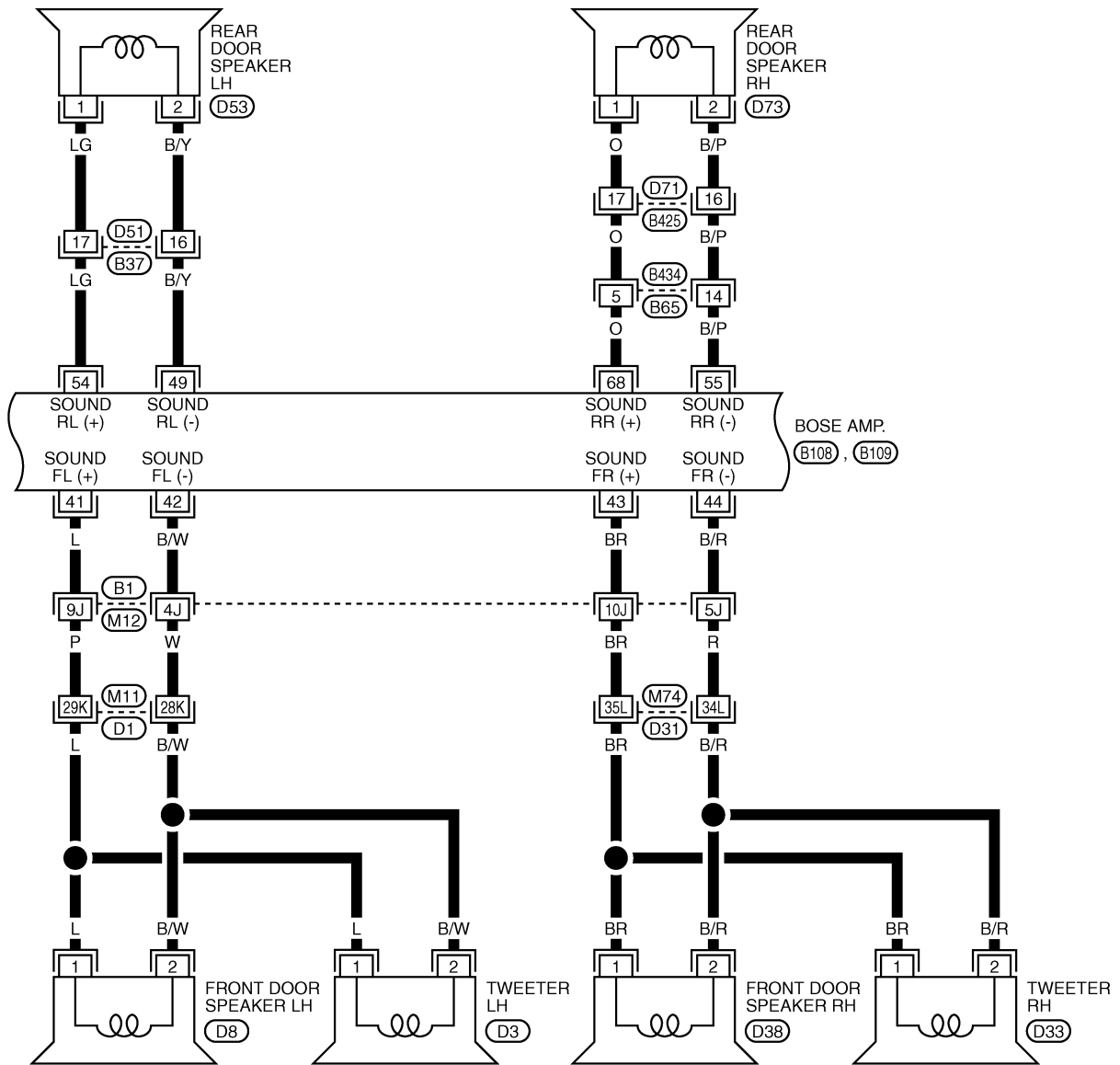


REFER TO THE FOLLOWING.
(B1) -SUPER MULTIPLE JUNCTION (SMJ)

TKWT5124E

SYSTEM DESCRIPTION [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

AV-AV-39

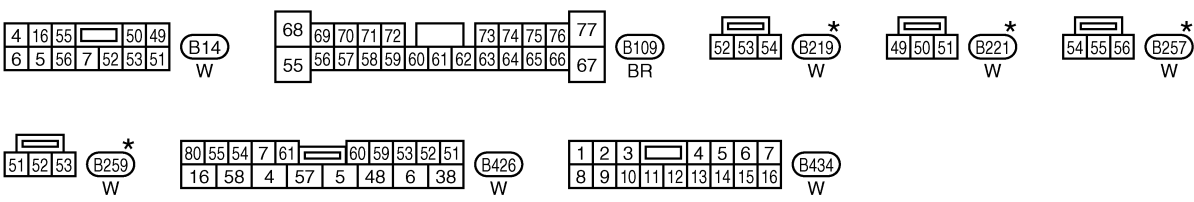
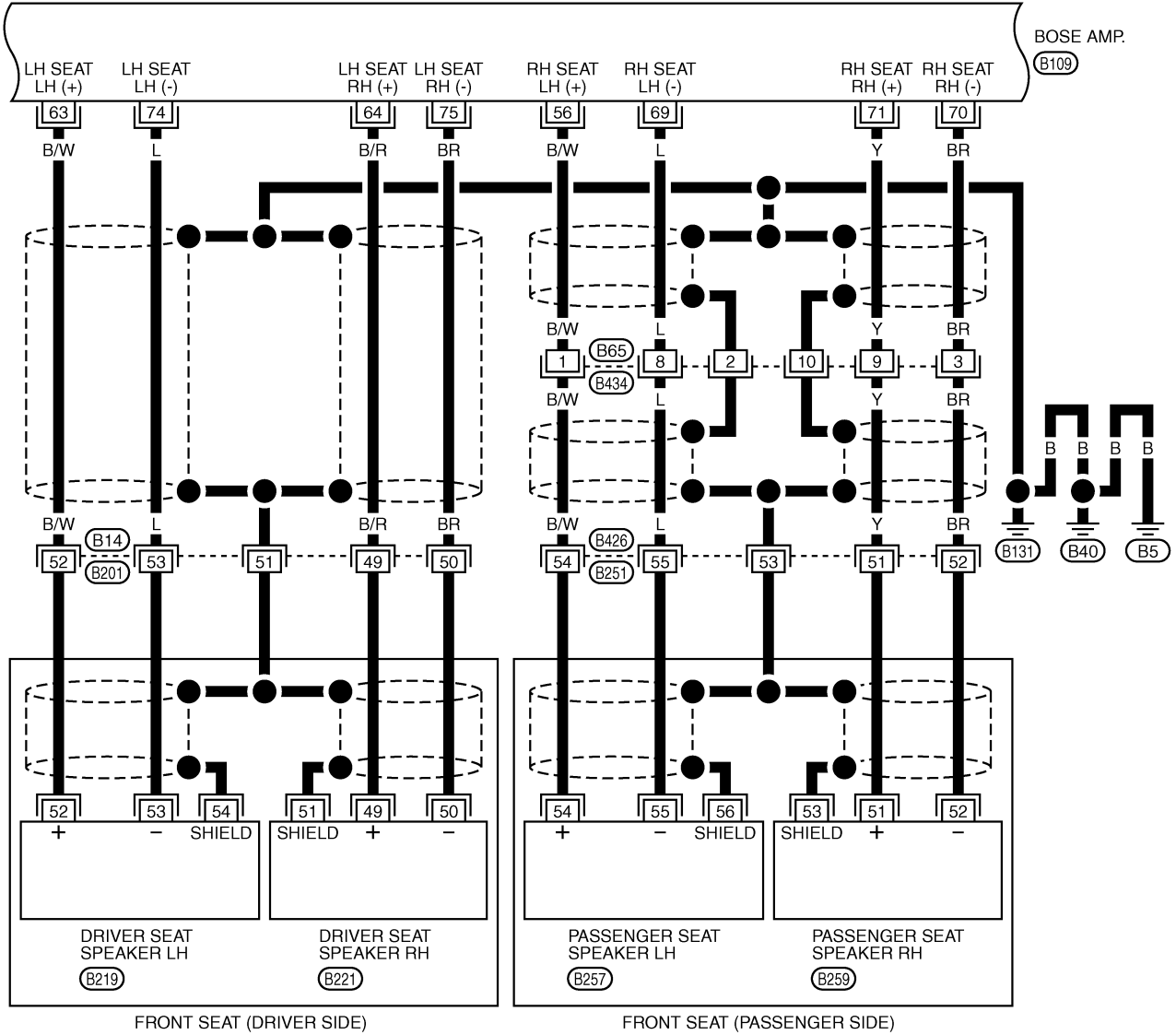


REFER TO THE FOLLOWING.
(B1), (D1), (D31) -SUPER
MULTIPLE JUNCTION (SMJ)

TKWT5322E

SYSTEM DESCRIPTION [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

AV-AV-40

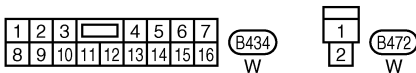
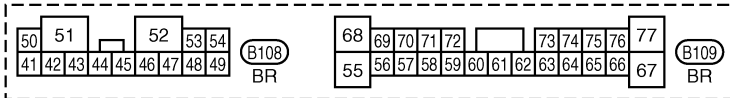
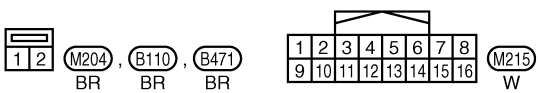
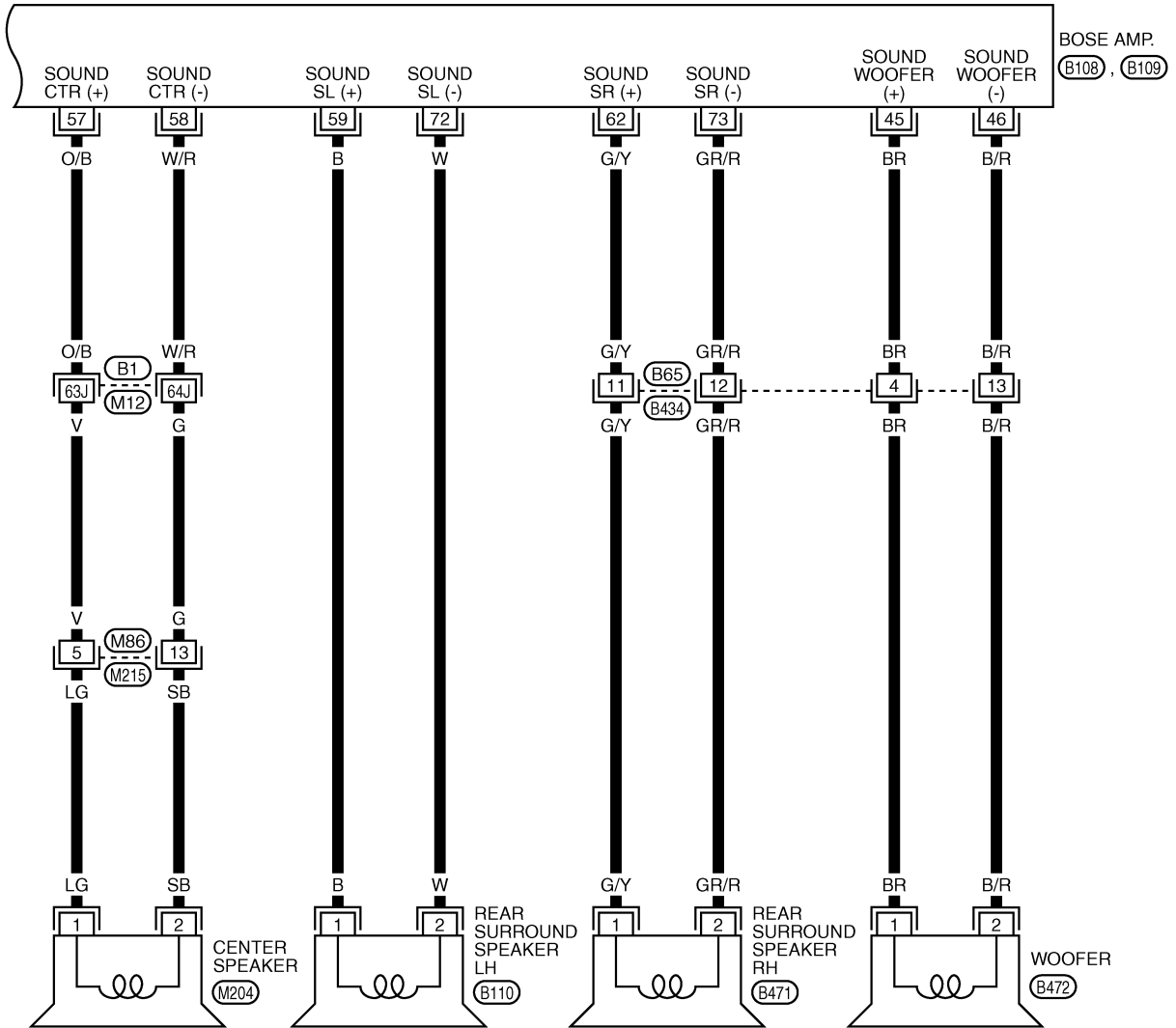


*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

TKWT5323E

SYSTEM DESCRIPTION [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

AV-AV-41



REFER TO THE FOLLOWING.

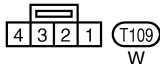
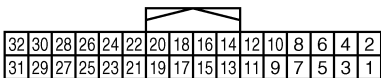
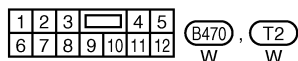
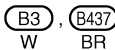
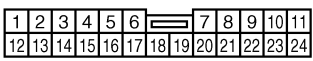
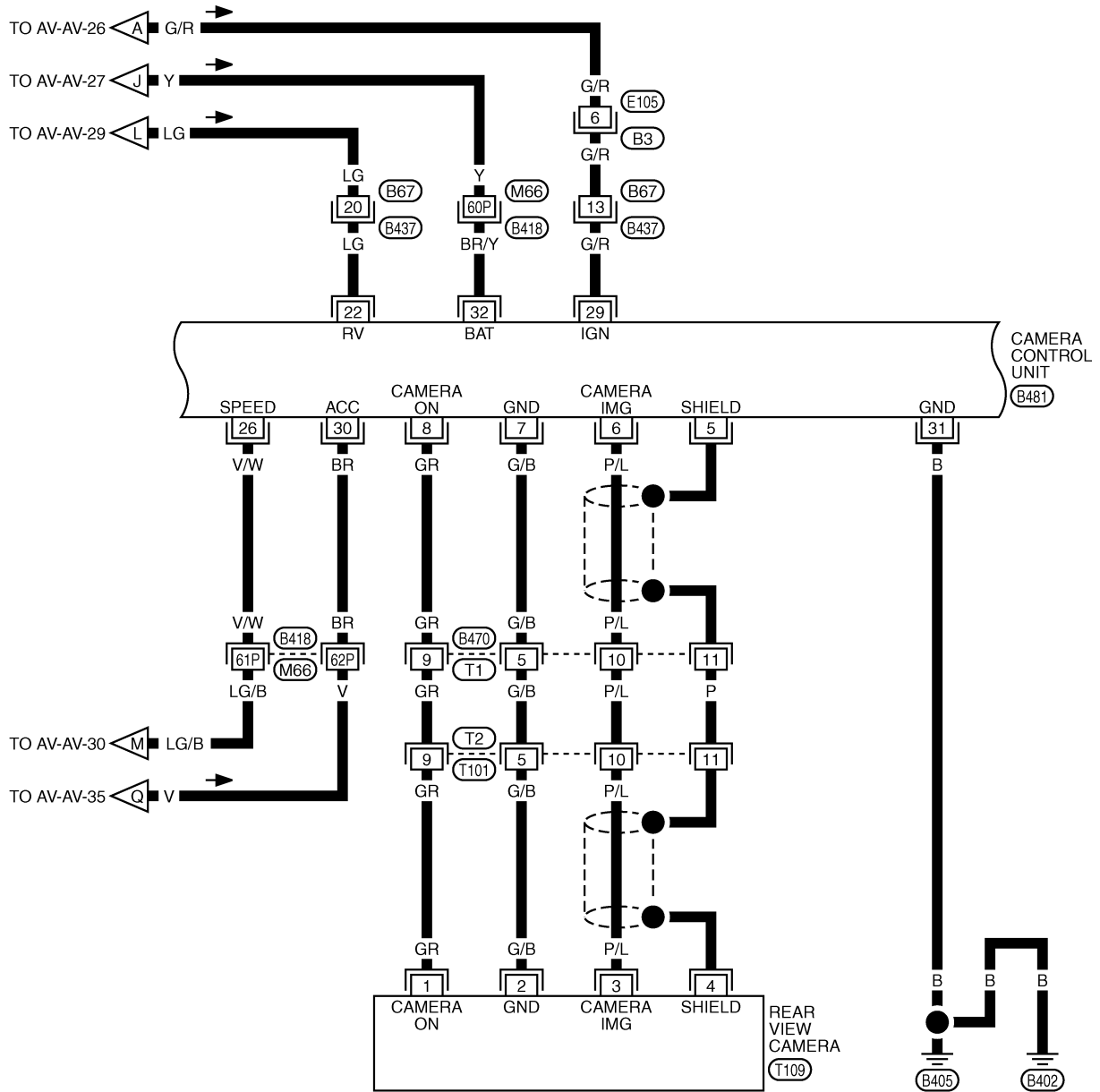
(B1) -SUPER MULTIPLE JUNCTION (SMJ)

TKWT5324E

SYSTEM DESCRIPTION [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

AV-AV-42

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REFER TO THE FOLLOWING.
(B418) -SUPER MULTIPLE JUNCTION (SMJ)

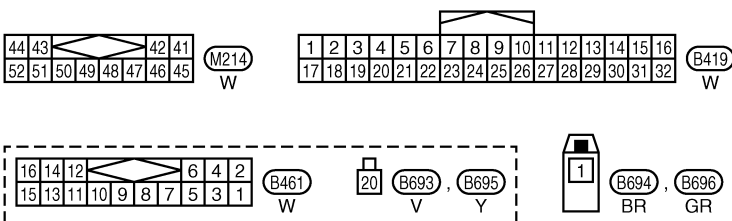
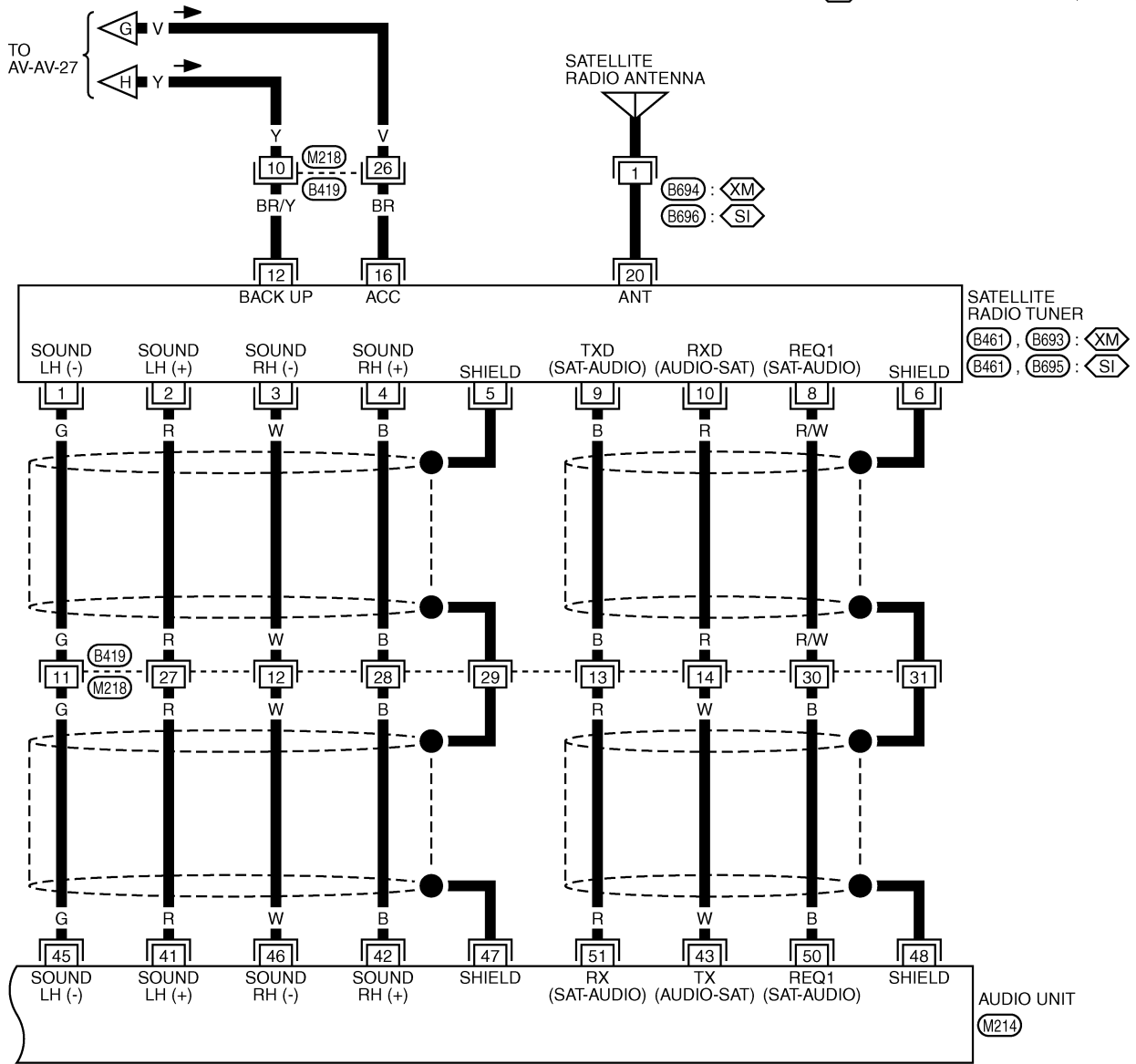
TKWT5125E

SYSTEM DESCRIPTION [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

AV-AV-44

 : WITH SATELLITE RADIO (XM)

 : WITH SATELLITE RADIO (SIRIUS)

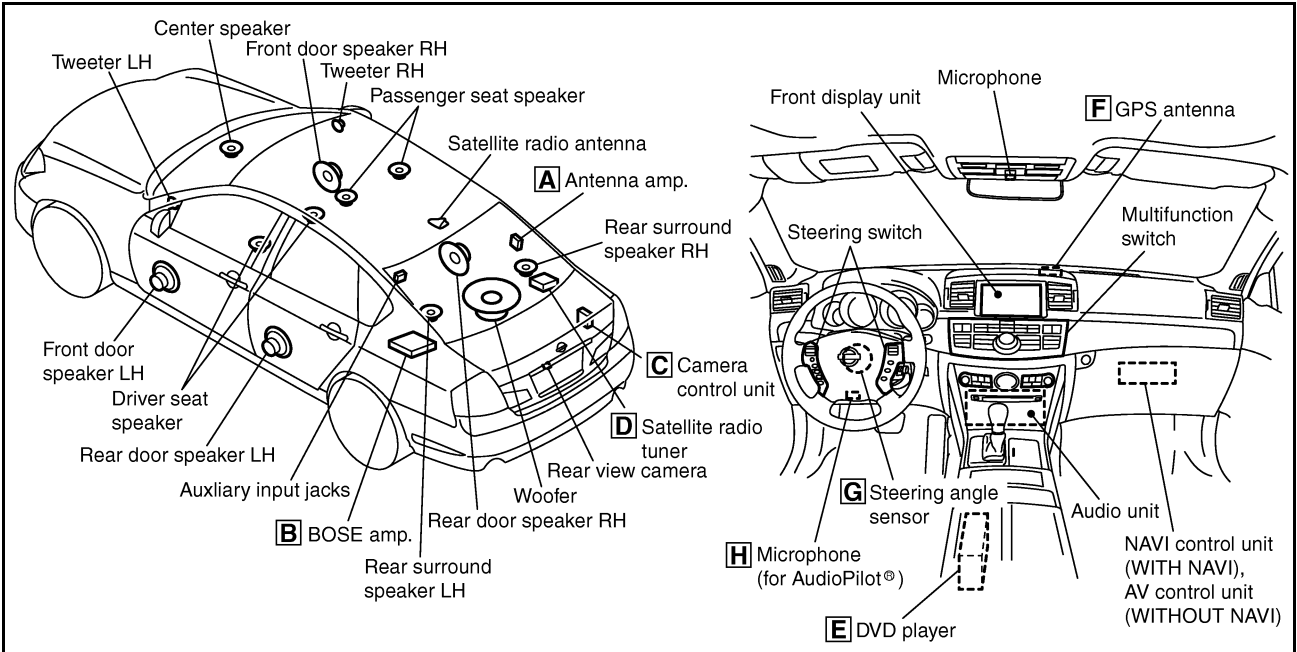


TKWT5127E

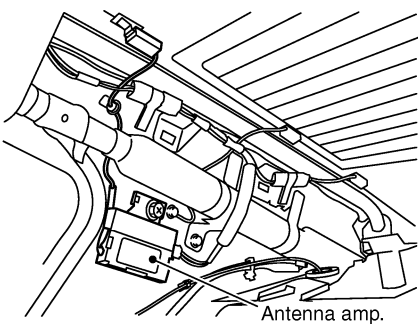
SYSTEM DESCRIPTION [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

NKS0048J

Component Parts Location

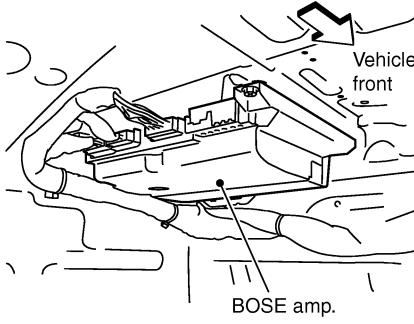


A Inside rear pillar RH



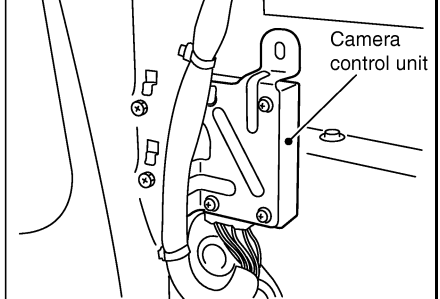
Antenna amp.

B Under rear parcel LH side



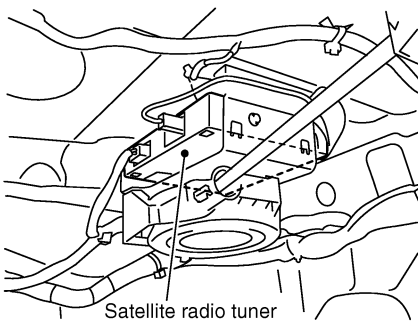
BOSE amp.

C RH side view with trunk side finisher (right) removed



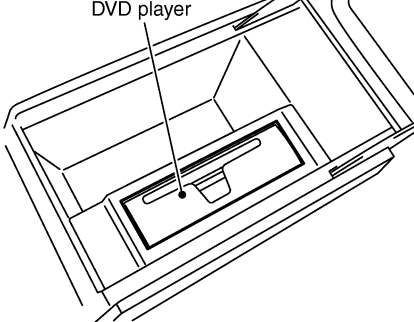
Camera control unit

D Under rear parcel RH side



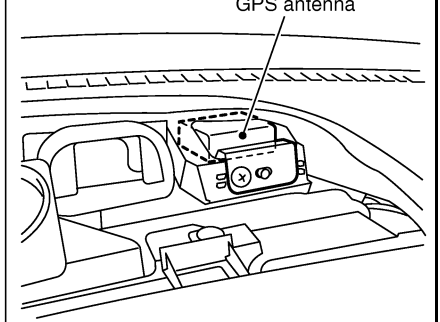
Satellite radio tuner

E DVD player



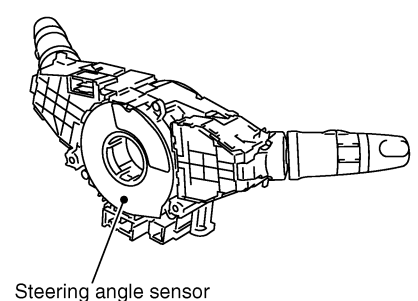
DVD player

F GPS antenna



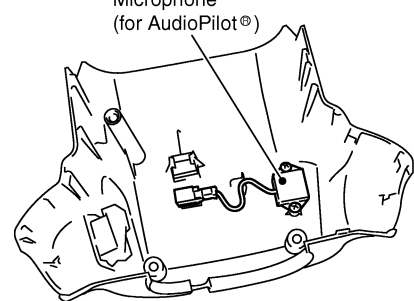
GPS antenna

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Steering angle sensor

H



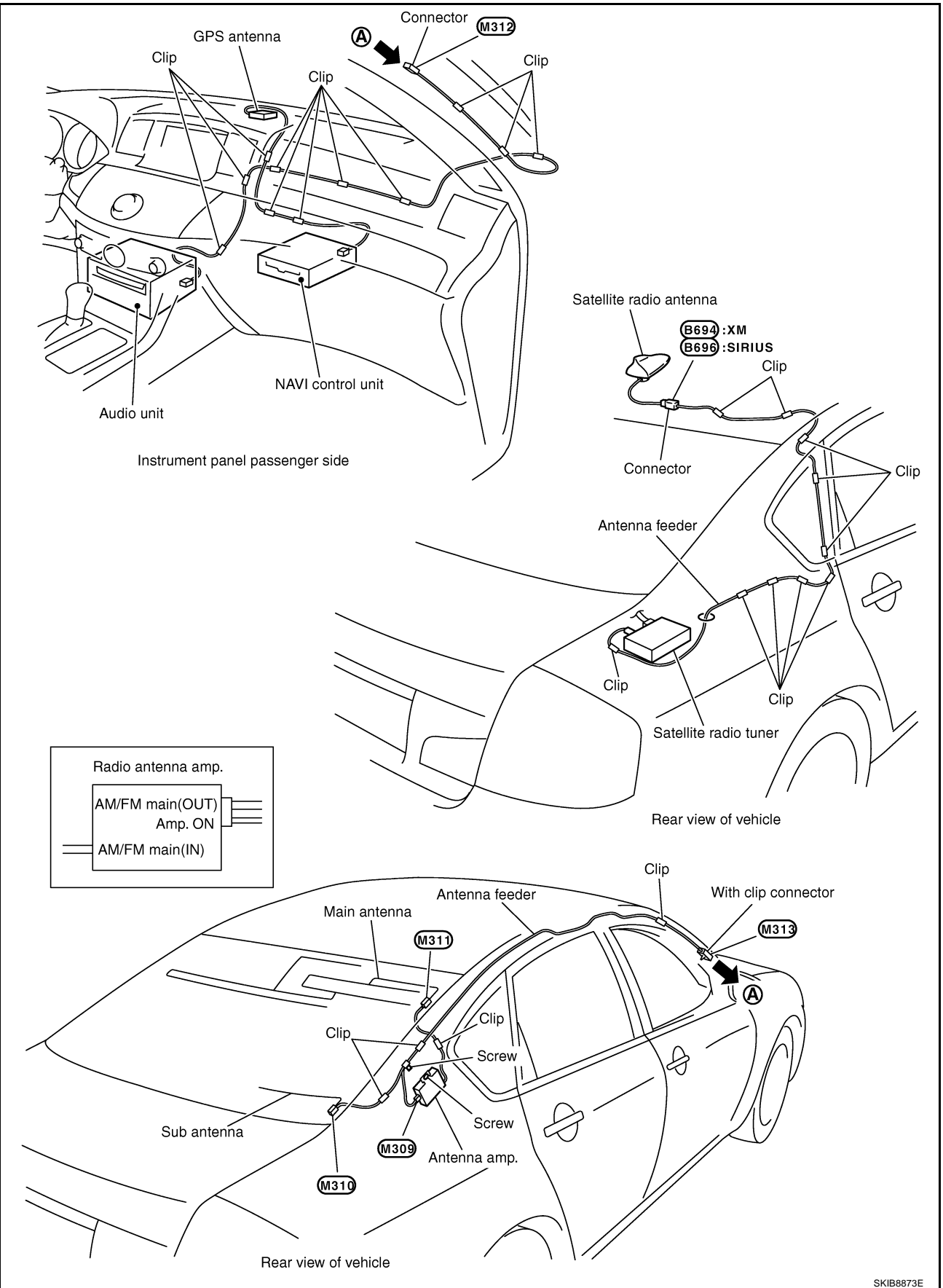
Microphone
(for AudioPilot®)

SKIB8874E

SYSTEM DESCRIPTION [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

Location of Antenna

NKS0048K



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SKIB8873E

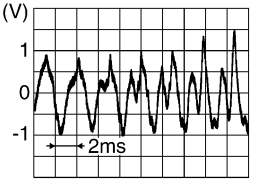
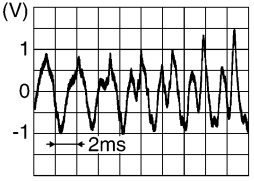
TERMINALS AND REFERENCE VALUE FOR CONTROL UNIT [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

TERMINALS AND REFERENCE VALUE FOR CONTROL UNIT

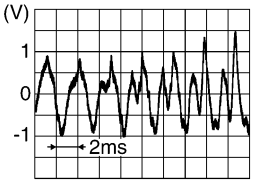
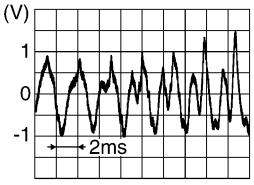
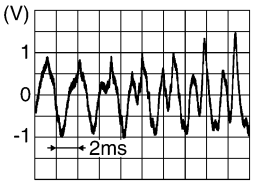
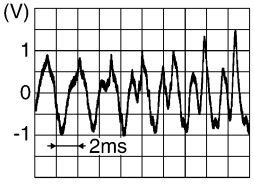
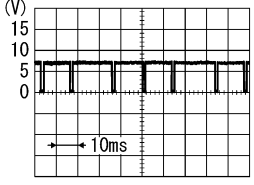
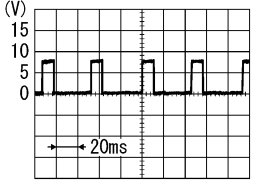
PFP:00000

Audio Unit for Base System

NKS0048L

| Terminal (Wire color) | | Item | Signal input/ output | Condition | | Reference value |
|---|--|-------------------------------|----------------------------|--------------------|--|---|
| + | - | | | Ignition switch | Operation | |
| 2 (P) ^{*1} (R/L) ^{*2} | 3 (W) | Audio signal front LH | Output | ON | Receive audio signal. |  <p style="text-align: right; font-size: small;">SKIB3609E</p> |
| 4 (LG) | 5 (SB) | Audio signal rear LH | | | | |
| 6 (BR) | 15 (G) | Steering switch signal A | Input | ON | Keep pushing SOURCE switch. | Approx. 0 V |
| | | | | | Keep pushing MENU UP switch. | Approx. 1.2 V |
| | | | | | Keep pushing MENU DOWN switch. | Approx. 2.5 V |
| | | | | | Keep pushing ENTER switch. | Approx. 3.7 V |
| | | | | | Except for above. | Approx. 5 V |
| 7 (V) | Ground | ACC power supply | Input | ACC | - | Battery voltage |
| 8 (B/W) | Ground | Illumination control signal | Input | OFF | Illumination control switch is operated by lighting switch in ON position. | Change between approx. 0 V and approx. 12 V |
| 9 (R) | Ground | Illumination signal | Input | OFF | Lighting switch is OFF. | Approx. 0 V |
| | | | | | Lighting switch is ON. | Approx. 12 V |
| 11 (BR) ^{*1} (P) ^{*2} | 12 (R) ^{*1} (L) ^{*2} | Audio signal front RH | Output | ON | Receive audio signal. |  <p style="text-align: right; font-size: small;">SKIB3609E</p> |
| 13 (Y) | 14 (P) | Audio signal rear RH | | | | |
| 15 (G) | Ground | Steering switch signal ground | - | ON | - | Approx. 0 V |
| 16 (O) | 15 (G) | Steering switch signal B | Input | ON | Keep pushing VOL DOWN switch. | Approx. 0 V |
| | | | | | Keep pushing VOL UP switch. | Approx. 1.2 V |
| | | | | | Keep pushing TEL switch. | Approx. 2.5 V |
| | | | | | Keep pushing BACK switch. | Approx. 3.7 V |
| | | | | | Except for above. | Approx. 5 V |
| 19 (Y) | Ground | Battery power supply | Input | OFF | - | Battery voltage |
| 20 (B) | Ground | Ground | - | ON | - | Approx. 0 V |
| 23 (R) ^{*1} (Y) ^{*2} | - | Communication signal (H) | Input/ Output | - | - | - |

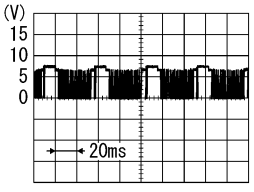
TERMINALS AND REFERENCE VALUE FOR CONTROL UNIT [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

| Terminal (Wire color) | | Item | Signal input/ output | Condition | | Reference value |
|--|--|-------------------------------------|----------------------------|--------------------|------------------------------------|--|
| + | - | | | Ignition switch | Operation | |
| 24 (B) ^{*1} (O) ^{*2} | - | Communication signal (L) | Input/ Output | - | - | - |
| 30 (BR) | 31 (B/R) | TEL voice signal | Input | ON | When inputting telephone voice. |  SKIB3609E |
| 32 (L/G) ^{*1} (P) ^{*2} | 33 (L/Y) ^{*1} (L) ^{*2} | Voice guidance signal | Input | ON | Push "VOICE" button. |  SKIB3609E |
| 37 | - | Shield | - | - | - | - |
| 38 | - | Shield | - | - | - | - |
| 41 (R) | 45 (G) | Audio signal LH | Input | ON | Satellite radio mode is ON. |  SKIB3609E |
| 42 (B) | 46 (W) | Audio signal RH | Input | ON | Satellite radio mode is ON. |  SKIB3609E |
| 43 (W) | Ground | Communication signal (AUDIO-SAT) | Output | ON | Satellite radio mode is ON. |  SKIB3826E |
| 47 | - | Shield | - | - | - | - |
| 48 | - | Shield | - | - | - | - |
| 50 (B) | Ground | REQ1 (SAT-AUDIO) | Input | ON | Satellite radio mode is ON. |  SKIB3825E |

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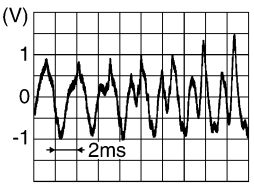
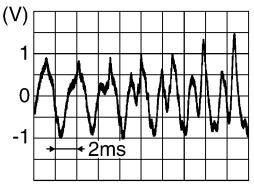
TERMINALS AND REFERENCE VALUE FOR CONTROL UNIT [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

| Terminal (Wire color) | | Item | Signal input/ output | Condition | | Reference value |
|--------------------------|--------|-------------------------------------|----------------------------|--------------------|-----------------------------|---|
| + | - | | | Ignition switch | Operation | |
| 51 (R) | Ground | Communication signal (SAT-AUDIO) | Input | ON | Satellite radio mode is ON. |  <small>SKIB3824E</small> |
| 53 | Ground | Antenna amp ON signal | Output | ON | - | Approx. 12 V |
| 54 | - | AM-FM main | Input | - | - | - |
| 55 | - | FM sub | Input | - | - | - |

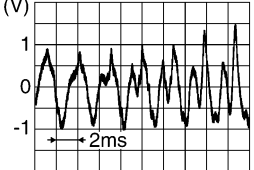
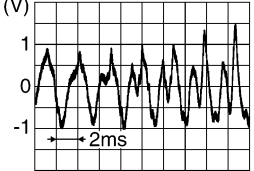
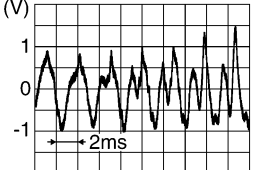
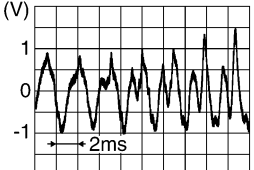
- *1: 2WD models without navigation system and RAS
- *2: Except *1

Audio Unit for BOSE System

NKS0048M

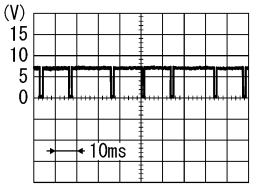
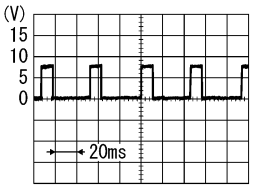
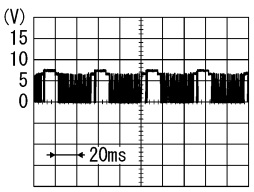
| Terminal (Wire color) | | Item | Signal input/ output | Condition | | Reference value |
|--------------------------|-----------|-----------------------------|----------------------------|--------------------|--|---|
| + | - | | | Ignition switch | Operation | |
| 2 (R/L) | 3 (W) | Audio signal LH | Output | ON | Receive audio signal. |  <small>SKIB3609E</small> |
| 6 (BR) | 15 (G) | Steering switch signal A | Input | ON | Keep pushing SOURCE switch. | Approx. 0 V |
| | | | | | Keep pushing MENU UP switch. | Approx. 1.2 V |
| | | | | | Keep pushing MENU DOWN switch. | Approx. 2.5 V |
| | | | | | Keep pushing ENTER switch. | Approx. 3.7 V |
| | | | | | Except for above. | Approx. 5 V |
| 7 (V) | Ground | ACC power supply | Input | ACC | - | Battery voltage |
| 8 (B/W) | Ground | Illumination control signal | Input | OFF | Illumination control switch is operated by lighting switch in ON position. | Change between approx. 0 V and approx. 12 V |
| 9 (R) | Ground | Illumination signal | Input | OFF | Lighting switch is OFF. | Approx. 0 V |
| | | | | | Lighting switch is ON. | Approx. 12 V |
| 11 (P) | 12 (L) | Audio signal RH | Output | ON | Receive audio signal. |  <small>SKIB3609E</small> |

TERMINALS AND REFERENCE VALUE FOR CONTROL UNIT [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

| Terminal (Wire color) | | Item | Signal input/ output | Condition | | Reference value |
|--------------------------|-------------------------|----------------------------------|----------------------------|--------------------|--------------------------------------|---|
| + | - | | | Ignition switch | Operation | |
| 15 (G) | Ground | Steering switch signal ground | - | ON | - | Approx. 0 V |
| 16 (O) | 15 (G) | Steering switch signal B | Input | ON | Keep pushing VOL DOWN switch. | Approx. 0 V |
| | | | | | Keep pushing VOL UP switch. | Approx. 1.2 V |
| | | | | | Keep pushing TEL, PTT switch. | Approx. 2.5 V |
| | | | | | Keep pushing BACK switch. | Approx. 3.7 V |
| | | | | | Except for above. | Approx. 5 V |
| 19 (Y) | Ground | Battery power supply | Input | OFF | - | Battery voltage |
| 20 (B) | Ground | Ground | - | ON | - | Approx. 0 V |
| 21 [*] (B/R) | 25 [*] (BR) | Sound signal LH | Input | ON | When playing DVD (Down mix is ON) |  <small>SKIB3609E</small> |
| 22 [*] (B/W) | 26 [*] (L) | Sound signal RH | | | | |
| 23 (Y) | - | Communication signal (H) | Input/ Output | - | - | - |
| 24 (O) | - | Communication signal (L) | Input/ Output | - | - | - |
| 27 [*] | - | Shield | - | - | - | - |
| 30 (BR) | 31 (B/R) | TEL voice signal | Input | ON | When inputting TEL voice signal. |  <small>SKIB3609E</small> |
| 37 | - | Shield | - | - | - | - |
| 41 (R) | 45 (G) | Audio signal LH | Input | ON | Satellite radio mode is ON. |  <small>SKIB3609E</small> |
| 42 (B) | 46 (W) | Audio signal RH | Input | ON | Satellite radio mode is ON. |  <small>SKIB3609E</small> |

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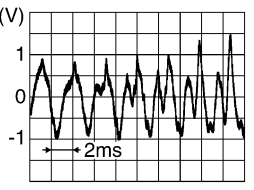
TERMINALS AND REFERENCE VALUE FOR CONTROL UNIT [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

| Terminal (Wire color) | | Item | Signal input/ output | Condition | | Reference value |
|--------------------------|--------|-------------------------------------|----------------------------|--------------------|-----------------------------|--|
| + | - | | | Ignition switch | Operation | |
| 43 (W) | Ground | Communication signal (AUDIO-SAT) | Output | ON | Satellite radio mode is ON. |  <small>SKIB3826E</small> |
| 47 | - | Shield | - | - | - | - |
| 48 | - | Shield | - | - | - | - |
| 50 (B) | Ground | REQ1 (SAT-AUDIO) | Input | ON | Satellite radio mode is ON. |  <small>SKIB3825E</small> |
| 51 (R) | Ground | Communication signal (SAT-AUDIO) | Input | ON | Satellite radio mode is ON. |  <small>SKIB3824E</small> |
| 53 | Ground | Antenna amp ON signal | Output | ON | - | Approx. 12V |
| 54 | - | AM-FM main | Input | - | - | - |
| 55 | - | FM sub | Input | - | - | - |

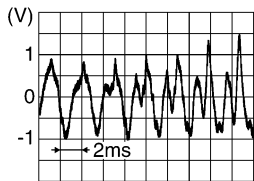
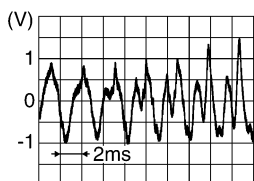
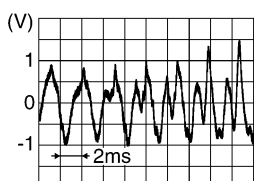
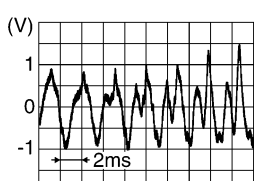
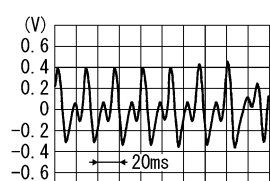
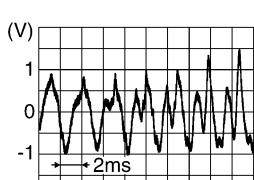
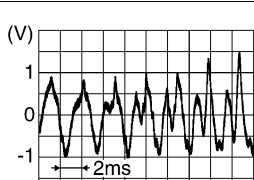
*: BOSE surround 5.1ch system

BOSE Amp

NKS0048N

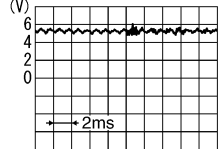
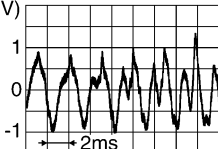
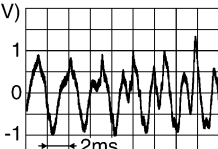
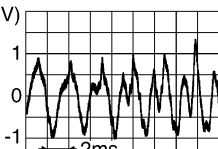
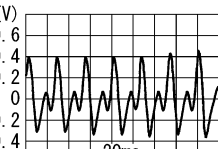
| Terminal (Wire color) | | Item | Signal input/ output | Condition | | Reference value |
|--------------------------|-------------|------------------------------|----------------------------|--------------------|-------------------------------------|---|
| + | - | | | Ignition switch | Operation | |
| 14 (G) | - | Communication signal (L) | - | - | - | - |
| 15 (G) | - | Communication signal (L) | - | - | - | - |
| 16 (BR) | Ground | ACC power supply | Input | ACC | - | Battery voltage |
| 23* (L/R) | 3* (L/G) | DVD sound signal front LH | Input | ON | When playing DVD ^{CAUTION} |  <small>SKIB3609E</small> |

TERMINALS AND REFERENCE VALUE FOR CONTROL UNIT [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

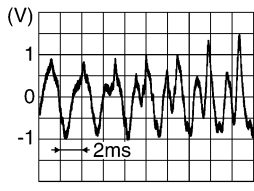
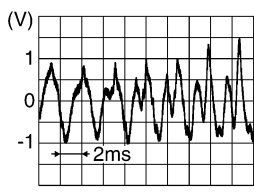
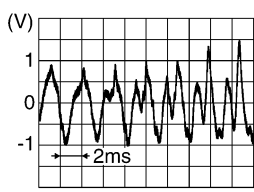
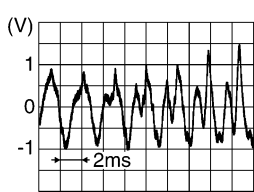
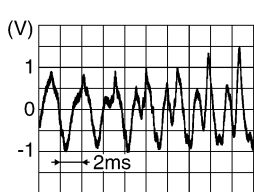
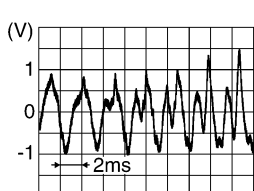
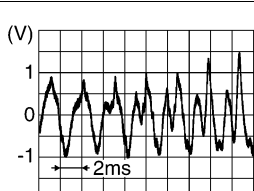
| Terminal (Wire color) | | Item | Signal input/ output | Condition | | Reference value |
|--------------------------|------------|------------------------------|----------------------------|--------------------|-------------------------------------|---|
| + | - | | | Ignition switch | Operation | |
| 24* (B/Y) | 4* (LG) | DVD sound signal front RH | Input | ON | When playing DVD ^{CAUTION} |  <p style="text-align: right; font-size: small;">SKIB3609E</p> |
| 25* (B) | 5* (W) | DVD sound signal rear LH | Input | ON | When playing DVD ^{CAUTION} |  <p style="text-align: right; font-size: small;">SKIB3609E</p> |
| 26* (P) | 6* (L) | DVD sound signal rear RH | Input | ON | When playing DVD ^{CAUTION} |  <p style="text-align: right; font-size: small;">SKIB3609E</p> |
| 27* (G) | 7* (R) | DVD sound signal center | Input | ON | When playing DVD ^{CAUTION} |  <p style="text-align: right; font-size: small;">SKIB3609E</p> |
| 28* (BR) | 8* (Y) | DVD sound signal woofer | Input | ON | When playing DVD ^{CAUTION} |  <p style="text-align: right; font-size: small;">PKIB6116J</p> |
| 29 (P) | 9 (L) | Audio signal LH | Input | ON | Receive audio signal. |  <p style="text-align: right; font-size: small;">SKIB3609E</p> |
| 30 (R) | 10 (G) | Audio signal RH | Input | ON | Receive audio signal. |  <p style="text-align: right; font-size: small;">SKIB3609E</p> |

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TERMINALS AND REFERENCE VALUE FOR CONTROL UNIT [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

| Terminal (Wire color) | | Item | Signal input/ output | Condition | | Reference value |
|--------------------------|-------------|-----------------------------|----------------------------|--------------------|--------------------------------|--|
| + | - | | | Ignition switch | Operation | |
| 31 (L) | 11 (B/W) | MIC. signal | Input | ON | When inputting noise. |  <p>(reference value)</p> <p style="text-align: right;">PKIA2104E</p> |
| 32 (B/W) | 12 (L) | Voice guidance signal | Input | ON | When inputting voice guidance. |  <p style="text-align: right;">SKIB3609E</p> |
| 33 | - | Shield | - | - | - | - |
| 34 (R) | - | Communication signal (H) | - | - | - | - |
| 35 (R) | - | Communication signal (H) | - | - | - | - |
| 36 | - | Shield | - | - | - | - |
| 41 (L) | 42 (B/W) | Audio signal front LH | Output | ON | Receive audio signal. |  <p style="text-align: right;">SKIB3609E</p> |
| 43 (BR) | 44 (B/R) | Audio signal front RH | Output | ON | Receive audio signal. |  <p style="text-align: right;">SKIB3609E</p> |
| 45 (BR) | 46 (B/R) | Audio signal woofer | Output | ON | Receive audio signal. |  <p style="text-align: right;">PKIB6116J</p> |
| 47 (B/W) | Ground | Ground | - | ON | - | Approx. 0 V |
| 50 (Y) | Ground | Battery power supply | Input | OFF | - | Battery voltage |
| 51 (R) | Ground | Battery power supply | Input | OFF | - | Battery voltage |
| 52 (B/W) | Ground | Ground | - | ON | - | Approx. 0 V |

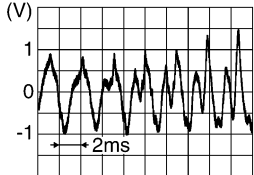
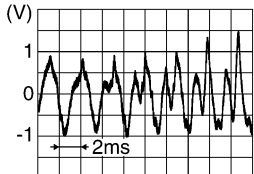
TERMINALS AND REFERENCE VALUE FOR CONTROL UNIT [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

| Terminal (Wire color) | | Item | Signal input/ output | Condition | | Reference value |
|--------------------------|---------------|------------------------------------|----------------------------|--------------------|-----------------------|---|
| + | - | | | Ignition switch | Operation | |
| 54 (LG) | 49 (B/Y) | Audio signal rear LH | Output | ON | Receive audio signal. |  <p style="text-align: right; font-size: small;">SKIB3609E</p> |
| 56* (B/W) | 69* (L) | Audio signal passenger seat LH | Output | ON | Receive audio signal. |  <p style="text-align: right; font-size: small;">SKIB3609E</p> |
| 57 (O/B) | 58 (W/R) | Audio signal center | Output | ON | Receive audio signal. |  <p style="text-align: right; font-size: small;">SKIB3609E</p> |
| 59* (B) | 72* (W) | Audio signal rear sur- round LH | Output | ON | Receive audio signal. |  <p style="text-align: right; font-size: small;">SKIB3609E</p> |
| 62* (G/Y) | 73* (GR/R) | Audio signal rear sur- round RH | Output | ON | Receive audio signal. |  <p style="text-align: right; font-size: small;">SKIB3609E</p> |
| 63* (B/W) | 74* (L) | Audio signal driver seat LH | Output | ON | Receive audio signal. |  <p style="text-align: right; font-size: small;">SKIB3609E</p> |
| 64* (B/R) | 75* (BR) | Audio signal driver seat RH | Output | ON | Receive audio signal. |  <p style="text-align: right; font-size: small;">SKIB3609E</p> |

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TERMINALS AND REFERENCE VALUE FOR CONTROL UNIT [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

| Terminal (Wire color) | | Item | Signal input/ output | Condition | | Reference value |
|--------------------------|-------------|-----------------------------------|----------------------------|--------------------|-----------------------|---|
| + | - | | | Ignition switch | Operation | |
| 68 (O) | 55 (B/P) | Audio signal rear RH | Output | ON | Receive audio signal. |  <small>SKIB3609E</small> |
| 71* (Y) | 70* (BR) | Audio signal passenger seat RH | Output | ON | Receive audio signal. |  <small>SKIB3609E</small> |

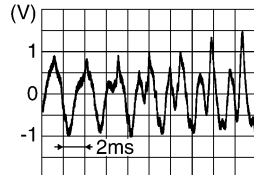
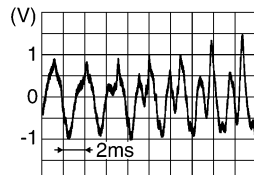
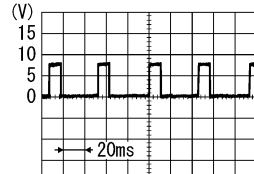
*: BOSE surround 5.1ch System

CAUTION:

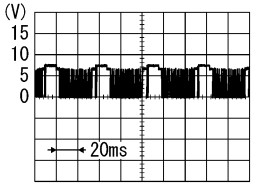
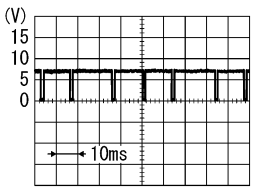
When the stereo sound is played, only front RH and LH are input. When the monaural sound is played, only center is input. All surround sounds are input only when the 5.1 channel surround sound is played.

Satellite Radio Tuner

NKS00480

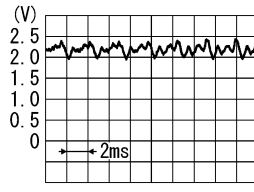
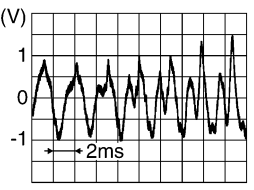
| Terminal (Wire color) | | Item | Signal input/ output | Condition | | Reference value |
|--------------------------|----------|------------------|----------------------------|--------------------|------------------------------------|---|
| + | - | | | Ignition switch | Operation | |
| 2 (R) | 1 (G) | Audio signal LH | Output | ON | Receive audio signal. |  <small>SKIB3609E</small> |
| 4 (B) | 3 (W) | Audio signal RH | Output | ON | Receive audio signal. |  <small>SKIB3609E</small> |
| 5 | - | Shield | - | - | - | - |
| 6 | - | Shield | - | ON | - | Approx. 0 V |
| 8 (R/W) | Ground | REQ1 (SAT-AUDIO) | Output | ON | Set to the satellite radio mode |  <small>SKIB3825E</small> |

TERMINALS AND REFERENCE VALUE FOR CONTROL UNIT [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

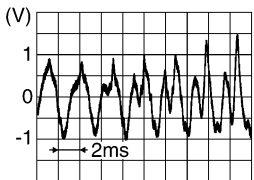
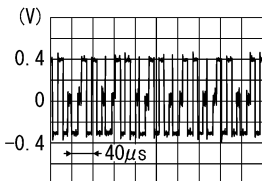
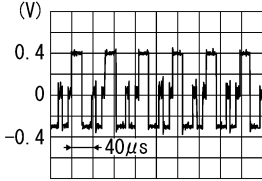
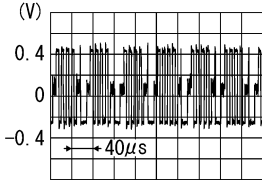
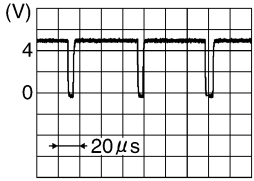
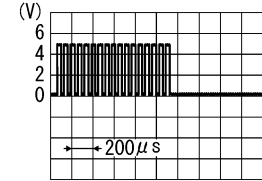
| Terminal (Wire color) | | Item | Signal input/ output | Condition | | Reference value |
|--------------------------|--------|-------------------------------------|----------------------------|--------------------|------------------------------------|---|
| + | - | | | Ignition switch | Operation | |
| 9 (B) | Ground | Communication signal (SAT-AUDIO) | Output | ON | Set to the satellite radio mode |  <small>SKIB3824E</small> |
| 10 (R) | Ground | Communication signal (AUDIO-SAT) | Input | ON | Set to the satellite radio mode |  <small>SKIB3826E</small> |
| 12 (BR/Y) | Ground | Battery power supply | Input | OFF | - | Battery voltage |
| 16 (BR) | Ground | ACC power supply | Input | ACC | - | Battery voltage |
| 20 | - | Satellite antenna signal | Input | - | - | - |

AV (NAVI) Control Unit

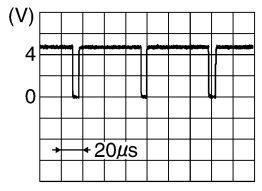
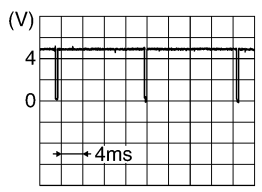
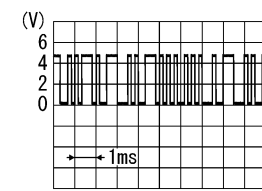
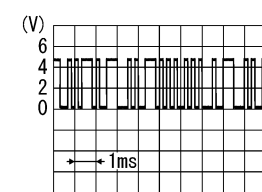
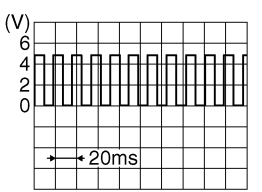
NKS0048P

| Terminal (Wire color) | | Item | Signal Input/ output | Condition | | Reference value |
|--------------------------|-------------|----------------------|----------------------------|--------------------|---------------------------|---|
| + | - | | | Ignition switch | Operation | |
| 1 (B) | Ground | Ground | - | ON | - | Approx. 0 V |
| 2 (Y) | Ground | Battery power supply | Input | OFF | - | Battery voltage |
| 5 (V) | Ground | ACC power supply | Input | ACC | - | Battery voltage |
| 6 (O/L) | 7 | MIC. power supply | Output | ON | - | Approx. 5 V |
| 7 | Ground | MIC. ground | - | ON | - | Approx. 0 V |
| 8 (W/L) | 7 | MIC. signal | Input | ON | Give a voice. |  <small>PKIB5037J</small> |
| 9 | - | Shield | - | - | - | - |
| 10 (BR) | 11 (B/R) | TEL voice signal | Output | ON | When inputting TEL voice. |  <small>SKIB3609E</small> |

TERMINALS AND REFERENCE VALUE FOR CONTROL UNIT [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

| Terminal (Wire color) | | Item | Signal Input/ output | Condition | | Reference value |
|--------------------------|-------------|--------------------------|----------------------------|--------------------|---|---|
| + | - | | | Ignition switch | Operation | |
| 12 (L/G) | 14 (L/Y) | Voice guidance signal | Output | ON | When inputting voice guidance. |  <small>SKIB3609E</small> |
| 13 | - | Shield | - | - | - | - |
| 44 (L/G) | 47 (W/L) | RGB signal (R: red) | Output | ON | Start confirmation/adjustment mode, and then display color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen. |  <small>SKIB2238J</small> |
| 45 (O/L) | 47 (W/L) | RGB signal (G: green) | Output | ON | Start confirmation/adjustment mode, and then display color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen. |  <small>SKIB2236J</small> |
| 46 (L/Y) | 47 (W/L) | RGB signal (B: blue) | Output | ON | Start confirmation/adjustment mode, and then display color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen. |  <small>SKIB2237J</small> |
| 47 (W/L) | Ground | RGB ground | - | ON | - | Approx.0 V |
| 48 (B) | Ground | RGB synchronizing signal | Output | ON | - |  <small>SKIB3603E</small> |
| 49 | - | Shield | - | - | - | - |
| 50 (G) | Ground | RGB area (YS) signal | Output | ON | When inputting RGB image. Set the selector lever in R position, and then display the rear view image. |  <small>PKIB4948J</small> |

TERMINALS AND REFERENCE VALUE FOR CONTROL UNIT [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

| Terminal (Wire color) | | Item | Signal Input/ output | Condition | | Reference value |
|--------------------------|--------|---|----------------------------|--------------------|--|---|
| + | - | | | Ignition switch | Operation | |
| 51 (W) | Ground | Horizontal synchronizing (HP) signal | Input | ON | - |  <p style="text-align: right;">SKIB3601E</p> |
| 52 (R) | Ground | Vertical synchronizing (VP) signal | Input | ON | - |  <p style="text-align: right;">SKIB3598E</p> |
| 53 (O/L) | Ground | Communication signal (CONT-DISP) | Input | ON | When adjusting display brightness. |  <p style="text-align: right;">PKIB5039J</p> |
| 54 (W/L) | Ground | Communication signal (DISP-CONT) | Input | ON | When adjusting display brightness. |  <p style="text-align: right;">PKIB5039J</p> |
| 55 | - | Shield | - | - | - | - |
| 61 (LG) | Ground | Illumination signal | Input | OFF | Lighting switch is OFF. | Approx. 0 V |
| | | | | | Lighting switch is ON. | Approx. 12 V |
| 63 (Y/G) | Ground | Ignition signal | Input | ON | - | Battery voltage |
| 64 (P) | Ground | Parking brake signal | Input | ON | Parking brake ON. | Approx. 0 V |
| | | | | | Parking brake OFF. | Approx. 12 V |
| 65 (O) | Ground | Reverse signal | Input | ON | Select lever in R position. | Approx. 12 V |
| | | | | | Other than selector lever in R position. | Approx. 0 V |
| 66 (G) | Ground | Vehicle speed signal (8-pulse) | Input | ON | When vehicle speed is approx. 40 km/h (25 MPH). |  <p style="text-align: right;">SKIA6649J</p> |

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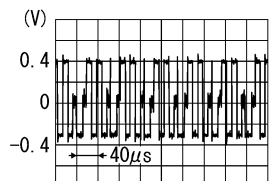
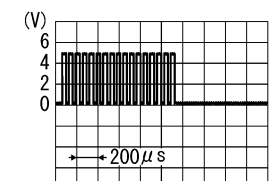
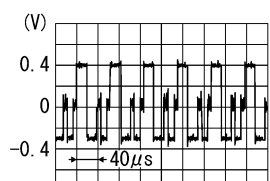
TERMINALS AND REFERENCE VALUE FOR CONTROL UNIT [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

| Terminal (Wire color) | | Item | Signal Input/ output | Condition | | Reference value |
|--------------------------|--------|--------------------------------------|----------------------------|--------------------|---|-----------------|
| + | - | | | Ignition switch | Operation | |
| 67* ³ (V) | Ground | Camera-connection recognition signal | Input | ON | Connected to rear view camera control unit connector. | Approx. 0 V |
| | | | | | Not connected to rear view camera control unit connector. | Approx. 5 V |
| 69 (W) | - | Communication signal (H) | Input/ Output | - | - | - |
| 70 (R) | - | Communication signal (L) | Input/ Output | - | - | - |
| 71 (LG) | - | CAN-H | Input/ Output | - | - | - |
| 72 (P) | - | CAN-L | Input/ Output | - | - | - |
| 107* ⁴ | Ground | GPS signal | Input | ON | Connector is not connected. | Approx. 5 V |

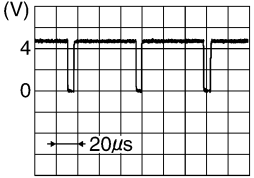
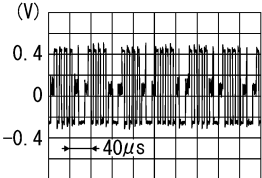
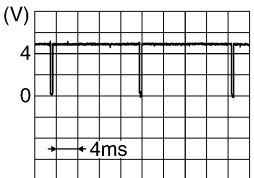
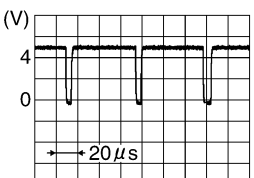
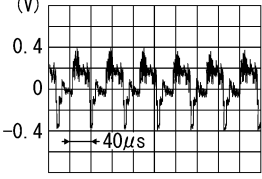
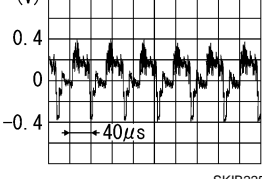
- *1: 2WD models without navigation system and RAS
- *2: Except *1
- *3: With rear view monitor
- *4: With navigation system

Front Display Unit

NKS0048Q

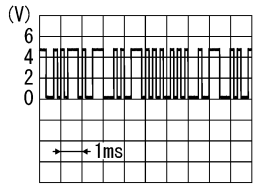
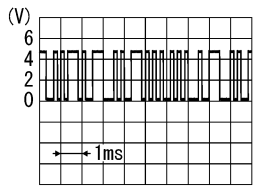
| Terminal (Wire color) | | Item | Signal input/ output | Condition | | Reference value |
|--------------------------|------------|-----------------------|----------------------------|--------------------|---|---|
| + | - | | | Ignition switch | Operation | |
| 1 (L/G) | 8 (W/L) | RGB Signal (R: red) | Input | ON | Start confirmation/adjustment mode, and then display color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen. |  <p style="text-align: right; font-size: small;">SKIB2238J</p> |
| 2 (G) | Ground | RGB area (YS) signal | Input | ON | When inputting RGB image. | Approx. 5 V |
| | | | | | Set the selector lever in R position, and then display the rear view image. |  <p style="text-align: right; font-size: small;">PKIB4948J</p> |
| 3 (O/L) | 8 (W/L) | RGB signal (G: green) | Input | ON | Start confirmation/adjustment mode, and then display color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen. |  <p style="text-align: right; font-size: small;">SKIB2236J</p> |

TERMINALS AND REFERENCE VALUE FOR CONTROL UNIT [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

| Terminal (Wire color) | | Item | Signal input/ output | Condition | | Reference value |
|--------------------------|------------|---|----------------------------|--------------------|--|---|
| + | - | | | Ignition switch | Operation | |
| 4 (W) | Ground | Horizontal synchronizing (HP) signal | Output | ON | - |  <p style="text-align: right;">SKIB3601E</p> |
| 5 (L/Y) | 8 (W/L) | RGB signal (B: blue) | Input | ON | Start confirmation/adjust- ment mode, and then dis- play color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen. |  <p style="text-align: right;">SKIB2237J</p> |
| 6 (R) | Ground | Vertical synchronizing (VP) signal | Input | ON | - |  <p style="text-align: right;">SKIB3598E</p> |
| 7 (B) | Ground | RGB synchronizing sig- nal | Input | ON | - |  <p style="text-align: right;">SKIB3603E</p> |
| 8 (W/L) | Ground | RGB ground | - | ON | - | Approx. 0 V |
| 10 | - | Shield | - | - | - | - |
| 11 ^{*1} (Y) | Ground | Camera image signal | Input | ON | Set selector lever in R posi- tion, and then display the rear view image. |  <p style="text-align: right;">SKIB2251J</p> |
| 12 ^{*1} | - | Shield | - | - | - | - |
| 14 ^{*2} | - | Shield | - | - | - | - |
| 15 ^{*2} (L) | Ground | Composite image signal | Output | ON | DVD image |  <p style="text-align: right;">SKIB2251J</p> |

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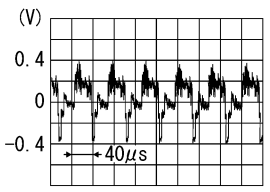
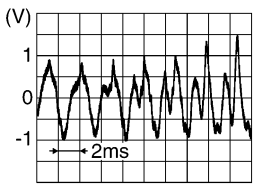
TERMINALS AND REFERENCE VALUE FOR CONTROL UNIT [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

| Terminal (Wire color) | | Item | Signal input/ output | Condition | | Reference value |
|--------------------------|--------|-------------------------------------|----------------------------|--------------------|---------------------------------------|---|
| + | - | | | Ignition switch | Operation | |
| 17 (W/L) | Ground | Communication signal (DISP-CONT) | Output | ON | When adjusting display brightness. |  <small>PKIB5039J</small> |
| 18 | - | Shield | - | - | - | - |
| 19 (O/L) | Ground | Communication signal (CONT-DISP) | Output | ON | When adjusting display brightness. |  <small>PKIB5039J</small> |
| 20 (V) | Ground | ACC power supply | Input | ACC | - | Battery voltage |
| 21 (L) | Ground | BAT power supply | Input | OFF | - | Battery voltage |
| 23 (B) | Ground | Ground | - | ON | - | Approx. 0 V |

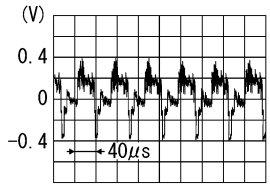
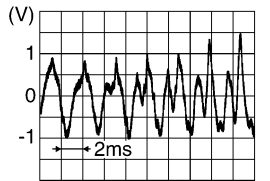
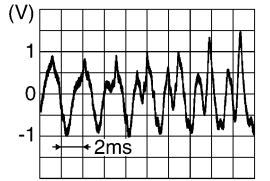
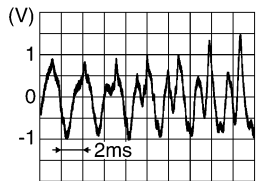
- *1: With rear view monitor
- *2: With BOSE surround 5.1ch system

DVD Player

NKS0048R

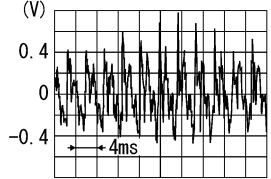
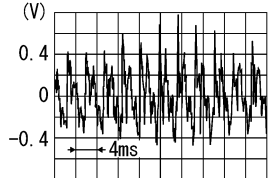
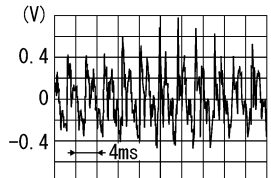
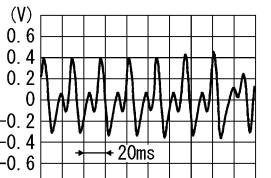
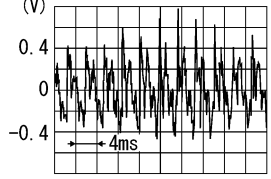
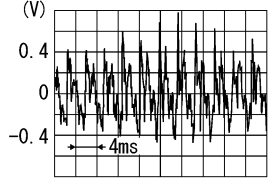
| Terminal (Wire color) | | Item | Signal input/ output | Condition | | Reference value |
|--------------------------|----------|----------------------|----------------------------|--------------------|-----------------|---|
| + | - | | | Ignition switch | Operation | |
| 1 (Y/R) | Ground | Battery power supply | Input | OFF | - | Battery voltage |
| 2 (V) | Ground | ACC power supply | Input | ACC | - | Battery voltage |
| 4 (W) | Ground | AUX image signal | Input | ON | - |  <small>SKIB2251J</small> |
| 5 (B) | - | Shield | - | - | - | - |
| 7 (W/L) | 6 (B) | AUX sound signal RH | Input | ON | AUX sound input |  <small>SKIB3609E</small> |

TERMINALS AND REFERENCE VALUE FOR CONTROL UNIT [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

| Terminal (Wire color) | | Item | Signal input/ output | Condition | | Reference value |
|--------------------------|------------|-----------------------------|----------------------------|--------------------|-------------------------|---|
| + | - | | | Ignition switch | Operation | |
| 14 (L/W) | - | Shield | - | - | - | - |
| 15 (Y) | - | Communication signal (H) | Input/ Output | - | - | - |
| 16 (W) | - | Communication signal (H) | Input/ Output | - | - | - |
| 17 (B/P) | Ground | Ground | - | ON | - | Approx. 0 V |
| 18 (R/L) | Ground | Illumination signal | Input | OFF | Lighting switch is OFF. | Approx. 0 V |
| | | | | | Lighting switch is ON. | Approx. 12 V |
| 19 (G/Y) | - | Shield | - | - | - | - |
| 20 (G) | Ground | DVD / AUX image signal | Output | ON | DVD image |  <small>SKIB2251J</small> |
| 23 (R) | 22 (B) | AUX sound signal LH | Input | ON | AUX sound input |  <small>SKIB3609E</small> |
| 24 (L/R) | - | Shield | - | - | - | - |
| 27 (B/R) | 11 (BR) | Sound signal LH | Output | ON | Sound output |  <small>SKIB3609E</small> |
| 28 (B/W) | 12 (L) | Sound signal RH | Output | ON | Sound output |  <small>SKIB3609E</small> |
| 30 (G/R) | - | Shield | - | - | - | - |
| 31 (O) | - | Communication signal (L) | Input/ Output | - | - | - |
| 32 (R) | - | Communication signal (L) | Input/ Output | - | - | - |
| 33 (R/Y) | - | Shield | - | - | - | - |

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TERMINALS AND REFERENCE VALUE FOR CONTROL UNIT [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

| Terminal (Wire color) | | Item | Signal input/ output | Condition | | Reference value |
|--------------------------|-------------|------------------------------|----------------------------|--------------------|-------------------------------------|---|
| + | - | | | Ignition switch | Operation | |
| 34 (R/L) | 42 (G) | DVD sound signal front RH | Output | ON | When playing DVD ^{CAUTION} |  <small>SKIB1990E</small> |
| 35 (L/Y) | 43 (L) | DVD sound signal front LH | Output | ON | When playing DVD ^{CAUTION} |  <small>SKIB1990E</small> |
| 36 (R/B) | 44 (R) | DVD sound signal center | Output | ON | When playing DVD ^{CAUTION} |  <small>SKIB1990E</small> |
| 37 (Y/B) | 45 (Y) | DVD sound signal woofer | Output | ON | When playing DVD ^{CAUTION} |  <small>PKIB6116J</small> |
| 38 (G/R) | - | Shield | - | - | - | - |
| 39 (Y/L) | 47 (W/L) | DVD sound signal rear RH | Output | ON | When playing DVD ^{CAUTION} |  <small>SKIB1990E</small> |
| 40 (O/L) | 48 (O) | DVD sound signal rear LH | Output | ON | When playing DVD ^{CAUTION} |  <small>SKIB1990E</small> |
| 46 (G/W) | - | Shield | - | - | - | - |

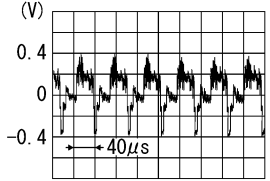
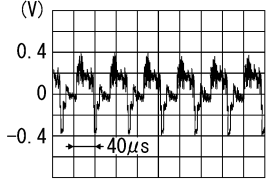
CAUTION:

When the stereo sound is played, only front RH and LH are output. When the monaural sound is played, only center is output. All surround sounds are input only when the 5.1 channel surround sound is played.

TERMINALS AND REFERENCE VALUE FOR CONTROL UNIT [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

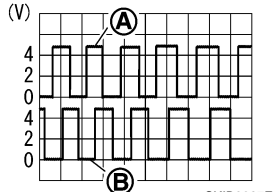
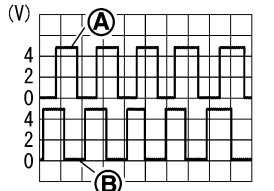
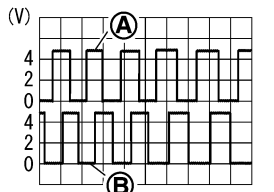
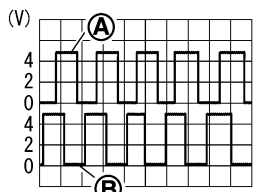
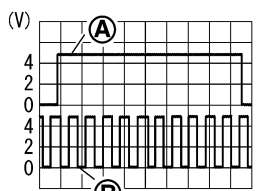
Camera Control Unit

NKS0048S

| Terminal (Wire color) | | Item | Signal input/ output | Condition | | Reference value |
|--------------------------|--------|--------------------------------------|----------------------------|--------------------|---|--|
| + | - | | | Ignition switch | Operation | |
| 5 | - | Shield | - | - | - | - |
| 6 (P/L) | Ground | Camera image signal | Input | ON | Set selector lever in R position, and then display the rear view image. |  <p style="text-align: right; font-size: small;">SKIB2251J</p> |
| 7 (G/B) | Ground | Rear view camera ground | - | ON | - | Approx. 0 V |
| 8 (GR) | Ground | Camera ON signal | Output | ON | Set selector lever in R position, and then display the rear view image. | Approx. 6 V |
| 11 | - | Shield | - | - | - | - |
| 12 (Y) | Ground | Camera image signal | Output | ON | Set selector lever in R position, and then display the rear view image. |  <p style="text-align: right; font-size: small;">SKIB2251J</p> |
| 14 (V) | Ground | Camera-connection recognition signal | Output | ON | - | Approx. 0 V |
| 17 (G) | - | Communication signal (L) | Input/ Output | - | - | - |
| 18 (R) | - | Communication signal (H) | Input/ Output | - | - | - |
| 19 (R) | - | Communication signal (L) | Input/ Output | - | - | - |
| 20 (W) | - | Communication signal (H) | Input/ Output | - | - | - |
| 22 (LG) | Ground | Reverse signal | Input/ Output | ON | Select lever in R position. | Approx. 12 V |
| | | | | | Other than selector lever in R position. | Approx. 0 V |

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TERMINALS AND REFERENCE VALUE FOR CONTROL UNIT [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

| Terminal (Wire color) | | Item | Signal input/ output | Condition | | Reference value |
|--------------------------|--------|-----------------|----------------------------|--------------------|---|--|
| + | - | | | Ignition switch | Operation | |
| 23 (L/Y) | Ground | Sensor signal 1 | Input | ON | Turn the steering to the right |  <p style="text-align: right;">SKIB3827E</p> <p>A: Sensor signal 1 B: Sensor signal 2</p> |
| | | | | | Turn the steering to the left |  <p style="text-align: right;">SKIB3828E</p> <p>A: Sensor signal 1 B: Sensor signal 2</p> |
| 24 (B/R) | Ground | Sensor signal 2 | Input | ON | Turn the steering to the right |  <p style="text-align: right;">SKIB3827E</p> <p>A: Sensor signal 1 B: Sensor signal 2</p> |
| | | | | | Turn the steering to the left |  <p style="text-align: right;">SKIB3828E</p> <p>A: Sensor signal 1 B: Sensor signal 2</p> |
| 25 (O) | Ground | Sensor signal 3 | Input | ON | Turn the steering around the neutral position |  <p style="text-align: right;">SKIB3829E</p> <p>A: Sensor signal 3 B: Sensor signal 1</p> |

TERMINALS AND REFERENCE VALUE FOR CONTROL UNIT [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

| Terminal (Wire color) | | Item | Signal input/ output | Condition | | Reference value |
|--------------------------|--------|-----------------------------------|----------------------------|--------------------|--|-----------------|
| + | - | | | Ignition switch | Operation | |
| 26 (V/W) | Ground | Vehicle speed signal (8-pulse) | Input | ON | When vehicle speed is approx. 40 km/h (25 MPH). | |
| 29 (G/R) | Ground | Ignition signal | Input | ON | - | Battery voltage |
| 30 (BR) | Ground | ACC power supply | Input | ACC | - | Battery voltage |
| 31 (B) | Ground | Ground | - | ON | - | Approx. 0 V |
| 32 (BR/Y) | Ground | Battery power supply | Input | OFF | - | Battery voltage |

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DIAGNOSIS SYSTEM

[WITHOUT MOBILE ENTERTAINMENT SYSTEM]

DIAGNOSIS SYSTEM


PFP:00000

Multifunction Switch Self-Diagnosis Function

NKS0048T

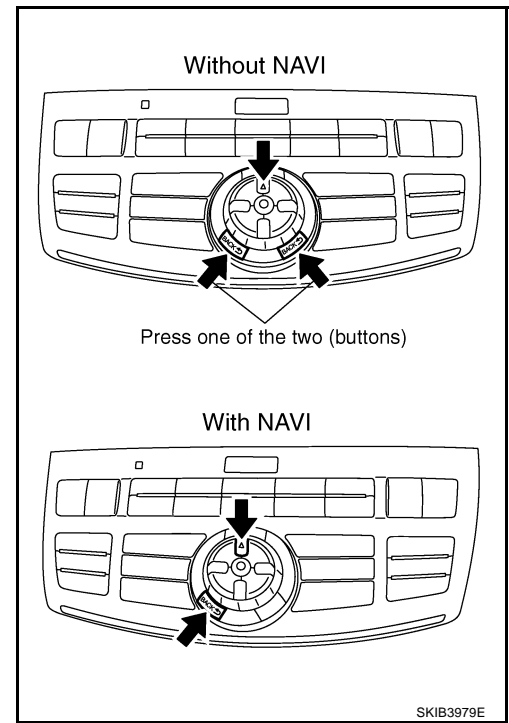
It can check each switch ON/OFF (continuity) operation of centralized switches.

SELF-DIAGNOSIS MODE

- Turn the ignition switch from OFF position to ACC position. Within 10 seconds, press and hold BACK switch and  switch for 3 seconds or more. Then, when these switches are released, the buzzer sounds, all indicators of multifunction switch turned on, and self-diagnosis mode is started.
- When each switch is pressed, the switch continuity can be checked by sounding the buzzer.

CAUTION:

The hazard switch cannot be checked.



FINISHING SELF-DIAGNOSIS MODE

- When the ignition switch is turned ON, self-diagnosis mode is canceled.

Multi AV System Diagnosis Functions

NKS0048U

- There are 2 diagnosis functions (On board diagnosis and diagnosis using CONSULT-II). It is necessary to use them properly according to the condition. If the on board diagnosis starts, perform diagnosis with on board diagnosis. If the on board diagnosis does not start (because the display is not displayed, the multifunction switch operation is not activated, etc.), perform diagnosis using CONSULT-II.
- At on board diagnosis, the AV (NAVI) control unit diagnosis function starts when multifunction switch operation and the AV (NAVI) control unit performs the diagnosis for each unit of system. Then, it displays the results on the display.
- At diagnosis using CONSULT-II, the AV (NAVI) control unit diagnosis function starts when the CAN communication and the AV (NAVI) control unit perform the diagnosis for each unit of system.

On Board Diagnosis

DESCRIPTION

NKS0048V

- It has Self-Diagnosis mode for conducting trouble diagnosis automatically and a Confirmation/Adjustment mode for operating manually.
- Self-diagnosis mode diagnoses AV (NAVI) control unit and communication of each unit composing system, and displays self-diagnosis results. NAVI control unit diagnoses communication with GPS antenna simultaneously.
- Confirmation/Adjustment mode is used to monitor the vehicle signals requiring operation and judgement by a technician (malfunctions that cannot be automatically judged by the system), the confirmation/change/adjustment of setting value, the error history of system, and the communication condition of system.

DIAGNOSIS SYSTEM

[WITHOUT MOBILE ENTERTAINMENT SYSTEM]

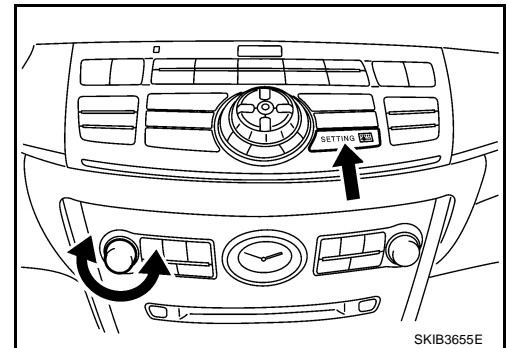
On Board Diagnosis Item

| Mode | Description | | |
|-----------------------------|--|---------------------------|---|
| Self Diagnosis | <ul style="list-style-type: none"> ● AV (NAVI) control unit diagnosis and connection diagnosis between AV (NAVI) control unit and each unit ● The DVD-ROM drive diagnosis of NAVI control unit and the connection diagnosis between NAVI control unit and GPS antenna can be performed (DVD-ROM drive will not be diagnosed when no map DVD-ROM is in it.) | | |
| Confirmation/ Adjustment | Display Diagnosis | | |
| | Vehicle Signals | | |
| | Speaker Test | | |
| | Climate Control | | |
| | Navigation*1 | Steering Angle Adjustment | When there is a difference between the actual turning angle and the vehicle mark turning angle, it can be adjusted. |
| | | Speed Calibration | When there is a difference between the current location mark and the actual location, it can be adjusted. |
| | Error History | | |
| | Synchronizer FES clock | | |
| | Vehicle CAN Diagnosis | | |
| | AV COMM Diagnosis | | |
| | Handsfree Phone | | |
| | Camera Cont.*2 | | |
| | Bluetooth | | |
| Delete Unit Connection Log | | | |

- *1: With navigation system
- *2: With rear view monitor

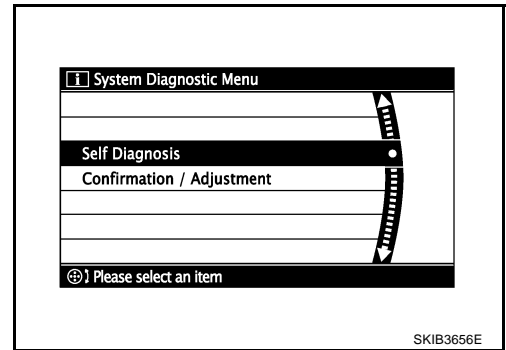
STARTING PROCEDURE

1. Start the engine.
2. Turn the audio system OFF.
3. While pushing the "SETTING" button, turn the volume control dial clockwise or counterclockwise for 40 clicks or more. (When the self-diagnosis mode is started, a short beep will be heard.)
 - Shifting from current screen to previous screen is performed by pushing "BACK" button.



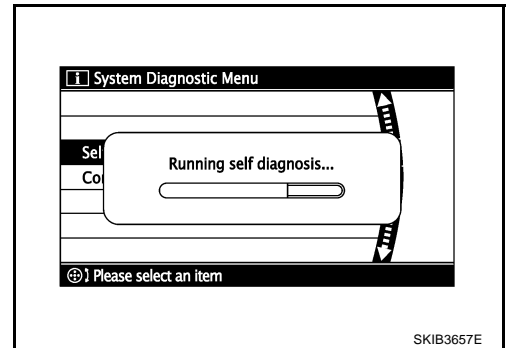
DIAGNOSIS SYSTEM [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

4. The trouble diagnosis initial screen is displayed, and then the items of “Self Diagnosis” and “Confirmation/Adjustment” can be selected.



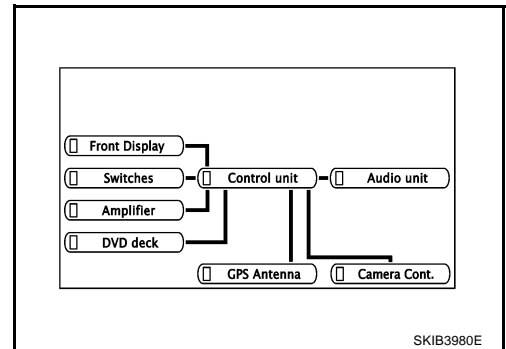
Self Diagnosis Mode

- Start the diagnosis function, and then select “Self Diagnosis”.
 - Self-diagnosis subdivision screen will be shown and the operation will enter the self-diagnosis mode.
 - The bar graph visible on self-diagnosis screen displays progress of the diagnosis.



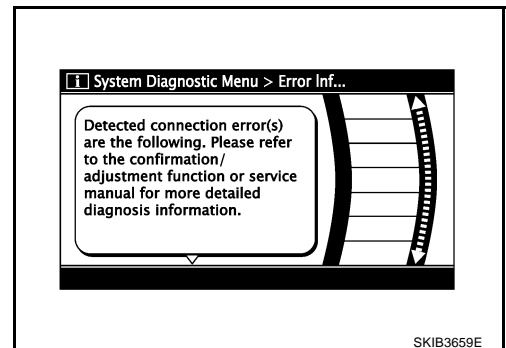
- Diagnostic results are displayed when the self-diagnosis is complete. Each unit name and connection lines between each unit will be colored according to the diagnostic results, as follows.

| Diagnosis results | Unit | Con- nection line |
|--|--------|-------------------------|
| Normal | Green | Green |
| Connection malfunction | Gray | Yellow |
| DVD-ROM drive undiagnosed | Gray | Green |
| DVD-ROM and DVD-ROM drive malfunction | Yellow | Green |
| Unit returned an error ^{Note} | Red | Green |



Note: Only control unit (AV control unit, NAVI control unit) is displayed in red.

- If multiple errors occur at the same time for a single unit, the screen switch colors are determined according to the following order of priority: red > yellow > gray.
- Select a switch on the “Diagnosis results” screen and comments for the trouble diagnosis results will be shown.



DIAGNOSIS SYSTEM

[WITHOUT MOBILE ENTERTAINMENT SYSTEM]

DIAGNOSIS RESULT

Check the applicable display in the following table, and then repair the malfunctioning parts.

Control Unit Is Red, Gray, or Yellow

| Switch color | Description | Possible malfunction/Action to take |
|-----------------------|---|---|
| Red | AV (NAVI) control unit malfunction is detected | Replace AV (NAVI) control unit Refer to AV-131, "AV (NAVI) Control Unit" |
| Yellow (With NAVI) | <ul style="list-style-type: none"> ● Malfunction is detected on DVD-ROM drive pickup lens in NAVI control unit ● There is dirt and damage on the map disc | <ul style="list-style-type: none"> ● Map disc ● NAVI control unit |
| Gray (With NAVI) | DVD-ROM not inserted is detected | Insert map disc |

Connection Line Between Units Is Yellow (Only 1 Line)

| Applicable parts | Description | Probable malfunction location |
|---|---|---|
| Control unit to Camera Cont. | Camera-connection recognition signal malfunction is detected | <ul style="list-style-type: none"> ● Camera control unit power supply and ground circuit ● Camera-connection recognition signal circuit ● AV (NAVI) control unit ● Camera control unit |
| Control unit to GPS Antenna | GPS antenna connection malfunction is detected | <ul style="list-style-type: none"> ● GPS antenna feeder ● GPS antenna ● NAVI control unit |
| Control unit to DVD deck | <ul style="list-style-type: none"> ● DVD player power supply and ground circuit malfunction is detected ● Malfunction is detected on communication signal between DVD player and AV (NAVI) control unit | <ul style="list-style-type: none"> ● DVD player power supply and ground circuit ● DVD player ● AV (NAVI) control unit |
| Control unit to Amplifier (BOSE system) | <ul style="list-style-type: none"> ● BOSE amp power supply and ground circuit malfunction is detected ● Malfunction is detected on communication signal between BOSE amp and AV (NAVI) control unit | <ul style="list-style-type: none"> ● BOSE amp power supply and ground circuit ● BOSE amp ● AV (NAVI) control unit |
| Control unit to Audio unit (BOSE system) | <ul style="list-style-type: none"> ● Audio unit power supply and ground circuit malfunction is detected ● Malfunction is detected on communication circuit between audio unit and BOSE amp ● Malfunction is detected on communication signal between audio unit and AV (NAVI) control unit | <ul style="list-style-type: none"> ● Audio unit power supply and ground circuit ● Communication circuit between BOSE amp and audio unit ● Audio unit ● BOSE amp ● AV (NAVI) control unit |

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DIAGNOSIS SYSTEM [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

Connection Line Between Units Is Yellow (2 or More Lines)

When 2 or more connection lines between control unit (AV control unit, NAVI control) and each unit are displayed in yellow, these communication system lines may be open or shorted. The malfunctioning parts can be detected by the combination of the connection lines displayed in yellow.

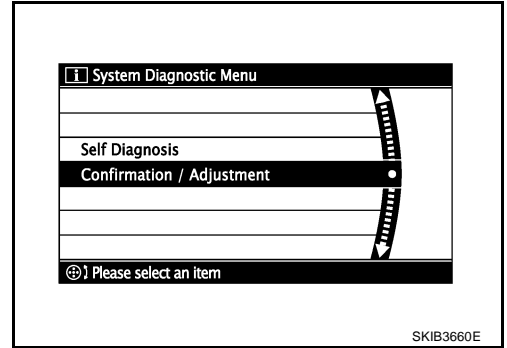
| Applicable parts | Description | Probable malfunction location |
|--|---|--|
| Control unit to ● Amplifier ● Audio unit | Base system ● Audio unit power supply and ground circuit malfunction is detected ● Malfunction is detected on communication circuit between multifunction switch and audio unit ● Malfunction is detected on communication signal between audio unit and AV (NAVI) control unit | ● Audio unit power and ground circuit ● Communication circuit between multifunction switch and audio unit ● Multifunction switch ● Audio unit ● AV (NAVI) control unit |
| | BOSE system ● Malfunction is detected on communication circuit between multifunction switch and camera control unit ● Malfunction is detected on communication circuit between camera control unit and BOSE amp | ● Communication circuit between camera control unit and BOSE amp ● Multifunction switch ● Camera control unit ● BOSE amp |

DIAGNOSIS SYSTEM [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

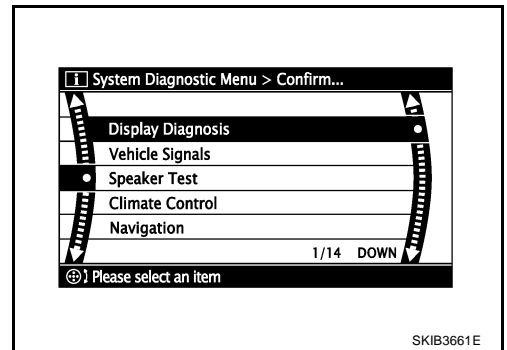
Confirmation/Adjustment Mode

NKS0048X

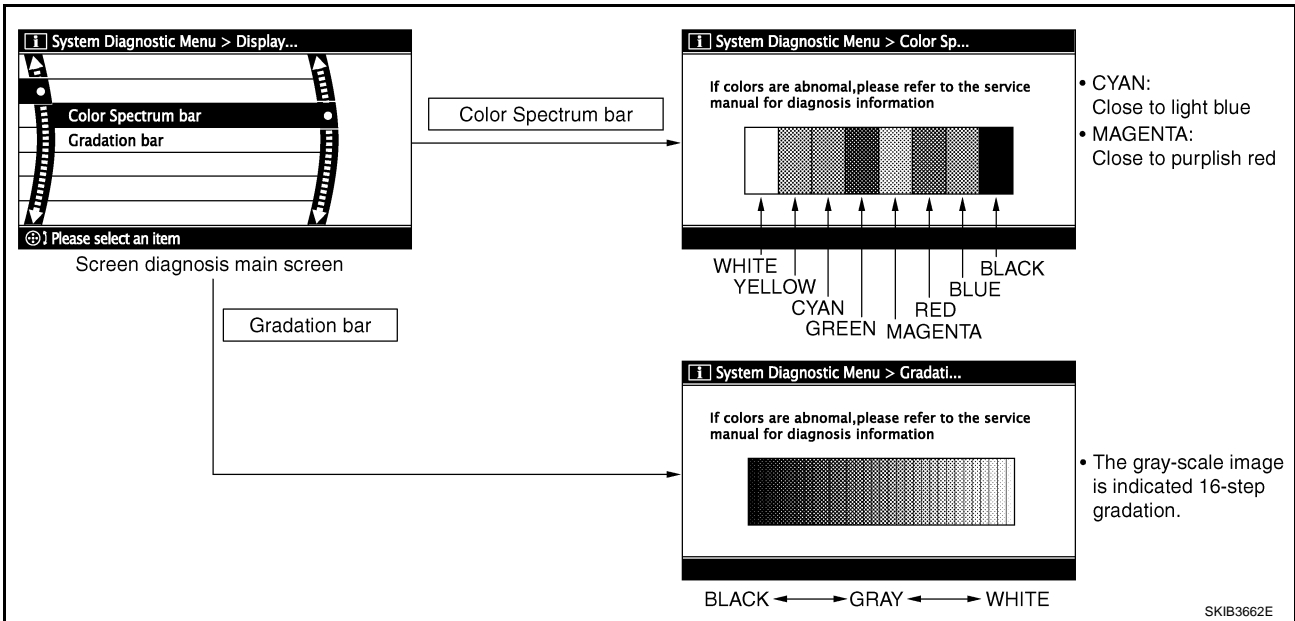
1. Start the diagnosis function, and then select "Confirmation/Adjustment".



2. Select each screen switch of Confirmation/Adjustment screen to display the relevant diagnosis screen. Press the "BACK" switch to return to the initial screen of Confirmation/Adjustment.



DISPLAY DIAGNOSIS



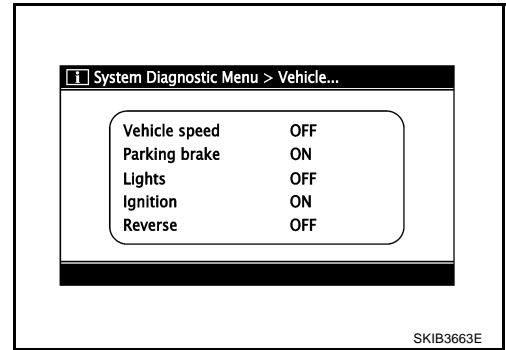
If RGB signal is malfunctioning, the tint of the color bar display is as follows.

- R (red) signal error** : Light blue (Cyan) tint
- G (green) signal error** : Purple (Magenta) tint
- B (blue) signal error** : Yellow tint

DIAGNOSIS SYSTEM [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

VEHICLE SIGNALS

A comparison check can be made of each actual vehicle signal and the signals recognized by the system.



| Diagnosis item | Display | Vehicle status | Remarks |
|----------------|---------|---|---|
| Vehicle speed | ON | Vehicle speed > 0 km/h (0 MPH) | Changes in indication may be delayed. This is normal. |
| | OFF | Vehicle speed = 0 km/h (0 MPH) | |
| | — | Ignition switch in ACC position | |
| Parking brake | ON | Parking brake is applied. | |
| | OFF | Parking brake is released. | |
| Lights | ON | Light switch ON | — |
| | OFF | Light switch OFF | |
| Ignition | ON | Ignition switch ON | — |
| | OFF | Ignition switch in ACC position | |
| Reverse | ON | Selector lever in R position | Changes in indication may be delayed. This is normal. |
| | OFF | Selector lever in any position other than R | |
| | — | Ignition switch in ACC position | |

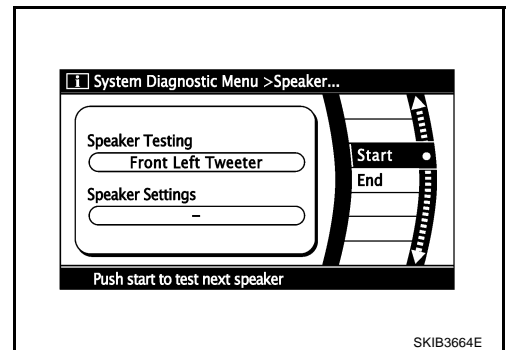
SPEAKER TEST

When selecting “Speaker Test”, speaker diagnosis screen is displayed. When pressing “Start”, test tone emits from the speaker. At that time, when pressing “Start”, test tone emits from next speaker. Then, when pressing the “End”, test tone stops.

NOTE:

The frequency of test tone emitted from each speaker is as follows.

| | |
|------------------------------|-----------------|
| Tweeter | : 3 kHz |
| Front door speaker | : 300 Hz |
| Rear door speaker | : 1 kHz |
| Rear surround speaker | : 1 kHz |
| Center speaker | : 1 kHz |
| Woofers | : 100 Hz |
| Seat speaker | : 1 kHz |



CLIMATE CONTROL

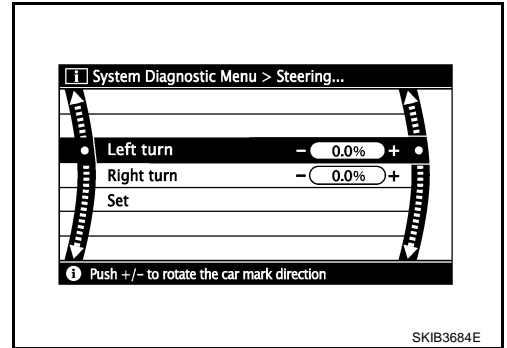
For details, refer to [ATC-56, "Self-diagnosis Function"](#).

DIAGNOSIS SYSTEM [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

NAVIGATION

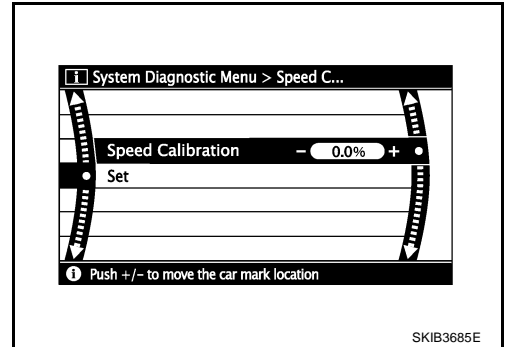
Steering Angle Adjustment

The steering angle output value detected with the gyroscope can be adjusted.



Speed Calibration

Usually the automatic distance correction function adjusts the malfunction in distance caused by the tires wearing down or the tire pressure change. If prompt adjustment is necessary when the tire chains are installed etc., perform this procedure.



ERROR HISTORY

The diagnostic results of “Self-diagnosis” determine if any malfunction occurred between selecting “Self-diagnosis” and displaying “Self-diagnostic Results”.

If an error occurred before the ignition switch was turned ON and does not occur again until “Self-diagnosis” is completed, the trouble diagnosis result will be judged normal. Therefore, errors in the past which cannot be found by “Self-diagnosis”, must be found by checking the “Error record”.

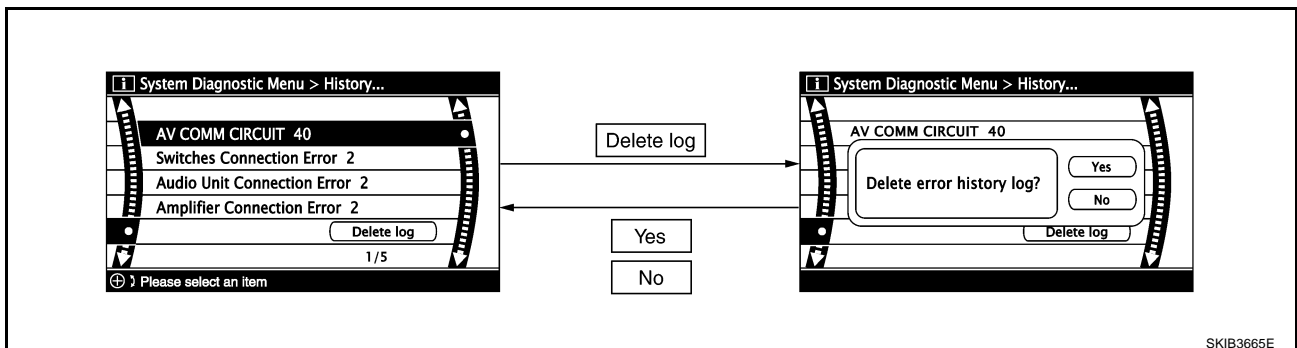
The error history shows the error occurrence frequency in past. The frequency of occurrence is displayed by 2 types: the count down type and the count up type. Select either type according to the error item.

In “Error History” of models with NAVI, time and place that the selected error last occurred are displayed. Be careful about the following.

- If there is a malfunction with the GPS antenna circuit board in the NAVI control unit, the correct date of occurrence may not be able to be displayed.
- Place of the error occurrence is represented by the position of the current location mark at the time an error occurred. If current location mark has deviated from the correct position, then the place of the error occurrence cannot be located correctly.

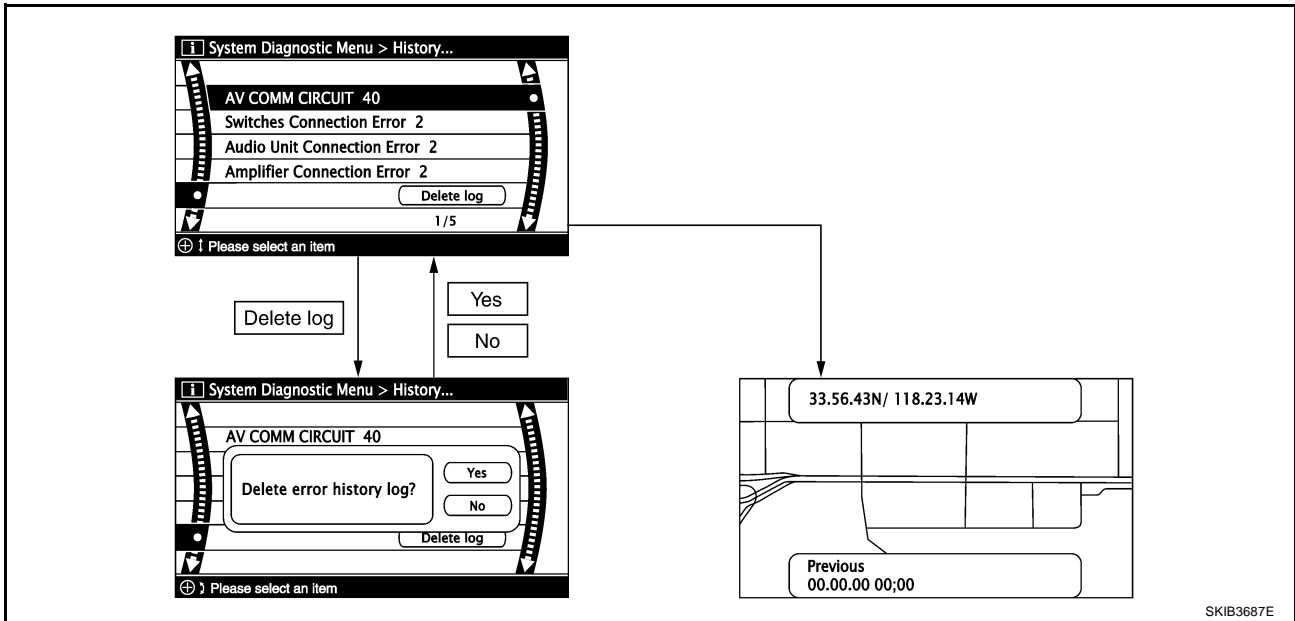
Transition Screen

Without NAVI



DIAGNOSIS SYSTEM [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

With NAVI



Count Down Type

- When the error is detected, set the counter to 40. If the system is normal when turning the ignition switch ON, the counter decreases by 1.
- The lower limit of the counter is 1. It can be reset to 0 by “Delete log” switch or CONSULT-II.

Count Up Type

- When the ignition switch is turned ON if the error is detected, the counter increases 1. Even if it is normal when the ignition switch is turned ON the next time, the counter does not decrease.
- The upper limit of the counter is 50. 51 or more is displayed as 50. It can be reset to 0 by “Delete log” switch or CONSULT-II.

| Display type of occurrence frequency | Error history display item |
|--------------------------------------|--|
| Count down type | CAN_COMM_CIRCUIT, CONTROL UNIT (CAN), AV COMM CIRCUIT, CONTROL UNIT (AV) |
| Count up type | Other than the above |

Error Item

Some error items may be displayed simultaneously according to the cause. If some error items are displayed simultaneously, the detection of the cause can be performed by the combination of display items

| Error item | Description | Possible cause/Action to take |
|--|--|---|
| CAN_COMM_CIRCUIT | CAN communication malfunction is detected | Perform the diagnosis using CONSULT-II, and then repair the malfunctioning parts based on diagnostic results. Refer to AV-103, "SELF-DIAG RESULTS" |
| CONTROL UNIT (CAN) | CAN initial diagnosis malfunction is detected | Replace AV (NAVI) control unit Refer to AV-131, "AV (NAVI) Control Unit" |
| CONTROL UNIT (AV) | AV communication circuit initial diagnosis malfunction is detected | Replace AV (NAVI) control unit Refer to AV-131, "AV (NAVI) Control Unit" |
| <ul style="list-style-type: none"> ● AV COMM CIRCUIT ● Switches Connection Error ● DVD Deck Connection Error ● Audio Unit Connection Error ● Amplifier Connection Error ● Rearview Camera Connection Error | Malfunction is detected on communication circuit between AV (NAVI) control unit and DVD player | <ul style="list-style-type: none"> ● Communication circuit between AV (NAVI) control unit and DVD player ● AV (NAVI) control unit ● DVD player |

DIAGNOSIS SYSTEM

[WITHOUT MOBILE ENTERTAINMENT SYSTEM]

| Error item | Description | Possible cause/Action to take |
|---|---|---|
| <ul style="list-style-type: none"> ● AV COMM CIRCUIT ● Switches Connection Error ● Audio Unit Connection Error ● Amplifier Connection Error ● Rearview Camera Connection Error | BOSE surround 5.1ch system <ul style="list-style-type: none"> ● Malfunction is detected on communication circuit between DVD player and multifunction switch | <ul style="list-style-type: none"> ● Communication circuit between DVD player and multifunction switch ● DVD player ● Multifunction switch |
| | BOSE 2ch system <ul style="list-style-type: none"> ● Malfunction is detected on communication circuit between AV (NAVI) control unit and multifunction switch | <ul style="list-style-type: none"> ● Communication circuit between AV (NAVI) control unit and multifunction switch ● AV (NAVI) control unit ● Multifunction switch |
| <ul style="list-style-type: none"> ● AV COMM CIRCUIT ● Audio Unit Connection Error ● Amplifier Connection Error ● Rearview Camera Connection Error | Malfunction is detected on communication circuit between multifunction switch and camera control unit | <ul style="list-style-type: none"> ● Communication circuit between multifunction switch and camera control unit ● Multifunction switch ● Camera control unit |
| <ul style="list-style-type: none"> ● AV COMM CIRCUIT ● Audio Unit Connection Error ● Amplifier Connection Error | Base system <ul style="list-style-type: none"> ● Audio unit power supply and ground circuit malfunction is detected ● Malfunction is detected on communication circuit between multifunction switch and audio unit ● Malfunction is detected on communication signal between audio unit and AV (NAVI) control unit | <ul style="list-style-type: none"> ● Audio unit power supply and ground circuit ● Communication circuit between multifunction switch and audio unit ● Multifunction switch ● Audio unit ● AV (NAVI) control unit |
| | BOSE system <ul style="list-style-type: none"> ● Malfunction is detected on communication circuit between camera control unit and BOSE amp | <ul style="list-style-type: none"> ● Communication circuit between camera control unit and BOSE amp ● Camera control unit ● BOSE amp |
| <ul style="list-style-type: none"> ● AV COMM CIRCUIT ● Audio Unit Connection Error | <ul style="list-style-type: none"> ● Audio unit power supply and ground circuit malfunction is detected ● Malfunction is detected on communication circuit between BOSE amp and audio unit ● Malfunction is detected on communication signal between audio unit and AV (NAVI) control unit | <ul style="list-style-type: none"> ● Audio unit power supply and ground circuit ● Communication circuit between BOSE amp and audio unit ● Audio unit ● AV (NAVI) control unit ● BOSE amp |
| <ul style="list-style-type: none"> ● AV COMM CIRCUIT ● Rearview Camera Connection Error | <ul style="list-style-type: none"> ● Camera control unit power supply and ground circuit malfunction is detected ● Malfunction is detected on communication signal between camera control unit and AV (NAVI) control unit | <ul style="list-style-type: none"> ● Camera control unit power supply and ground circuit ● Camera control unit ● AV (NAVI) control unit |
| <ul style="list-style-type: none"> ● AV COMM CIRCUIT ● Switches Connection Error | <ul style="list-style-type: none"> ● Multifunction switch power supply and ground circuit malfunction is detected ● Malfunction is detected on communication signal between multifunction switch and AV (NAVI) control unit | <ul style="list-style-type: none"> ● Multifunction switch power supply and ground circuit ● Multifunction switch ● AV (NAVI) control unit |
| <ul style="list-style-type: none"> ● AV COMM CIRCUIT ● DVD Deck Connection Error | <ul style="list-style-type: none"> ● DVD player power supply and ground circuit malfunction is detected ● Malfunction is detected on communication signal between DVD player and AV (NAVI) control unit | <ul style="list-style-type: none"> ● DVD player power supply and ground circuit ● DVD player ● AV (NAVI) control unit |

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DIAGNOSIS SYSTEM [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

| Error item | Description | Possible cause/Action to take |
|---|---|---|
| <ul style="list-style-type: none"> ● AV COMM CIRCUIT ● Amplifier Connection Error | <ul style="list-style-type: none"> ● BOSE amp power supply and ground circuit malfunction is detected ● Malfunction is detected on communication signal between BOSE amp and AV (NAVI) control unit | <ul style="list-style-type: none"> ● BOSE amp power supply and ground circuit ● BOSE amp ● AV (NAVI) control unit |
| Front Display Connection Error | <ul style="list-style-type: none"> ● Front display unit power supply and ground circuit malfunction is detected ● Malfunction is detected on communication circuit between front display unit and AV (NAVI) control unit ● Malfunction is detected on communication signal between front display unit and AV (NAVI) control unit | <ul style="list-style-type: none"> ● Front display unit power supply and ground ● Communication circuit between front display unit and AV (NAVI) control unit ● Front display unit ● AV (NAVI) control unit |
| GPS Antenna Error | GPS antenna connection malfunction is detected | <ul style="list-style-type: none"> ● GPS antenna feeder ● GPS antenna ● NAVI control unit |
| Camera Control Unit Connection Error | Camera and connection recognition signal circuit malfunction is detected | <ul style="list-style-type: none"> ● Camera-connection recognition signal circuit ● Camera control unit ● AV (NAVI) control unit |
| FLASH-ROM Error Of Control Unit | AV (NAVI) control unit malfunction is detected | Replace AV (NAVI) control unit Refer to AV-131, "AV (NAVI) Control Unit" |
| Connection Of Gyro | NAVI control unit malfunction is detected | Replace NAVI control unit Refer to AV-131, "AV (NAVI) Control Unit" |
| GPS Communication Error | GPS malfunction is detected | If the symptoms such as the GPS receipt malfunction occur, intermittent malfunction caused by strong radio interference may be detected. If the malfunction always occurs, replace NAVI control unit. |
| GPS ROM Error | | |
| GPS RAM Error | | |
| GPS RTC Error | | |
| DVD-ROM Communication Error | <ul style="list-style-type: none"> ● Malfunction is detected on DVD-ROM drive pickup lens in NAVI control unit ● There is dirt and damage on the map disc | <ul style="list-style-type: none"> ● Map disc ● NAVI control unit Refer to AV-131, "AV (NAVI) Control Unit" |
| DVD-ROM Read Error | | |
| DVD-ROM Disc Error | | |
| DVD-ROM Mechanism not Detected | | |
| DVD-ROM Mechanism Error | | |
| DVD-ROM Focus Error | | |
| DVD-ROM TOC Error | | |
| DVD-ROM Seek Error | | |
| DVD-ROM Error Correction Error | | |
| DVD-ROM Data Transfer Error | | |
| DVD-ROM Data Error | | |
| DVD-ROM Time-out | | |
| DVD-ROM Loading / Eject Error | | |
| CAN Controller Memory Error | AV (NAVI) control unit malfunction is detected | Replace AV (NAVI) control unit Refer to AV-131, "AV (NAVI) Control Unit" |
| Bluetooth Module Connection Error | | |

DIAGNOSIS SYSTEM [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

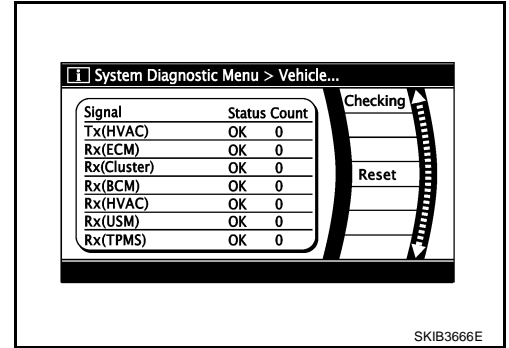
VEHICLE CAN DIAGNOSIS

- CAN communication status and error counter is displayed.
- Error counter displays 0 if any malfunction is not detected in the past. If the malfunction is detected, it displays 40. When turning the ignition switch ON, if it is normal, it displays 39. The lower limit of the counter is 1.
- If it is reset, the error counter is deleted.

| Items | Display (Current) | Error counter (Past) |
|--------------|-------------------|----------------------|
| Tx (HVAC) | OK /??? | 0 - 40 |
| Rx (ECM) | OK /??? | 0 - 40 |
| Rx (Cluster) | OK /??? | 0 - 40 |
| Rx (BCM) | OK /??? | 0 - 40 |
| Rx (HVAC) | OK /??? | 0 - 40 |
| Rx (USM) | OK /??? | 0 - 40 |
| Rx (TPMS) | OK /??? | 0 - 40 |

NOTE:

"???" indicates "UNKWN".



AV COMM DIAGNOSIS

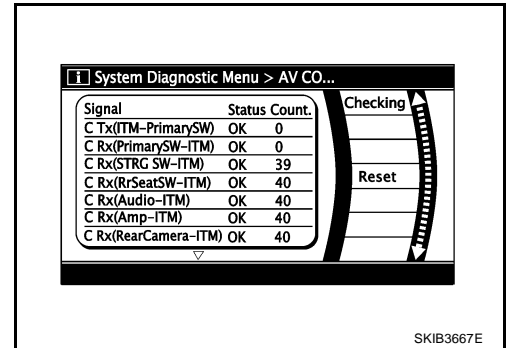
- Displays the communication condition between AV (NAVI) control unit (master unit) and each unit and between audio unit (sub-master unit) and each unit.
- Error counter displays 0 if any malfunction is not detected in the past. If the malfunction is detected, it displays 40. When turning the ignition switch ON, if it is normal, it displays 39. The lower limit of the counter is 1.
- If it is reset, the error counter is deleted.

| Items | Status (Current) | Counter (Past) |
|-----------------------|------------------|----------------|
| C Tx (ITM-PrimarySW) | OK /??? | 0 - 40 |
| C Rx (PrimarySW-ITM) | OK /??? | 0 - 40 |
| C Rx (STRG SW-ITM) | OK /??? | 0 - 40 |
| C Rx (RrSeatSW-ITM) | OK /??? | 0 - 40 |
| C Rx (Audio-ITM) | OK /??? | 0 - 40 |
| C Rx (Amp-ITM) | OK /??? | 0 - 40 |
| C Rx (RearCamera-ITM) | OK /??? | 0 - 40 |
| C Rx (DVD-ITM) | OK /??? | 0 - 40 |
| C Rx (Amp-Audio) | OK /??? | 0 - 40 |
| C Rx (DVD-Audio) | OK /??? | 0 - 40 |

ITM: AV (NAVI) control unit

NOTE:

"???" indicates "UNKWN".



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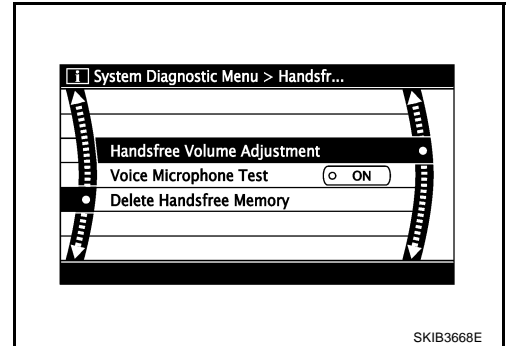
AV

DIAGNOSIS SYSTEM [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

HANDSFREE PHONE

Handsfree Volume Adjustment

The received volume adjustment of hands-free phone can be adjusted to Low, Medium, and High settings.



Voice Microphone Test

When this function is turned "ON", the voice that is input to microphone is output to front speaker via TEL voice signal line. The microphone and TEL voice signal line can be checked.

Delete Handsfree Memory

Erase the memory related to the hands-free phone.

DIAGNOSIS SYSTEM

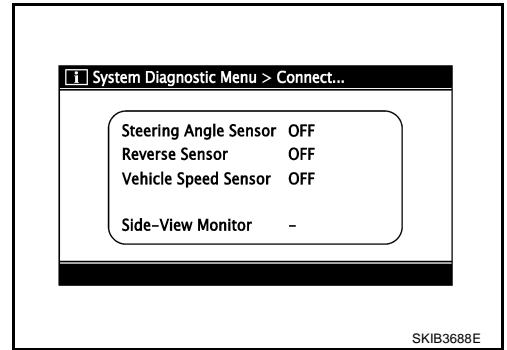
[WITHOUT MOBILE ENTERTAINMENT SYSTEM]

CAMERA CONT.

There are 2 functions: "Connection Confirmation", "Adjust offset of rear view camera".

Connection Confirmation

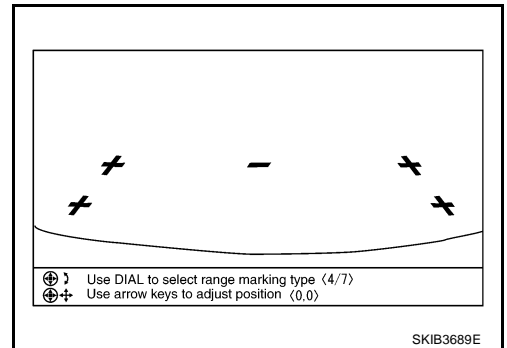
The input signals of steering angle sensor signal, reverse signal, and vehicle speed signal can be checked.



| Diagnosis item | Display | Vehicle status |
|-----------------------|---------|---|
| Steering Angle Sensor | ON | It turns ON when the steering is turning with the ignition switch ON (Once it turns ON, it does not change during Connection Confirmation mode) |
| | OFF | Turn ignition switch ACC It turns OFF when the steering is not turning with the ignition switch ON |
| | — | Camera-connection recognition signal malfunction |
| Reverse Sensor | ON | Selector lever in R position with ignition switch ON |
| | OFF | Turn ignition switch ACC Selector lever in any position other than R with ignition switch ON |
| | — | Camera-connection recognition signal malfunction |
| Vehicle Speed Sensor | ON | When vehicle speed is 0 km/h or more with ignition switch ON |
| | OFF | Turn ignition switch ACC When vehicle speed is 0 km/h with ignition switch ON |
| | — | Camera-connection recognition signal malfunction |

Adjust Offset of Rear View Camera

If the adjustment of rear view monitor guiding line display position is necessary when rear view camera is removed, use this mode to adjust it.

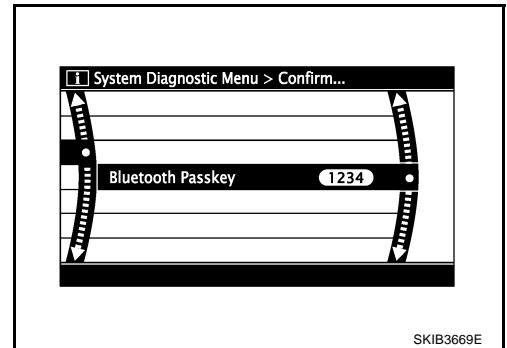


DIAGNOSIS SYSTEM [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

BLUETOOTH

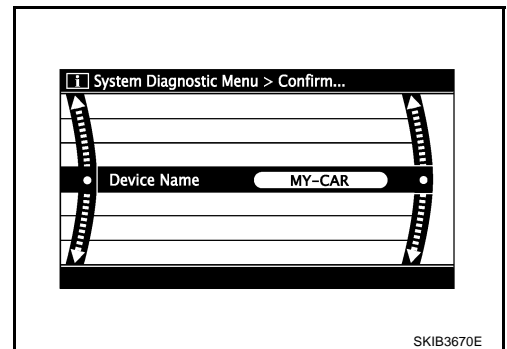
Confirm/Change Passkey

- The passkey of Bluetooth can be confirmed and changed.
- The passkey can be changed by four digits within 0 to 9.



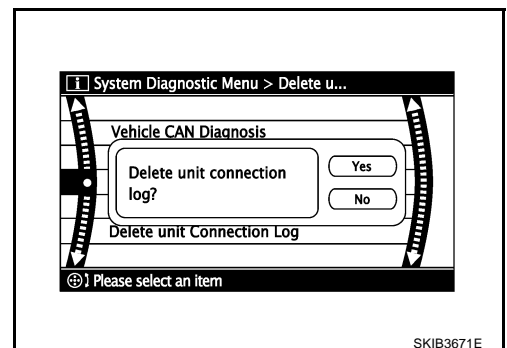
Confirm/Change Device Name

- The device name of Bluetooth can be confirmed and changed.
- The device name can be changed by sixteen digits within A to Z (small characters can be used) and - (hyphen).



DELETE UNIT CONNECTION LOG

Erase the connection history of unit and error history that is recorded in AV (NAVI) control unit (clear the connection history of the removed unit).

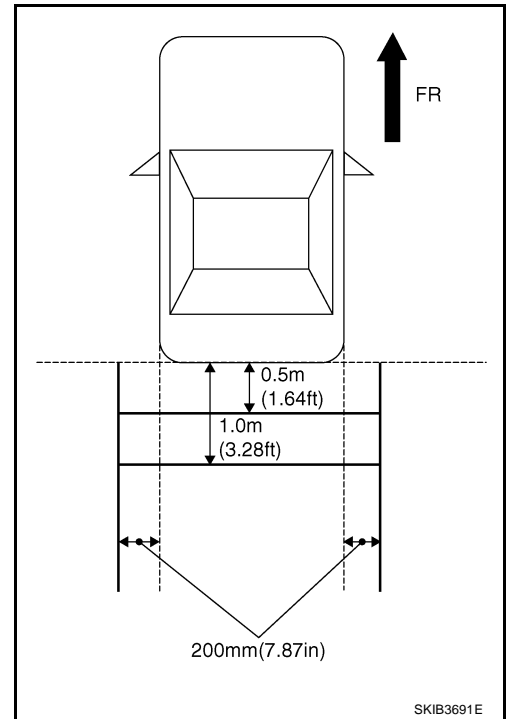


DIAGNOSIS SYSTEM [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

Rear View Monitor Guiding Line Adjustment

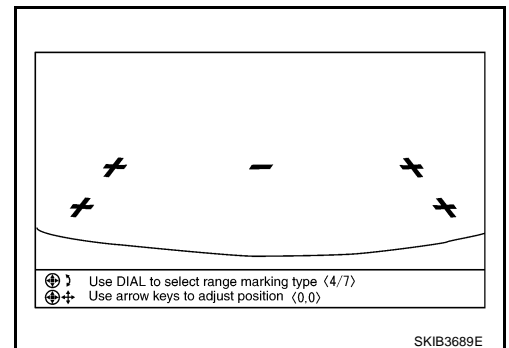
NKS0048Y

1. Draw lines on rearward area of the vehicle passing through the following points: 20 cm (7.87 in) from both sides of the vehicle, and 0.5 m (1.64 ft), 1.0 m (3.28 ft) from the rear end of the bumper.
2. Set into "Adjust offset of rear view camera" mode of Confirmation/Adjustment mode.



3. Rotate the center dial, and then select the guiding line pattern so that its angle is aligned with the correction line of the rear of the vehicle.

Selected pattern : 7



4. Make fine adjustment to the correction line of the rear of the vehicle with up/down/left/right switches so that its position is aligned with the guiding line. Press "OK" switch and record the adjusted guiding line position to the camera control unit.

Up/Down adjustment range : -20 - 20

Left/Right adjustment range : -20 - 20

CAUTION:

Never operate other function such as pressing BACK while writing index data.

If Confirmation/Adjustment mode does not function in the above procedure, perform one of the following service to adjust the index again.

- Remove battery for five min. Then reconnect battery.
- Remove camera control unit connector for five min. Then reconnect camera control unit connector.

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DIAGNOSIS SYSTEM [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

NKS0048Z

CONSULT-II Functions (Multi AV)

CONSULT-II can display each diagnostic item using the diagnostic test modes shown following.

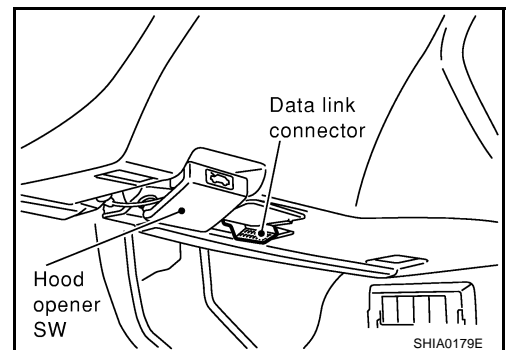
| Diagnosis mode | Description |
|-----------------------|--|
| SELF-DIAG RESULTS | <ul style="list-style-type: none"> ● Performs the connection diagnosis of communication circuit between AV (NAVI) control unit and system and displays the current and past malfunctions collectively. ● The DVD-ROM drive diagnosis of NAVI control unit and the connection diagnosis between NAVI control unit and GPS antenna can be performed (DVD-ROM drive will not be diagnosed when no map DVD-ROM is in it) |
| DATA MONITOR | The diagnosis of vehicle signal that is input to the AV (NAVI) control unit can be performed |
| CAN DIAG SUPPORT MNTR | The transmitting/receiving of CAN communication can be monitored. Refer to LAN-44, "CAN Diagnostic Support Monitor" . |
| AV COMM MONITOR | The transmitting/receiving of a system can be monitored |
| ECU PART NUMBER | The part number of AV (NAVI) control unit can be checked |

OPERATION PROCEDURE

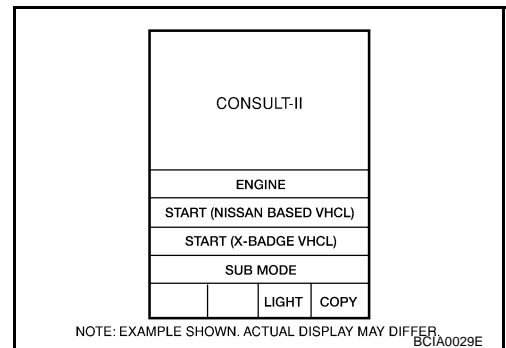
CAUTION:

If CONSULT-II is used with no connection of CONSULT-II CONVERTER, malfunctions might be detected in self-diagnosis depending on control unit which carry out CAN communication.

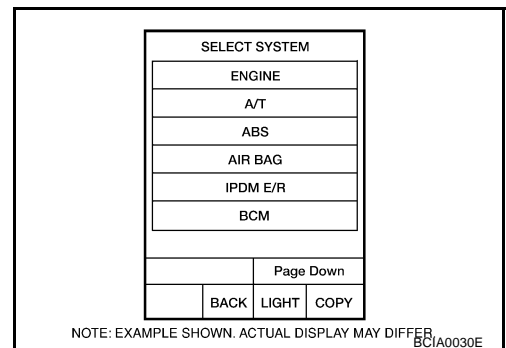
1. Turn ignition switch OFF.
2. Connect CONSULT-II and CONSULT-II CONVERTER to data link connector, and turn ignition switch ON.



3. Touch "START (NISSAN BASED VHCL)".

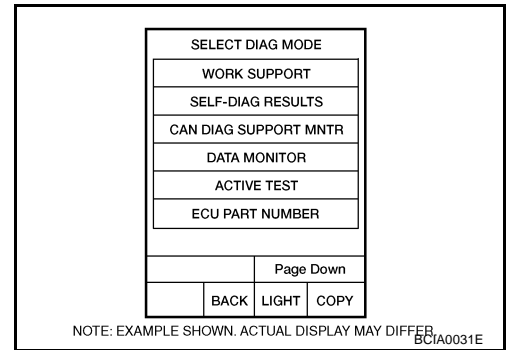


4. Touch "MULTI AV"
If "MULTI AV" is not indicated, check the following item.
 - AV (NAVI) control unit power supply and ground circuit.
 - CONSULT-II data link connector (DLC) circuit
Refer to [LAN-42, "Precautions When Using CONSULT-II"](#) .



DIAGNOSIS SYSTEM [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

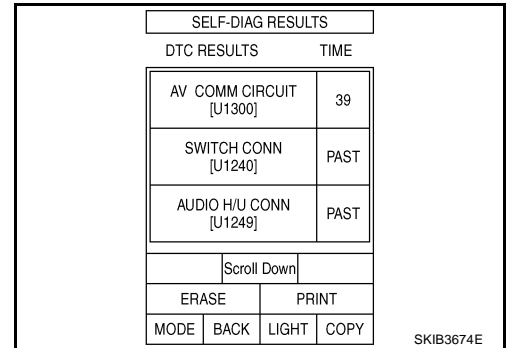
5. Select diagnosis item on "SELECT DIAG MODE" screen.



SELF-DIAG RESULTS

The self-diagnosis is started and self-diagnostic results are displayed by touching "START" after selecting "SELF-DIAG RESULTS".

- In CONSULT-II self-diagnosis, self-diagnostic results and error history are displayed collectively.
- The current malfunction indicates "CRNT". The past malfunction indicates "PAST".
- If DTC [U1000], [U1300] are detected, "0" is displayed at "TIME". If it is normal the next time ignition switch is ON of next time, add 1 to the "TIME".



Display Item of SELF-DIAG RESULTS

Self-diagnostic results may be displayed simultaneously according to the cause. If some error items are displayed simultaneously, the detection of the cause can be performed by the combination of display items

| Error item | Description | Possible cause/Action to take |
|---|---|---|
| CAN COMM CIRCUIT [U1000] | CAN communication malfunction is detected | Print out the self-diagnostic results and go to LAN-42, "Precautions When Using CONSULT-II" . |
| CONTROL UNIT (CAN) [U1010] | CAN initial diagnosis malfunction is detected | Replace AV (NAVI) control unit Refer to AV-131, "AV (NAVI) Control Unit" . |
| CONTROL UNIT (AV) [U1310] | AV communication circuit initial diagnosis malfunction is detected | Replace AV (NAVI) control unit Refer to AV-131, "AV (NAVI) Control Unit" . |
| <ul style="list-style-type: none"> ● AV COMM CIRCUIT [U1300] ● SWITCH CONN [U1240] ● DVD DECK CONN [U1248] ● AUDIO H/U CONN [U1249] ● AMP CONN [U124E] ● REAR CAMERA CONN [U1252] | Malfunction is detected on communication circuit between AV (NAVI) control unit and DVD player | <ul style="list-style-type: none"> ● Communication circuit between AV (NAVI) control unit and DVD player ● AV (NAVI) control unit ● DVD player |
| <ul style="list-style-type: none"> ● AV COMM CIRCUIT [U1300] ● SWITCH CONN [U1240] ● AUDIO H/U CONN [U1249] ● AMP CONN [U124E] ● REAR CAMERA CONN [U1252] | BOSE surround 5.1ch system | <ul style="list-style-type: none"> ● Communication circuit between DVD player and multifunction switch ● DVD player ● Multifunction switch |
| | BOSE 2ch system | <ul style="list-style-type: none"> ● Communication circuit between AV (NAVI) control unit and multifunction switch ● AV (NAVI) control unit ● Multifunction switch |
| <ul style="list-style-type: none"> ● AV COMM CIRCUIT [U1300] ● AUDIO H/U CONN [U1249] ● AMP CONN [U124E] ● REAR CAMERA CONN [U1252] | Malfunction is detected on communication circuit between multifunction switch and camera control unit | <ul style="list-style-type: none"> ● Communication circuit between multifunction switch and camera control unit ● Multifunction switch ● Camera control unit |

DIAGNOSIS SYSTEM [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

| Error item | Description | Possible cause/Action to take |
|---|---|---|
| <ul style="list-style-type: none"> ● AV COMM CIRCUIT [U1300] ● AUDIO H/U CONN [U1249] ● AMP CONN [U124E] | Base system <ul style="list-style-type: none"> ● Audio unit power supply and ground circuit malfunction is detected ● Malfunction is detected on communication circuit between multifunction switch and audio unit ● Malfunction is detected on communication signal between audio unit and AV (NAVI) control unit | <ul style="list-style-type: none"> ● Audio unit power supply and ground circuit ● Communication circuit between multifunction switch and audio unit ● Multifunction switch ● Audio unit ● AV (NAVI) control unit |
| | BOSE system <ul style="list-style-type: none"> ● Malfunction is detected on communication circuit between camera control unit and BOSE amp | <ul style="list-style-type: none"> ● Communication circuit between camera control unit and BOSE amp ● Camera control unit ● BOSE amp |
| <ul style="list-style-type: none"> ● AV COMM CIRCUIT [U1300] ● AUDIO H/U CONN [U1249] | <ul style="list-style-type: none"> ● Audio unit power supply and ground circuit malfunction is detected ● Malfunction is detected on communication circuit between BOSE amp and audio unit ● Malfunction is detected on communication signal between audio unit and AV (NAVI) control unit | <ul style="list-style-type: none"> ● Audio unit power supply and ground circuit ● Communication circuit between BOSE amp and audio unit ● Audio unit ● AV (NAVI) control unit ● BOSE amp |
| <ul style="list-style-type: none"> ● AV COMM CIRCUIT [U1300] ● REAR CAMERA CONN [U1252] | <ul style="list-style-type: none"> ● Camera control unit power supply and ground circuit malfunction is detected ● Malfunction is detected on communication signal between camera control unit and AV (NAVI) control unit | <ul style="list-style-type: none"> ● Camera control unit power supply and ground circuit ● Camera control unit ● AV (NAVI) control unit |
| <ul style="list-style-type: none"> ● AV COMM CIRCUIT [U1300] ● SWITCH CONN [U1240] | <ul style="list-style-type: none"> ● Multifunction switch power supply and ground circuit malfunction is detected ● Malfunction is detected on communication signal between multifunction switch and AV (NAVI) control unit | <ul style="list-style-type: none"> ● Multifunction switch power supply and ground circuit ● Multifunction switch ● AV (NAVI) control unit |
| <ul style="list-style-type: none"> ● AV COMM CIRCUIT [U1300] ● DVD DECK CONN [U1248] | <ul style="list-style-type: none"> ● DVD player power supply and ground circuit malfunction detected ● Malfunction is detected on communication signal between DVD player and AV (NAVI) control unit | <ul style="list-style-type: none"> ● DVD player power supply and ground circuit ● DVD player ● AV (NAVI) control unit |
| <ul style="list-style-type: none"> ● AV COMM CIRCUIT [U1300] ● AMP CONN [U124E] | <ul style="list-style-type: none"> ● BOSE amp power supply and ground circuit malfunction is detected ● Malfunction is detected on communication signal between BOSE amp and AV (NAVI) control unit | <ul style="list-style-type: none"> ● BOSE amp power supply and ground circuit ● BOSE amp ● AV (NAVI) control unit |
| FRONT DISP CONN [U1243] | <ul style="list-style-type: none"> ● Front display unit power supply and ground circuit malfunction is detected ● Malfunction is detected on communication circuit between front display unit and AV (NAVI) control unit ● Malfunction is detected on communication signal between front display unit and AV (NAVI) control unit | <ul style="list-style-type: none"> ● Front display unit power supply and ground ● Communication circuit between front display unit and AV (NAVI) control unit ● Front display unit ● AV (NAVI) control unit |

DIAGNOSIS SYSTEM

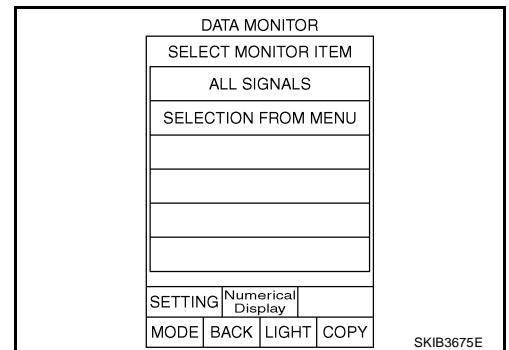
[WITHOUT MOBILE ENTERTAINMENT SYSTEM]

| Error item | Description | Possible cause/Action to take |
|--------------------------------|---|---|
| GPS ANTENNA CONN [U1244] | GPS antenna connection malfunction is detected | <ul style="list-style-type: none"> ● GPS antenna feeder ● GPS antenna ● NAVI control unit |
| CAMERA CONT CONN [U1250] | Camera and connection recognition signal circuit malfunction is detected | <ul style="list-style-type: none"> ● Camera-connection recognition signal circuit ● Camera control unit ● AV (NAVI) control unit |
| Cont Unit FLASH-ROM [U1200] | AV (NAVI) control unit malfunction is detected | Replace AV (NAVI) control unit Refer to AV-131, "AV (NAVI) Control Unit" . |
| GYRO NO CONN [U1201] | NAVI control unit malfunction is detected | Replace NAVI control unit Refer to AV-131, "AV (NAVI) Control Unit" . |
| GPS COMM [U1204] | GPS malfunction is detected | If the symptoms such as the GPS receipt malfunction occur, intermittent malfunction caused by strong radio interference may be detected. If the malfunction always occurs, replace NAVI control unit. |
| GPS ROM [U1205] | | |
| GPS RAM [U1206] | | |
| GPS RTC [U1207] | | |
| DVD-ROM COMM [U1208] | <ul style="list-style-type: none"> ● Malfunction is detected on DVD-ROM drive pickup lens in NAVI control unit ● There is dirt and damage on the map disc | <ul style="list-style-type: none"> ● Map disc ● NAVI control unit Refer to AV-131, "AV (NAVI) Control Unit" . |
| DVD-ROM READ [U1209] | | |
| DVD-ROM DISC [U120A] | | |
| DVD-ROM MECHA DETECT [U120C] | | |
| DVD-ROM DRIVE MECHA [U120D] | | |
| DVD-ROM FOCUS [U120E] | | |
| DVD-ROM TOC [U120F] | | |
| DVD-ROM SEEK [U1210] | | |
| DVD-ROM ERR CORRECTION [U1211] | | |
| DVD-ROM DATA FORWARD [U1212] | | |
| DVD-ROM DATA [U1213] | | |
| DVD-ROM TIMEOUT [U1214] | | |
| DVD-ROM LOAD [U1215] | | |
| CAN CONT [U1216] | AV (NAVI) control unit malfunction is detected | Replace AV (NAVI) control unit Refer to AV-131, "AV (NAVI) Control Unit" . |
| BLUETOOTH CONN [U1217] | | |

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DATA MONITOR

When "DATA MONITOR" is selected, "ALL SIGNALS" and "SELECTION FROM MENU" are displayed.



DIAGNOSIS SYSTEM [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

ALL SIGNALS

- When "ALL SIGNALS" is selected and "START" is touched, the following vehicle signal condition that is input to AV (NAVI) control unit is displayed.
- For each signal, a comparison of actual operating status and the status recognized by the system can be checked.

| DATA MONITOR | | | |
|--------------|------|--------|------|
| MONITOR | | | |
| VHCL SPD SIG | | OFF | |
| PKB SIG | | ON | |
| ILLUM SIG | | OFF | |
| IGN SIG | | ON | |
| REV SIG | | OFF | |
| | | RECORD | |
| MODE | BACK | LIGHT | COPY |

SKIB3676E

Display Condition

| Display Item | Display | Vehicle status | Remarks | |
|--------------|---------|---|---|---|
| VHCL SPD SIG | ON | Vehicle speed > 0 km/h (0 MPH) | Changes in indication may be delayed. This is normal. | |
| | OFF | Vehicle speed = 0 km/h (0 MPH) | | |
| PKB SIG | ON | Parking brake is applied. | | |
| | OFF | Parking brake is released. | | |
| ILLMU SIG | ON | Light switch ON | | - |
| | OFF | Light switch OFF | | |
| IGN SIG | ON | Ignition switch ON | - | |
| | OFF | Ignition switch in ACC position | | |
| REV SIG | ON | Selector lever in R position | Changes in indication may be delayed. This is normal. | |
| | OFF | Other than selector lever in R position | | |

SELECTION FROM MENU

- When "SELECTION FROM MENU" is selected, the vehicle signal display can be selected. After that, the selected vehicle signal condition is displayed when "START" is touched.

| Item to be selected | Description |
|---------------------|------------------------------------|
| VHCL SPD SIG | As well as selecting "ALL SIGNALS" |
| PKB SIG | |
| ILLUM SIG | |
| IGN SIG | |
| REV SIG | |

AV COMM MONITOR

When "AV COMM MONITOR" is selected, "AV&NAVI C/U" and "AUDIO" are displayed.

AV&NAVI C/U

- When "AV&NAVI C/U" is selected, the communication condition from AV (NAVI) control unit to each unit and malfunction counter are displayed.
- Error counter displays OK if any malfunction is not detected in the past. If the malfunction is detected, it displays 0. When turning the ignition switch ON, if it is normal, it displays 1. The upper limit of the counter is 39.

| Items | Display (PRSNT) | Error counter (PAST) |
|---------------|-----------------|----------------------|
| TRANSMIT DIAG | OK / UNKWN | OK / 0 - 39 |
| PANEL SWITCH | OK / UNKWN | OK / 0 - 39 |
| SW SECONDARY | - | - |
| RR CONTROL SW | - | - |

| AV COMM MONITOR | | | |
|-----------------|-------|-------|-------------|
| AV&NAVI C/U | | | |
| | PRSNT | PAST | |
| TRANSMIT DIAG | OK | OK | |
| PANEL SWITCH | OK | OK | |
| SW SECONDARY | - | - | |
| RR CONTROL SW | - | - | |
| STEERING SW | OK | OK | |
| AUDIO | OK | OK | |
| SPEAKER AMP | OK | OK | |
| SIDE CAMERA | - | - | |
| REAR CAMERA | - | - | |
| PRINT | | | Scroll Down |
| MODE | BACK | LIGHT | COPY |

SKIB3678E

DIAGNOSIS SYSTEM [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

| Items | Display (PRSNT) | Error counter (PAST) |
|-------------|-----------------|----------------------|
| STEERING SW | OK / UNKWN | OK / 0 - 39 |
| AUDIO | OK / UNKWN | OK / 0 - 39 |
| SPEAKER AMP | OK / UNKWN | OK / 0 - 39 |
| SIDE CAMERA | - | - |
| REAR CAMERA | OK / UNKWN | OK / 0 - 39 |
| TV TUNER | - | - |
| DVD PLAYER | OK / UNKWN | OK / 0 - 39 |
| VIDEO DIST | - | - |
| ETC | - | - |
| FM MULTI | - | - |
| REMOTE CONT | - | - |

AUDIO

- When "AUDIO" is selected, the communication condition from audio unit to each unit and malfunction counter are displayed.
- Error counter displays OK if any malfunction is not detected in the past. If the malfunction is detected, it displays 0. When turning the ignition switch ON, if it is normal, it displays 1. The upper limit of the counter is 39.

| Items | Display (Current) | Error counter (Past) |
|-------------|-------------------|----------------------|
| TRANSMIT DG | OK / UNKWN | OK / 0 - 39 |
| SPEAKER AMP | OK / UNKWN | OK / 0 - 39 |
| TV TUNER | - | - |
| DVD PLAYER | OK / UNKWN | OK / 0 - 39 |
| MD DECK | - | - |
| CD CHANGER | - | - |
| MD CHANGER | - | - |

| | | | |
|-----------------|-------|-------|------|
| AV COMM MONITOR | | | |
| AUDIO | | | |
| | PRSNT | PAST | |
| TRANSMIT DG | OK | OK | |
| SPEAKER AMP | - | - | |
| TV TUNER | - | - | |
| DVD PLAYER | - | - | |
| MD DECK | - | - | |
| CD CHANGER | - | - | |
| MD CHANGER | - | - | |
| | | | |
| PRINT | | | |
| MODE | BACK | LIGHT | COPY |

SKIB3679E

ECU PART NUMBER

The part number of AV (NAVI) control unit is displayed.

| | | | |
|--------------------|------|-------|------|
| ECU PART NUMBER | | | |
| | | | |
| 25915-EH010 | | | |
| | | | |
| MODE | BACK | LIGHT | COPY |

SKIB3680E

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TROUBLE DIAGNOSIS

[WITHOUT MOBILE ENTERTAINMENT SYSTEM]

TROUBLE DIAGNOSIS

PFP:00004

Multifunction Switch Cannot Be Operated

NKS00490

1. PERFORM CONSULT-II SELF-DIAGNOSIS

Perform CONSULT-II self-diagnosis and check the malfunction. Refer to [AV-103, "SELF-DIAG RESULTS"](#) .

Is there a malfunction?

YES >> [AV-103, "Display Item of SELF-DIAG RESULTS"](#).

NO >> Replace multifunction switch.

RGB Image Is Not Displayed

NKS00491

1. DIAGNOSIS USING CONSULT-II

Start CONSULT-II, and make sure that "MULTI AV" is displayed on SELECT SYSTEM screen. Refer to [AV-102, "OPERATION PROCEDURE"](#) .

OK or NG

OK >> GO TO 2.

NG >> Check AV (NAVI) control unit power supply and ground circuit.

2. PERFORM CONSULT-II SELF-DIAGNOSIS

Perform CONSULT-II self-diagnosis and check the malfunction. Refer to [AV-103, "SELF-DIAG RESULTS"](#) .

Is there a malfunction?

YES >> Refer to [AV-103, "Display Item of SELF-DIAG RESULTS"](#) .

NO >> GO TO 3.

3. CHECK HARNESS BETWEEN AV (NAVI) CONTROL UNIT AND FRONT DISPLAY UNIT

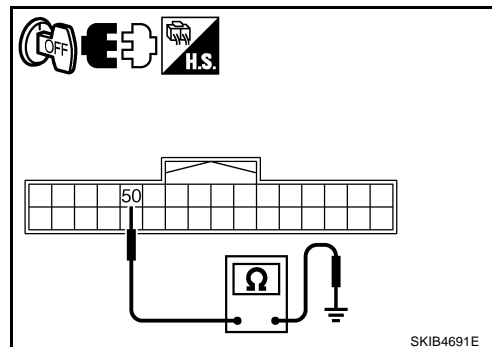
1. Turn ignition switch OFF.
2. Disconnect AV (NAVI) control unit connector and front display unit connector.
3. Check continuity between AV (NAVI) control unit harness connector M210 terminal 50 and ground.

50 – Ground : Continuity should not exist.

OK or NG

OK >> GO TO 4.

NG >> Repair harness or connector.



4. CHECK RGB AREA (YS) SIGNAL FOR AV (NAVI) CONTROL UNIT

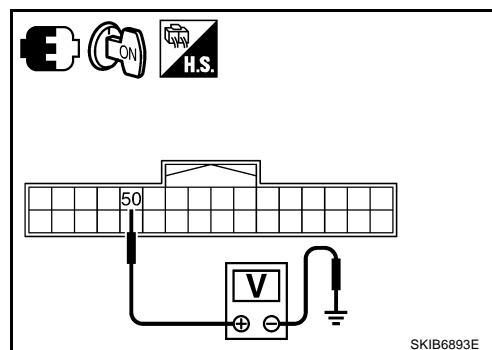
1. Connect AV (NAVI) control unit connector.
2. Turn ignition switch ON.
3. Display RGB image.
4. Check voltage between AV (NAVI) control unit harness connector M210 terminal 50 and ground.

50 – Ground : Approx. 5 V

OK or NG

OK >> Replace front display unit.

NG >> Replace AV (NAVI) control unit.



TROUBLE DIAGNOSIS

[WITHOUT MOBILE ENTERTAINMENT SYSTEM]

NKS00492

RGB Screen Is Rolling

1. CHECK HARNESS

1. Disconnect AV (NAVI) control unit connector and front display unit connector.
2. Check continuity between AV (NAVI) control unit harness connector (A) M210 terminal 45 and front display unit harness connector (B) M203 terminal 3.

45 – 3 : Continuity should exist.

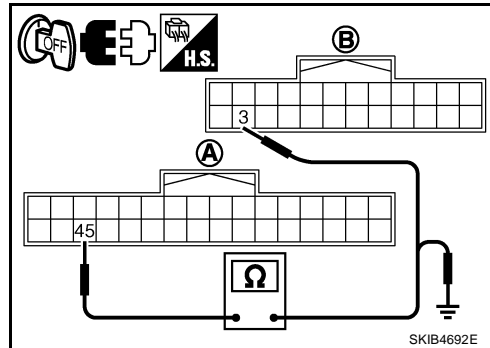
3. Check continuity between AV (NAVI) control unit harness connector (A) M210 terminal 45 and ground.

45 – Ground : Continuity should not exist.

OK or NG

OK >> GO TO 2.

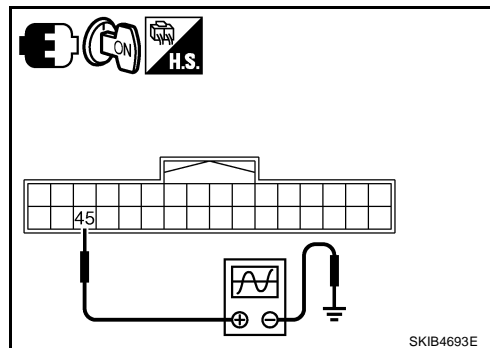
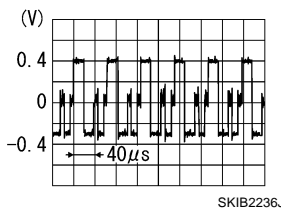
NG >> Repair harness or connector.



2. CHECK RGB SIGNAL (G: GREEN)

1. Connect AV (NAVI) control unit connector and front display unit connector.
2. Turn ignition switch ON.
3. Start Confirmation/Adjustment mode. Refer to [AV-91, "Confirmation/Adjustment Mode"](#).
4. Display color bar by selecting "Display Color Spectrum Bar" on DISPLAY DIAGNOSIS screen. Refer to [AV-91, "DISPLAY DIAGNOSIS"](#).
5. Check signal between AV (NAVI) control unit harness connector M210 terminal 45 and ground.

45 – Ground:



OK or NG

OK >> Replace front display unit.

NG >> Replace AV (NAVI) control unit.

Rear View Monitor Image Is Not Displayed DVD IMAGE IS DISPLAYED

NKS00493

1. CONSULT-II DIAGNOSIS

Perform CONSULT-II self-diagnosis and check the malfunction. Refer to [AV-103, "SELF-DIAG RESULTS"](#).

Is there a malfunction?

YES >> Refer to [AV-103, "Display Item of SELF-DIAG RESULTS"](#).

NO >> GO TO 2.

2. REVERSE SIGNAL INSPECTION

1. Turn the ignition switch ON, and then select "Connection Confirmation" of "Camera Controller" on Confirmation/Adjustment mode.
2. Make sure that "Reverse Sensor" is turned ON when shifting the selector lever in R position.

Is it OK?

YES >> GO TO 3.

NO >> Check reverse signal circuit, and then repair the malfunctioning parts.

TROUBLE DIAGNOSIS

[WITHOUT MOBILE ENTERTAINMENT SYSTEM]

3. CHECK HARNESS BETWEEN CAMERA CONTROL UNIT AND REAR VIEW CAMERA

1. Turn ignition switch OFF.
2. Disconnect camera control unit connector and rear view camera connector.
3. Check continuity between camera control unit harness connector (A) B481 terminal 8 and rear view camera harness connector (B) T109 terminal 1.

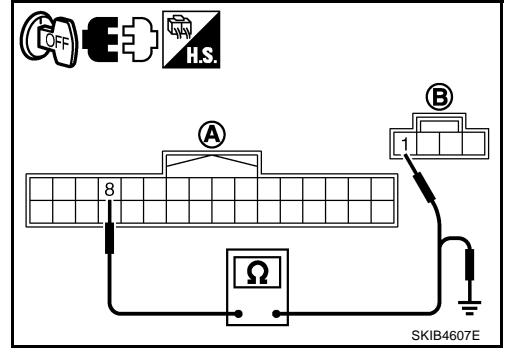
8 – 1 : Continuity should exist.

4. Check continuity between camera control unit harness connector (A) B481 terminal 8 and ground.

8 – Ground : Continuity should not exist.

OK or NG

- OK >> GO TO 4.
NG >> Repair harness or connector.



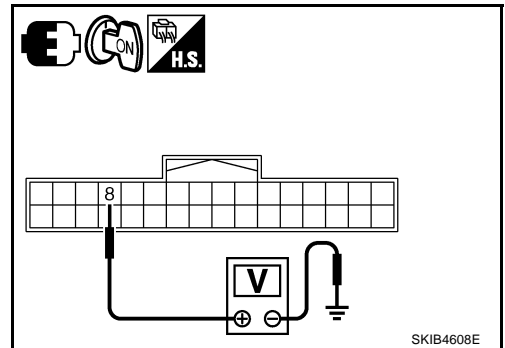
4. CHECK REAR VIEW CAMERA POWER SUPPLY

1. Connect camera control unit connector and rear view camera connector.
2. Turn ignition switch ON.
3. Shift the selector lever in R position.
4. Check voltage between camera control unit harness connector B481 terminal 8 and ground.

8 – Ground : Approx. 6 V

OK or NG

- OK >> GO TO 5.
NG >> Replace camera control unit.



5. CHECK HARNESS BETWEEN CAMERA CONTROL UNIT AND REAR VIEW CAMERA

1. Turn ignition switch OFF.
2. Disconnect camera control unit connector and rear view camera connector.
3. Check continuity between camera control unit harness connector (A) B481 terminal 6 and rear view camera harness connector (B) T109 terminal 3.

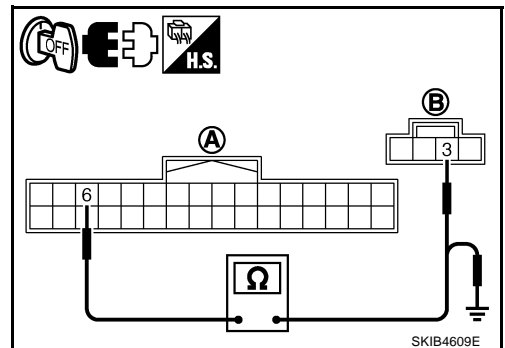
6 – 3 : Continuity should exist.

4. Check continuity between camera control unit harness connector (A) B481 terminal 6 and ground.

6 – Ground : Continuity should not exist.

OK or NG

- OK >> GO TO 6.
NG >> Repair harness or connector.

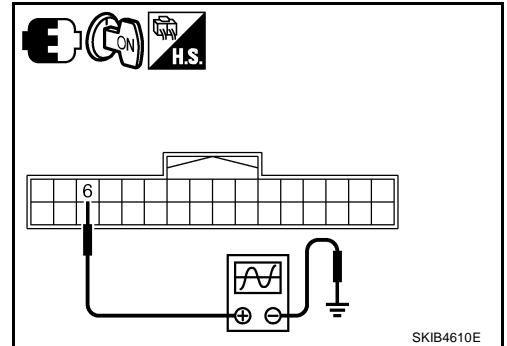
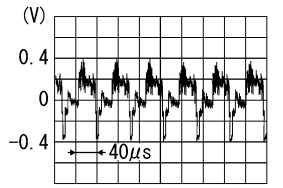


TROUBLE DIAGNOSIS [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

6. CHECK REAR VIEW IMAGE SIGNAL

1. Connect camera control unit connector and rear view camera connector.
2. Turn ignition switch ON.
3. Shift the selector lever in R position.
4. Check signal between camera control unit harness connector B481 terminal 6 and ground.

6 – Ground:



OK or NG

- OK >> GO TO 7.
- NG >> Replace rear view camera.

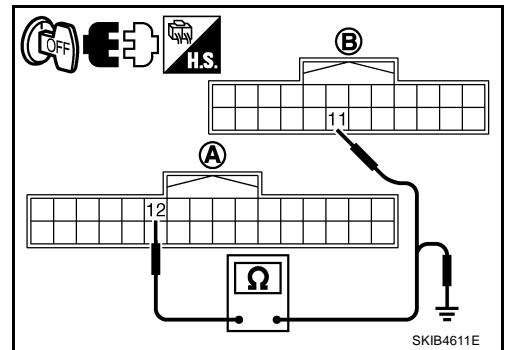
7. HARNESS CHECK BETWEEN CAMERA CONTROL UNIT AND FRONT DISPLAY UNIT

1. Turn ignition switch OFF.
2. Disconnect camera control unit connector and front display unit connector.
3. Check continuity between camera control unit harness connector (A) B481 terminal 12 and front display unit harness connector (B) M203 terminal 11.

12 - 11 : Continuity should exist.

4. Check continuity between camera control unit harness connector (A) B481 terminal 12 and ground.

12 - Ground : Continuity should not exist.



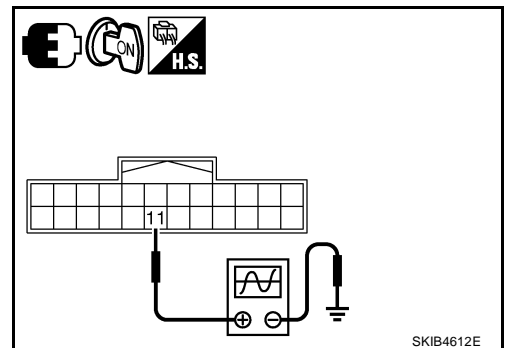
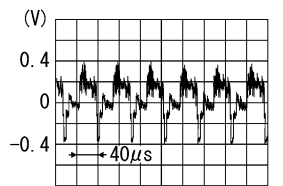
OK or NG

- OK >> GO TO 8.
- NG >> Repair harness or connector.

8. CHECK REAR VIEW IMAGE SIGNAL

1. Connect camera control unit connector and front display unit connector.
2. Turn ignition switch ON.
3. Shift the selector lever in R position.
4. Check signal between front display unit harness connector M203 terminal 11 and ground.

11 – Ground:



OK or NG

- OK >> Replace front display unit.
- NG >> Replace camera control unit.

TROUBLE DIAGNOSIS

[WITHOUT MOBILE ENTERTAINMENT SYSTEM]

DVD IMAGE IS NOT DISPLAYED

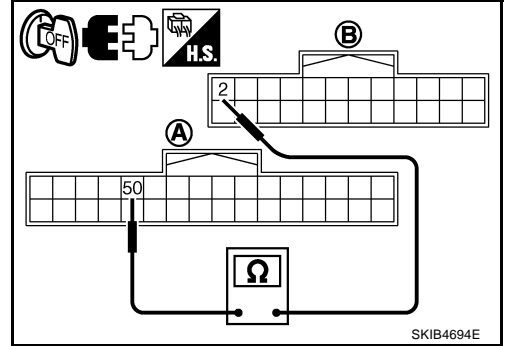
1. CHECK HARNESS BETWEEN AV (NAVI) CONTROL UNIT AND FRONT DISPLAY UNIT

1. Disconnect AV (NAVI) control unit connector and front display unit connector.
2. Check continuity between AV (NAVI) control unit harness connector (A) M210 terminal 50 and front display unit harness connector (B) M203 terminal 2.

50 – 2 : Continuity should exist.

OK or NG

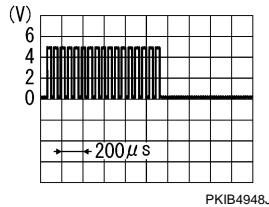
- OK >> GO TO 2.
NG >> Repair harness or connector.



2. CHECK RGB AREA SIGNAL

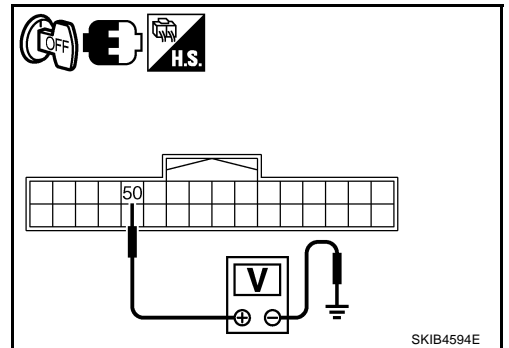
1. Connect AV (NAVI) control unit connector and front display unit connector.
2. Turn ignition switch ON.
3. Shift the selector lever in R position.
4. Check signal between AV (NAVI) control unit harness connector M210 terminal 50 and ground.

50 – Ground:



OK or NG

- OK >> Replace front display unit.
NG >> Replace AV (NAVI) control unit.



IT CANNOT BE SWITCHED TO REAR VIEW MONITOR IMAGE

1. CHECK REVERSE SIGNAL

Select "Vehicle Signals" on Confirmation/Adjustment mode, and make sure that the reverse signal is input normally. Refer to [AV-92. "VEHICLE SIGNALS"](#).

OK or NG

- OK >> GO TO 2.
NG >> Check reverse signal circuit, and then repair the malfunctioning parts.

TROUBLE DIAGNOSIS [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

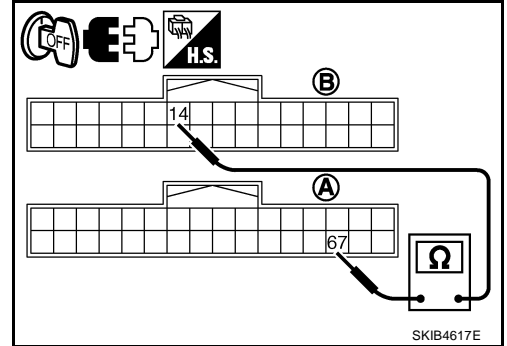
2. CHECK HARNESS BETWEEN AV (NAVI) CONTROL UNIT AND CAMERA CONTROL UNIT

1. Turn ignition switch OFF.
2. Disconnect AV (NAVI) control unit connector and camera control unit connector.
3. Check continuity between AV (NAVI) control unit harness connector (A) M210 terminal 67 and camera control unit harness connector (B) B481 terminal 14.

67 – 14 : Continuity should exist.

OK or NG

- OK >> GO TO 3.
NG >> Repair harness or connector.



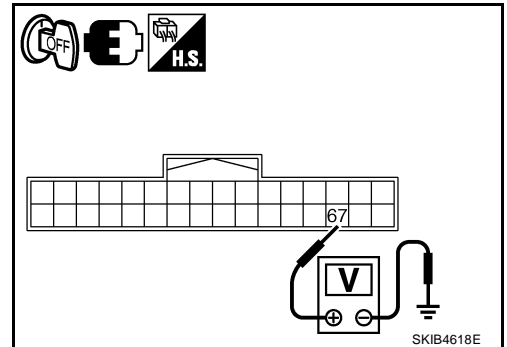
3. CHECK CAMERA-CONNECTION RECOGNITION SIGNAL

1. Connect AV (NAVI) control unit connector.
2. Turn ignition switch ON.
3. Check voltage between AV (NAVI) control unit harness connector M210 terminal 67 and ground.

67 – Ground: : Approx. 5 V

OK or NG

- OK >> Replace camera control unit.
NG >> Replace AV (NAVI) control unit.



DVD Image Is Not Displayed

1. REAR VIEW MONITOR IMAGE CONFIRMATION

Make sure that rear view monitor image is displayed when setting the selector lever in R position.

Is it displayed?

- YES >> GO TO 2.
NO >> GO TO 4.

2. CHECK HARNESS BETWEEN DVD PLAYER AND FRONT DISPLAY UNIT

1. Turn ignition switch OFF.
2. Disconnect DVD player connector front display unit connector.
3. Check continuity between DVD player harness connector (A) M272 terminal 20 and front display unit harness connector (B) M203 terminal 15.

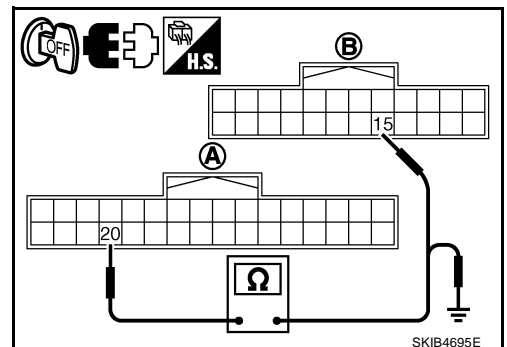
20 – 15 : Continuity should exist.

4. Check continuity between DVD player harness connector (A) M272 terminal 20 and ground.

20 – Ground : Continuity should not exist.

OK or NG

- OK >> GO TO 3.
NG >> Repair harness or connector.



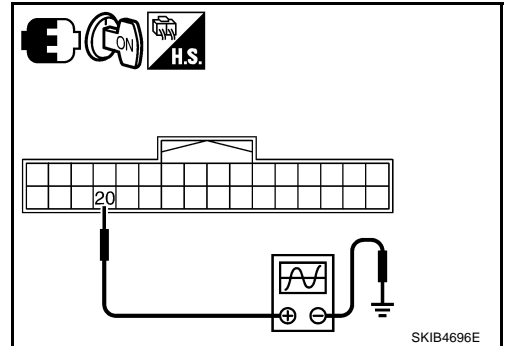
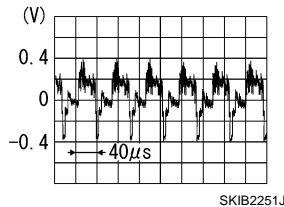
TROUBLE DIAGNOSIS

[WITHOUT MOBILE ENTERTAINMENT SYSTEM]

3. CHECK IMAGE SIGNAL

1. Connect DVD player connector and front display unit connector.
2. Turn ignition switch ON.
3. Display DVD image.
4. Check signal between DVD player harness connector M272 terminal 20 and ground.

20 – Ground:



OK or NG

- OK >> Replace front display unit.
- NG >> Replace DVD player.

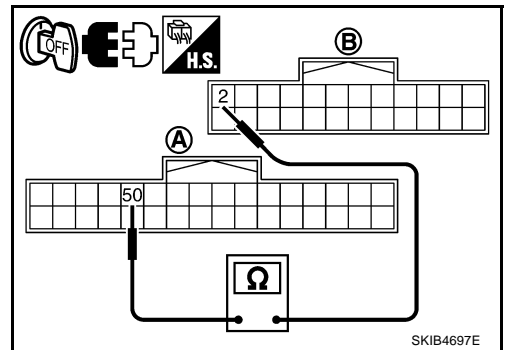
4. CHECK HARNESS BETWEEN AV (NAVI) CONTROL UNIT AND FRONT DISPLAY UNIT

1. Turn ignition switch OFF.
2. Disconnect AV (NAVI) control unit connector and front display unit connector.
3. Check continuity between AV (NAVI) control unit harness connector (A) M210 terminal 50 and front display unit harness connector (B) M203 terminal 2.

50 – 2 : Continuity should exist.

OK or NG

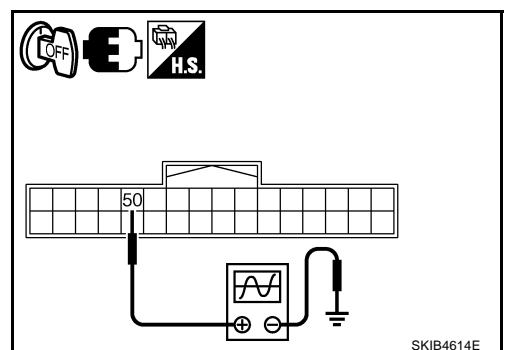
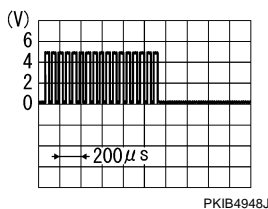
- OK >> GO TO 5.
- NG >> Repair harness or connector.



5. CHECK RGB AREA SIGNAL

1. Connect AV (NAVI) control unit connector and front display unit connector.
2. Turn ignition switch ON.
3. Shift the selector lever in R position.
4. Check signal between AV (NAVI) control unit harness connector M210 terminal 50 and ground.

50 – Ground:



OK or NG

- OK >> Replace front display unit
- NG >> Replace AV (NAVI) control unit.

TROUBLE DIAGNOSIS

[WITHOUT MOBILE ENTERTAINMENT SYSTEM]

Warning Message of Whether Rear View Image Is Rolling or Not Displayed

NKS00495

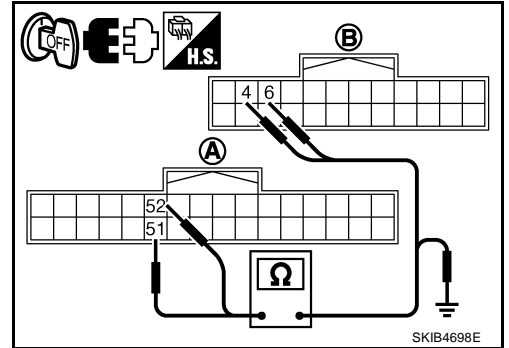
1. CHECK HARNESS BETWEEN AV (NAVI) CONTROL UNIT AND FRONT DISPLAY UNIT

1. Disconnect AV (NAVI) control unit connector and front display unit connector.
2. Check continuity between AV (NAVI) control unit harness connector (A) M210 terminals 51, 52 and display unit harness connector (B) M203 terminals 4, 6.

51 – 4 : Continuity should exist.
52 – 6 : Continuity should exist.

3. Check continuity between AV (NAVI) control unit harness connector (A) M210 terminals 51, 52 and ground.

51, 52 – Ground : Continuity should not exist.



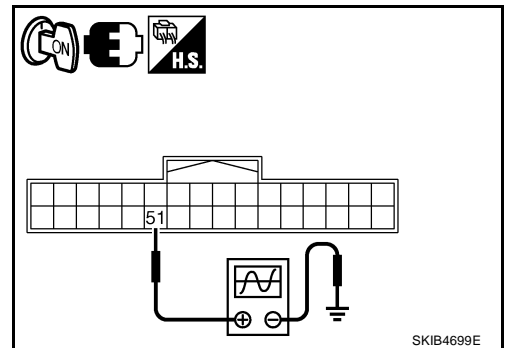
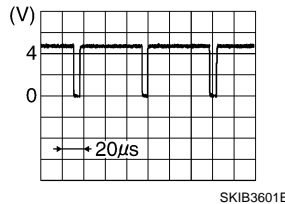
OK or NG

- OK >> GO TO 2.
 NG >> Repair harness or connector.

2. CHECK HORIZONTAL SYNCHRONIZING SIGNAL

1. Connect AV (NAVI) control unit connector and front display unit connector.
2. Turn ignition switch ON.
3. Check signal between AV (NAVI) control unit harness connector M210 terminal 51 and ground.

51 – Ground:



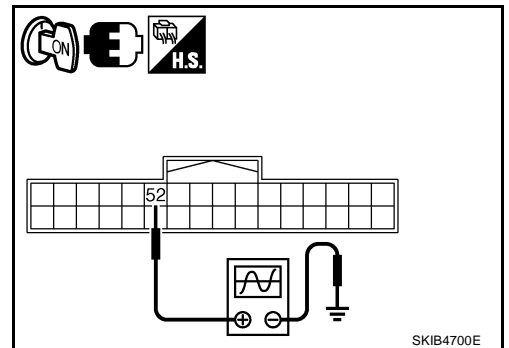
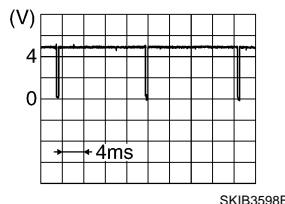
OK or NG

- OK >> GO TO 3.
 NG >> Replace front display unit.

3. CHECK VERTICAL SYNCHRONIZING SIGNAL

Check signal between AV (NAVI) control unit harness connector M210 terminal 52 and ground.

52 – Ground:



OK or NG

- OK >> Replace AV (NAVI) control unit.
 NG >> Replace front display unit.

DVD Operation Screen Is Not Displayed

NKS00496

Refer to [AV-115, "Warning Message of Whether Rear View Image Is Rolling or Not Displayed"](#) .

It Cannot Be Switched to DVD Mode

NKS00497

Refer to [AV-116, "DVD SOUND IS NOT OUTPUT"](#) .

TROUBLE DIAGNOSIS

[WITHOUT MOBILE ENTERTAINMENT SYSTEM]

Sound Is Not Output (Voice Guidance and TEL Voice Are Normal)

NKS00498

DVD AND AUDIO SOUND ARE NOT OUTPUT

1. PERFORM CONSULT-II SELF-DIAGNOSIS

Perform "SELF-DIAG RESULT" of CONSULT-II and check the malfunction. Refer to [AV-103, "SELF-DIAG RESULTS"](#).

OK or NG

OK >> GO TO 2.

NG >> Refer to [AV-103, "Display Item of SELF-DIAG RESULTS"](#).

2. CHECK AV COMM MONITOR

Select "AUDIO" of "AV COMM MONITOR", and then check the displays of "TRANSMIT DG" and "SPEAKER AMP".

A
TRANSMIT DG : OK
SPEAKER AMP : UNKWN

B
TRANSMIT DG : UNKWN
SPEAKER AMP : OK

A or B

A >> Replace BOSE amp.

B >> Replace audio unit.

DVD SOUND IS NOT OUTPUT

1. PERFORM CONSULT-II SELF-DIAGNOSIS

Perform "SELF-DIAG RESULT" of CONSULT-II and check the malfunction. Refer to [AV-103, "SELF-DIAG RESULTS"](#).

OK or NG

OK >> GO TO 2

NG >> Refer to [AV-103, "Display Item of SELF-DIAG RESULTS"](#).

2. CHECK AV COMM MONITOR

Select "AUDIO" of "AV COMM MONITOR", and then check the displays of "TRANSMIT DG" and "DVD player".

A
TRANSMIT DG : OK
DVD PLAYER : UNKWN

B
TRANSMIT DG : UNKWN
DVD PLAYER : OK

A or B

A >> Replace DVD player

B >> Replace audio unit.

Voice Activated Control System Is Not Activated THE SCREEN IS SWITCHED BY PRESSING THE STEERING SWITCH

NKS00499

1. VOICE MICROPHONE TEST

Turn "Voice Microphone Test" ON at Confirmation/Adjustment mode, and then check the sounds emitted from the speaker. Refer to [AV-98, "Voice Microphone Test"](#).

Is the sound output?

YES >> Replace AV (NAVI) control unit.

NO >> GO TO 2

TROUBLE DIAGNOSIS [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

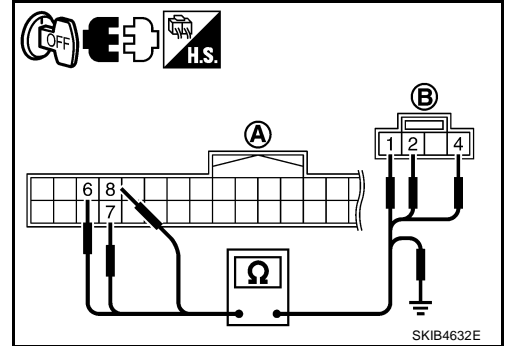
2. CHECK HARNESS BETWEEN AV (NAVI) CONTROL UNIT AND MIC.

1. Turn ignition switch OFF.
2. Disconnect AV (NAVI) control unit connector and MIC. connector.
3. Check continuity between AV (NAVI) control unit harness connector (A) M78 terminals 6, 7, 8 and MIC. harness connector (B) R52 terminals 4, 2, 1.

6 – 4 : Continuity should exist.
7 – 2 : Continuity should exist.
8 – 1 : Continuity should exist.

4. Check continuity between AV (NAVI) control unit harness connector (A) M78 terminals 6, 7, 8 and ground.

6, 7, 8 – Ground : Continuity should not exist.



OK or NG

- OK >> GO TO 3.
 NG >> Repair harness or connector.

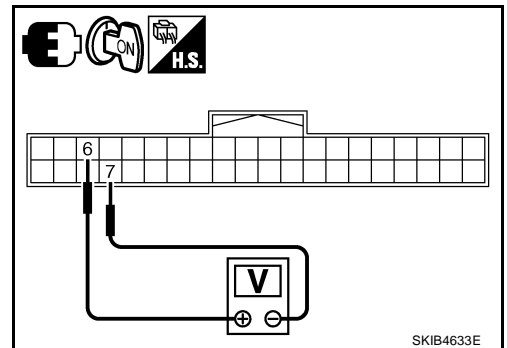
3. CHECK MIC. POWER SUPPLY

1. Connect AV (NAVI) control unit and MIC. connector.
2. Turn ignition switch ON.
3. Check voltage between AV (NAVI) control unit harness connector M78 terminals 6 and 7.

6 – 7 : Approx. 5 V

OK or NG

- OK >> GO TO 4.
 NG >> Replace AV (NAVI) control unit.

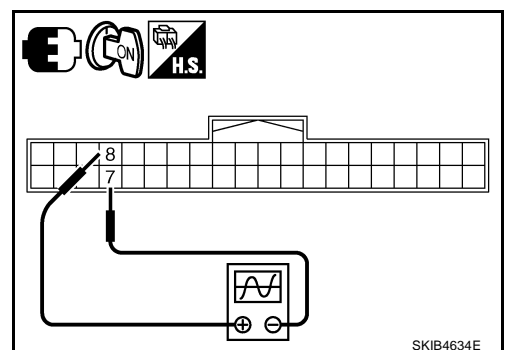
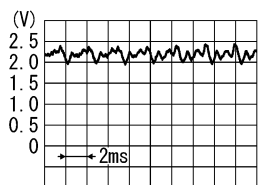


4. CHECK MIC. SIGNAL

1. Check signal between AV (NAVI) control unit harness connector M78 terminals 8 and 7.

Give a voice

8 – 7:



OK or NG

- OK >> Replace AV (NAVI) control unit.
 NG >> Replace MIC.

THE SCREEN IS NOT SWITCHED BY PRESSING THE STEERING SWITCH

Refer to [AV-118, "Steering Switch Cannot Be Operated"](#) .

TROUBLE DIAGNOSIS

[WITHOUT MOBILE ENTERTAINMENT SYSTEM]

NKS0049A

Steering Switch Cannot Be Operated NONE OF THE OPERATIONS WORK.

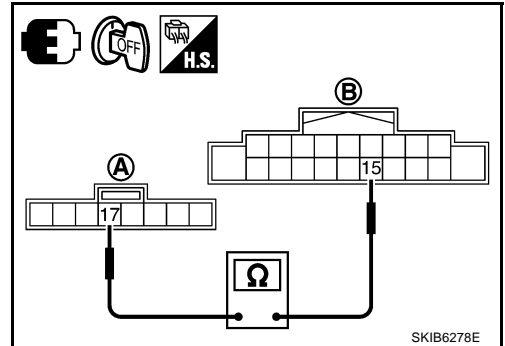
1. CHECK HARNESS

1. Check continuity between spiral cable harness connector (A) M303 terminal 17 and audio unit harness connector (B) M76 terminal 15.

17 – 15 : Continuity should exist.

OK or NG

- OK >> Replace steering switch.
NG >> Check spiral cable. If the malfunction is detected, repair the harness and connector.



SKIB6278E

“ENTER”, “MENU UP-DOWN”, AND “SOURCE” SWITCHES ARE NOT OPERATED

1. CHECK HARNESS

1. Check continuity between spiral cable harness connector (A) M303 terminal 20 and audio unit harness connector (B) M76 terminal 6.

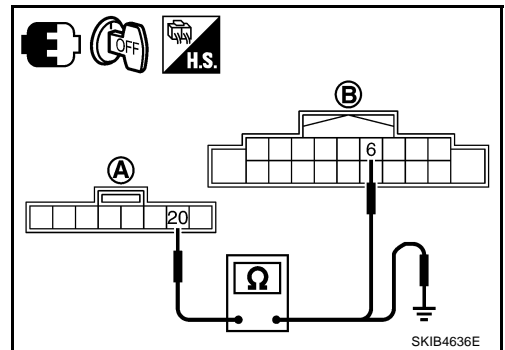
20 – 6 : Continuity should exist.

2. Check continuity between spiral cable harness connector (A) M303 terminal 20 and ground.

20 – Ground : Continuity should not exist.

OK or NG

- OK >> GO TO 2.
NG >> Check spiral cable. If the malfunction is detected, repair the harness and connector.



SKIB4636E

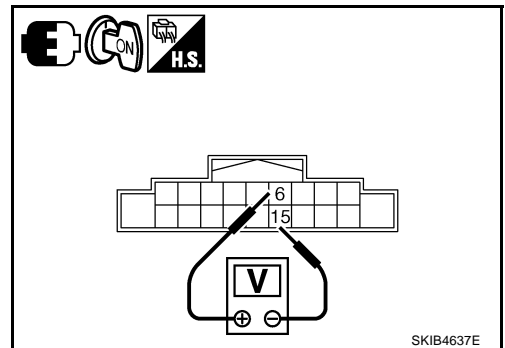
2. CHECK STEERING SWITCH SIGNAL A

1. Turn ignition switch ON.
2. Check voltage between audio unit harness connector M76 terminals 6 and 15

6 – 15 : Approx. 5 V

OK or NG

- OK >> Replace steering switch.
NG >> Replace audio unit.



SKIB4637E

TROUBLE DIAGNOSIS

[WITHOUT MOBILE ENTERTAINMENT SYSTEM]

“PTT/TEL”, “BACK”, AND “VOLUME CONTROL” SWITCHES ARE NOT OPERATED

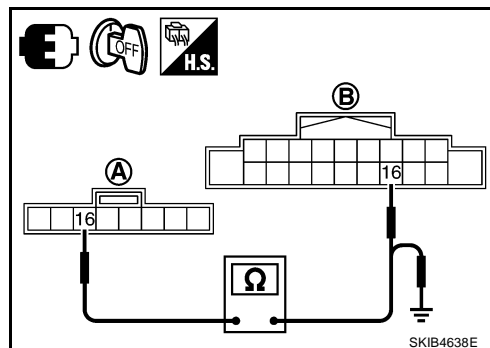
1. CHECK HARNESS

1. Check continuity between spiral cable harness connector (A) M303 terminal 16 and audio unit harness connector (B) M76 terminal 16.

16 – 16 : Continuity should exist.

2. Check continuity between spiral cable harness connector (A) M303 terminal 16 and ground.

16 – Ground : Continuity should not exist.



OK or NG

OK >> GO TO 2.

NG >> Check spiral cable. If the malfunction is detected, repair the harness and connector.

2. CHECK STEERING SWITCH SIGNAL B

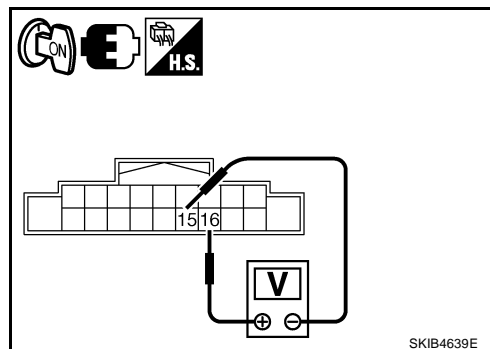
1. Turn ignition switch ON.
2. Check voltage between audio unit harness connector M76 terminals 16 and 15

16 – 15 : Approx. 5 V

OK or NG

OK >> Replace steering switch.

NG >> Replace audio unit.



The Hands-Free Phone Cannot Be Used THE VOICE CANNOT BE HEARD

NKS0049B

1. CHECK HARNESS AV (NAVI) CONTROL UNIT AND AUDIO UNIT

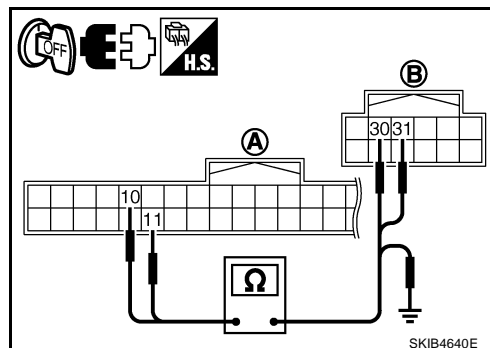
1. Disconnect AV (NAVI) control unit connector and audio unit connector.
2. Check continuity between AV (NAVI) control unit harness connector (A) M78 terminals 10, 11 and audio unit harness connector (B) M77 terminals 30, 31.

10 – 30 : Continuity should exist.

11 – 31 : Continuity should exist.

3. Check continuity between AV (NAVI) control unit harness connector (A) M78 terminals 10, 11 and ground.

10, 11 – Ground : Continuity should not exist.



OK or NG

OK >> GO TO 2.

NG >> Repair harness or connector.

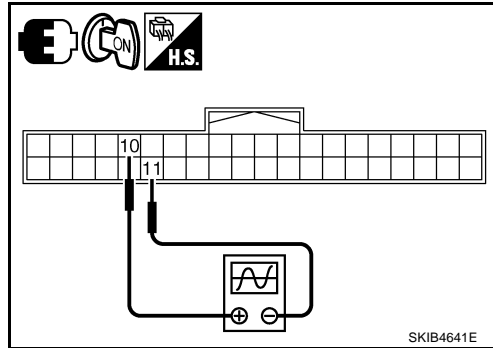
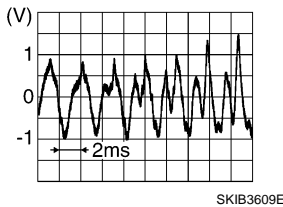
TROUBLE DIAGNOSIS [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

2. CHECK TEL VOICE SIGNAL

1. Connect AV (NAVI) control unit connector and audio unit connector.
2. Turn ignition switch ON.
3. Check signal between AV (NAVI) control unit harness connector M78 terminals 10 and 11

10 – 11:

When inputting TEL voice



OK or NG

- OK >> Replace audio unit.
- NG >> Replace AV (NAVI) control unit.

THE VOICE CANNOT BE TRANSMITTED

Refer to [AV-116, "THE SCREEN IS SWITCHED BY PRESSING THE STEERING SWITCH"](#) .

Voice Guidance Is Not Heard (Base System)

NKS0049C

1. CHECK HARNESS BETWEEN AV (NAVI) CONTROL UNIT AND AUDIO UNIT

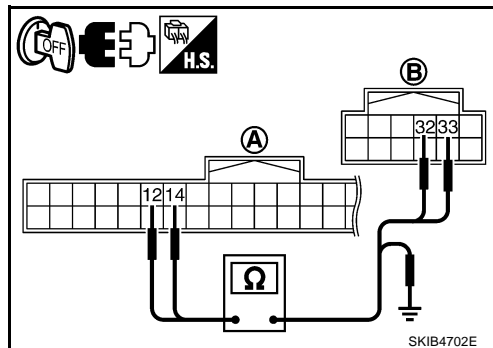
1. Disconnect AV (NAVI) control unit connector and audio unit connector.
2. Check continuity between AV (NAVI) control unit harness connector (A) M78 terminals 12, 14 and audio unit harness connector (B) M77 terminals 32, 33.

12 – 32 : Continuity should exist.

14 – 33 : Continuity should exist.

3. Check continuity between AV (NAVI) control unit harness connector (A) M78 terminals 12, 14 and ground.

12, 14 – Ground : Continuity should not exist.



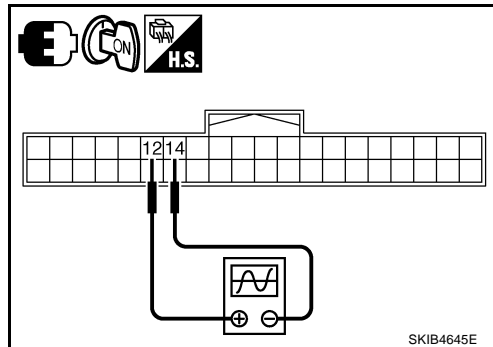
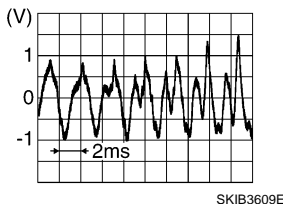
OK or NG

- OK >> GO TO 2.
- NG >> Repair harness or connector.

2. CHECK VOICE GUIDANCE SIGNAL

1. Connect AV (NAVI) control unit connector and audio unit connector.
2. Turn ignition switch ON.
3. Push the voice button.
4. Check signal between AV (NAVI) control unit harness connector M78 terminals 12 and 14.

12 – 14:



OK or NG

- OK >> Replace AV (NAVI) control unit.
- NG >> Replace audio unit.

TROUBLE DIAGNOSIS

[WITHOUT MOBILE ENTERTAINMENT SYSTEM]

Voice Guidance Is Not Heard (BOSE System)

NKS0049D

1. CHECK HARNESS BETWEEN AV (NAVI) CONTROL UNIT AND BOSE AMP

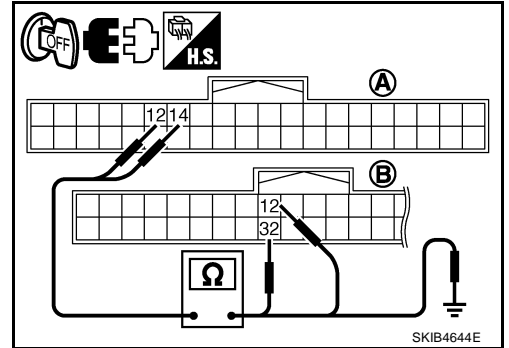
1. Disconnect AV (NAVI) control unit connector and BOSE amp connector.
2. Check continuity between AV (NAVI) control unit harness connector (A) M78 terminals 12, 14 and BOSE amp harness connector (B) B107 terminals 32, 12.

12 – 32 : Continuity should exist.

14 – 12 : Continuity should exist.

3. Check continuity between AV (NAVI) control unit harness connector (A) M78 terminals 12, 14 and ground.

12, 14 – Ground : Continuity should not exist.



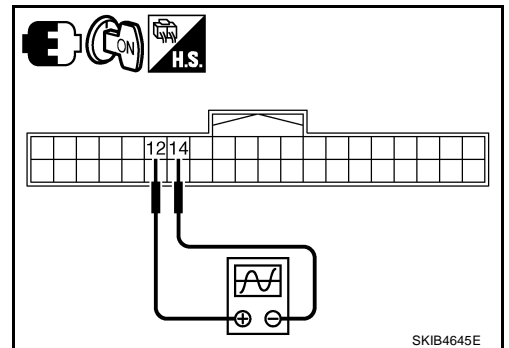
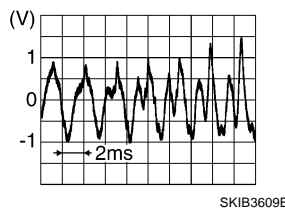
OK or NG

- OK >> GO TO 2.
- NG >> Repair harness or connector.

2. CHECK VOICE GUIDANCE SIGNAL

1. Connect AV (NAVI) control unit connector and BOSE amp connector.
2. Turn ignition switch ON.
3. Push the voice button.
4. Check signal between AV (NAVI) control unit harness connector M78 terminals 12 and 14.

12 – 14:



OK or NG

- OK >> Replace AV (NAVI) control unit.
- NG >> Replace BOSE amp.

TROUBLE DIAGNOSIS

[WITHOUT MOBILE ENTERTAINMENT SYSTEM]

NKS0049E

Example of Symptoms Judged Not Malfunction

NOTE:

For navigation system operation information, refer to navigation system owner's manual.

BASIC OPERATION

| Symptom | Possible cause | Possible solution |
|---|---|--|
| No image is displayed. | The brightness is at the lowest setting. | Adjust the brightness of the display. |
| | The display is turns off. | Push and hold ☀/☾ to turn on the display. |
| No voice guidance is available. The volume is too high or too low. | The volume is not set correctly, or it is turned off. | Adjust the volume of voice guidance. |
| | Volume guidance is not provided for narrow streets (roads displayed in gray). | This is not a malfunction. |
| No map is displayed on the screen. | The map DVD-ROM is not inserted, or it is inserted upside down. | Insert the map DVD-ROM correctly. |
| | A screen other than map screen is displayed. | Push "MAP". |
| The screen is too dim. The movement is slow. | The temperature in the interior of the vehicle is low. | Wait until the interior of the vehicle has warmed up. |
| Some pixels in the display are darker or brighter than others. | This condition is an inherent characteristic of liquid crystal displays. | This is not a malfunction. |
| Some menu items cannot be selected. | Some menu items become unavailable while the vehicle is driven. | Park the vehicle in a safe location, and then operate the navigation system. |

NOTE:

Locations stored in the Address Book and other memory functions may be lost if the vehicle's battery is disconnected or becomes discharged. If this occurs, service the vehicle's battery as necessary and re-enter the information in the Address Book.

VEHICLE ICON

| Symptom | Possible cause | Possible solution |
|---|---|---|
| Names of roads and locations differ between Plan view and Bird-view™. | This is because the quantity of the displayed information is reduced so that the screen does not become too crowded. There is also a chance that names of the roads or locations may be displayed multiple times, and the names appearing on the screen may be different because of a processing procedure. | This is not a malfunction. |
| The vehicle icon is not displayed in the correct position. | The vehicle was transported after the ignition switch was turned off, for example, by a ferry or car transporter. | Drive the vehicle for a while on a road where GPS can be received. |
| | The position and direction of the vehicle may be incorrect depending on the driving environments and the levels of positioning accuracy of the navigation system. | This is not a malfunction. Drive the vehicle for a while to automatically correct the position and direction of the vehicle icon. |
| When the vehicle is travelling on a new road, the vehicle icon is located on another road nearby. | Because the new road is not stored in the map data, the system automatically places the vehicle icon on the nearest road available. | Updated road information will be included in the next version of the map DVD-ROM. |
| The screen does not switch to the night screen even after turning on the headlights. | The daytime screen was set the last time the headlights were turned on. | Set the screen to the night screen mode using when turning on the headlights. |
| The map does not scroll even when the vehicle is moving. | The current location map screen is not displayed. | Push "MAP". |
| The vehicle icon is not displayed. | The current location map screen is not displayed. | Push "MAP". |

TROUBLE DIAGNOSIS [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

| Symptom | Possible cause | Possible solution |
|--|---|--|
| The GPS indicator on the screen remains gray. | GPS signals cannot be received depending on the vehicle location, such as in a parking garage, on a road that has numerous tall buildings, etc. | Drive on an open, straight road for a while. |
| | GPS signals cannot be received because objects are placed on the instrument panel. | Remove the objects from the instrument panel. |
| | A sufficient amount of GPS satellites are not available. | Wait for the satellites to move locations available for navigation system. |
| The location of vehicle icon is misaligned from the actual position. | When using tire chains or replacing the tires, speed calculations based on the speed sensor may be incorrect. | Drive the vehicle for a while [at approximately 30 km/h (19 MPH) for about 30 minutes] to automatically correct the vehicle icon position. If this does not correct the vehicle icon position, inspect AV system. |
| | The map data has mistake or is incomplete (the vehicle icon position is always misaligned in the same area). | Updated road information will be included in the next version of the map DVD-ROM. |

MAP DVD-ROM

| Symptom | Possible cause | Possible solution |
|------------------------------|--|--|
| The message "Error" appears. | Map DVD-ROM is dirty or partially damaged. | Check the DVD-ROM and wipe it clean with a soft cloth. |
| | | If there is any damage, replace the DVD-ROM. |

ROUTE CALCULATION AND VISUAL GUIDANCE

| Symptom | Possible cause | Possible solution |
|---|---|--|
| In the auto reroute calculation, waypoints are not included. | Waypoints already passed are not included in the auto reroute calculation. | In case of going to that waypoints again, edit the route. |
| Route information is not displayed. | Route calculation has not yet been performed. | Set the destination and perform route calculation. |
| | The vehicle is not driven on the suggested route. | Drive on the suggested route. |
| | Route guidance is set to off. | Turn on route guidance. |
| | Route information is not provided for narrow streets (roads displayed in gray). | This is not a malfunction. |
| The auto reroute calculation (or detour calculation) suggests the same route as the one previously suggested. | Route calculation took priority conditions into consideration, but the same route was calculated. | This is not a malfunction. |
| A waypoint cannot be added. | Five waypoints are already set on the route, including ones that already passed. | A maximum of 5 waypoints can be set on the route. In case of going to 6 or more waypoints, perform route calculations multiple times as necessary. |
| The suggested route is not displayed. | Roads near the destination cannot be calculated. | Reset the destination to a main or ordinary road, and recalculate the route. |
| | The starting point and destination are too close. | Set a more distant destination. |
| | The starting point and destination are too far away. | Divide the way by selecting one or two intermediate destinations, and perform route calculations multiple times. |
| | There are time restricted roads (by day of week, by time) near the current vehicle location or destination. | Set "Use Time Restricted Roads" to off. |
| A part of the route is not displayed. | The suggested route includes narrow streets (roads displayed in gray). | This is not a malfunction. |

TROUBLE DIAGNOSIS [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

| Symptom | Possible cause | Possible solution |
|--|--|--|
| The part of the route already passed is deleted. | A route is managed by sections between waypoints. If you passed the first waypoint, the section between the starting point and the waypoint is deleted. (It may not be deleted depending on the area.) | This is not a malfunction. |
| An indirect route is suggested. | If there are restrictions (such as one way streets) on roads close to the starting point or destination, the system may suggest an indirect route. | Adjust the location of the starting point or destination. |
| | The system may suggest an indirect route because route calculation does not take into consideration some areas such as narrow streets (gray roads). | Reset the destination to a main or ordinary road, and recalculate the route. |
| The landmark information does not correspond to the actual information. | This may be caused by insufficient or incorrect data on the DVD-ROM. | This is not a malfunction. |
| The suggested route does not exactly connect to the starting point, waypoints, or destination. | There is no data for route calculation closer to these locations. | Set the starting point, waypoints and destination on main road, and perform route calculation. |

VOICE GUIDANCE

| Symptom | Possible cause | Possible solution |
|---|---|--|
| The voice guidance is not available. | Voice guidance is only available at certain intersections. In some cases, voice guidance is not available even when the vehicle should make a turn. | This is not a malfunction. |
| | The vehicle has deviated from the suggested route. | Go back to the suggested route or request route calculation again. |
| | Voice guidance is set to off. | Turn on the voice guidance. |
| | Route guidance is set to off. | Turn on the voice guidance. |
| The guidance content does not correspond to the actual condition. | The content of the voice guidance may vary, depending on the types of intersections at which turns are made. | Follow all traffic rules and regulations. |

VOICE RECOGNITION

| Symptom | Possible cause | Possible solution |
|--|---|--|
| The system does not recognize the command. The system recognizes the command incorrectly. | The interior of the vehicle is too noisy. | Close the windows or have other occupants be quiet. |
| | The volume of the voice is too low. | Speak louder. |
| | Pronunciation is unclear. | Speak clearly. |
| | Voice recognition mode is not yet ready to speak. | Push the release "PTT" on the steering switch, and speak a command after the tone sounds. |
| | 5 seconds or more have passed after pushed and released "PTT" on the steering switch. | Make sure to speak a command within 5 seconds after push and release "PTT" on the steering switch. |
| | Only a limited range of voice commands is usable for each screen. | Use a correct voice command appropriate for the current screen. |

REAR VIEW MONITOR

| Symptom | Possible cause | Possible solution |
|--|--|---|
| Rear view monitor image is not displayed | The selector lever is not shifted in R position. | Shift the selector lever in R position. |

TROUBLE DIAGNOSIS [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

| Symptom | Possible cause | Possible solution |
|---|--|---|
| Rear view monitor image is not clear | Front glass of camera lens is dirty | Dip a soft cloth into water and wipe the glass softly. |
| | There are raindrops, snow, etc. | Wipe it with a soft cloth softly. |
| | The sunlight or the headlight of following vehicle is shining directly to the camera lens. | It returns to the original condition if the light applied to the lens disappears |
| The center position of possible route line is not in the correct position | <ul style="list-style-type: none"> ● Remove or replace the battery. ● Replace steering angle sensor or camera control unit. ● Turn steering wheel when turning ignition switch OFF. | Perform the neutral position correction as follows. <ul style="list-style-type: none"> ● Fully turn the steering wheel to left/right. ● Drive 100 m or more at vehicle speed 30 km/h or more. |

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REMOVAL AND INSTALLATION [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

REMOVAL AND INSTALLATION

PFP:00000

Removal and Installation/Precautions for Replacement REMOVAL OF BATTERY

NKS0049F

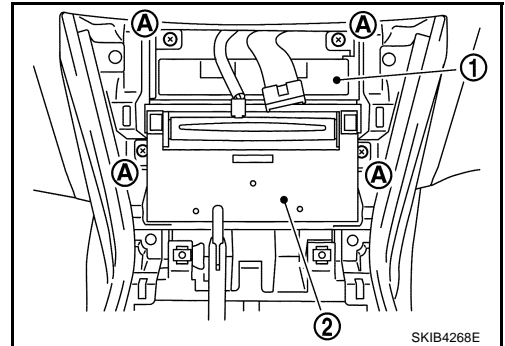
When the battery is removed, the possible route line center position of rear view monitor may not be in the correct position. Perform the center position correction with the following procedure.

1. Fully turn the steering wheel to left/right.
2. Drive 100 m (328.1 ft) or more at vehicle speed 30 km/h (18.6 MPH) or more.

Audio Unit REMOVAL

NKS0049G

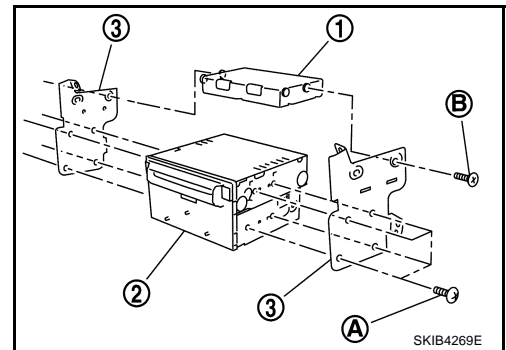
1. Remove cluster lid C. Refer to [IP-10, "INSTRUMENT PANEL ASSEMBLY"](#).
2. Remove screws (A) and remove audio unit (2) in conjunction with unified meter and A/C amp (1).



3. Remove screws (A) and (B)
4. Remove meter and A/C amp (1), audio unit (2) and bracket (3).

CAUTION:

Be careful not to allow foreign material to enter from CD slot.



INSTALLATION

Installation is the reverse order of removal.

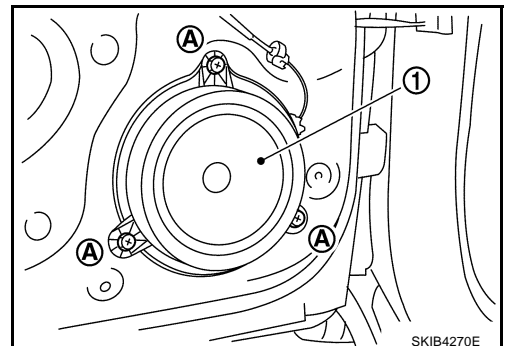
CAUTION:

Unified meter and A/C amp screws are different from other securing screws. Never confuse them when installing.

Front Door Speaker REMOVAL

NKS0049H

1. Remove front door finisher. Refer to [EI-34, "DOOR FINISHER"](#).
2. Remove screws (A) and remove front door speaker (1).



INSTALLATION

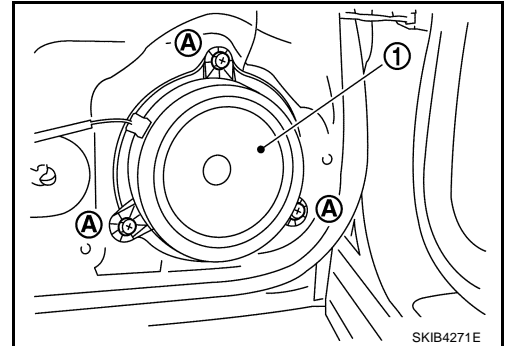
Installation is the reverse order of removal.

REMOVAL AND INSTALLATION [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

Rear Door Speaker REMOVAL

NKS0049I

1. Remove rear door finisher. Refer to [EI-34, "DOOR FINISHER"](#) .
2. Remove screws (A) and remove rear door speaker (1).



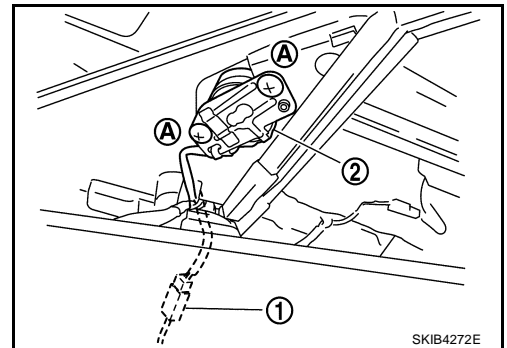
INSTALLATION

Installation is the reverse order of removal.

Tweeter REMOVAL

NKS0049J

1. Remove front door finisher. Refer to [EI-34, "DOOR FINISHER"](#) .
2. Remove door sash inner cover (front). Refer to [EI-34, "DOOR FINISHER"](#) .
3. Remove screws (A), and disconnect connector (1).
4. Remove tweeter (2).



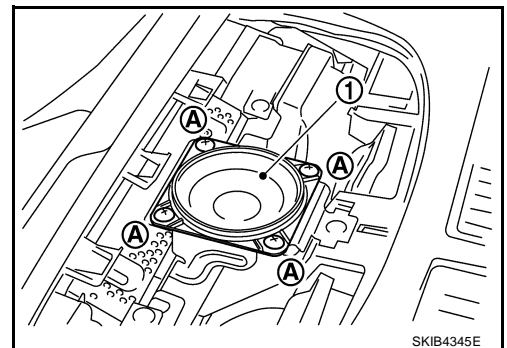
INSTALLATION

Installation is the reverse order of removal.

Center Speaker REMOVAL

NKS0049K

1. Remove upper ventilator grill. Refer to [ATC-145, "REMOVAL"](#) .
2. Remove screws (A) and disconnect connector.
3. Remove center speaker (1).



INSTALLATION

Installation is the reverse order of removal.

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REMOVAL AND INSTALLATION [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

Seat Speaker REMOVAL

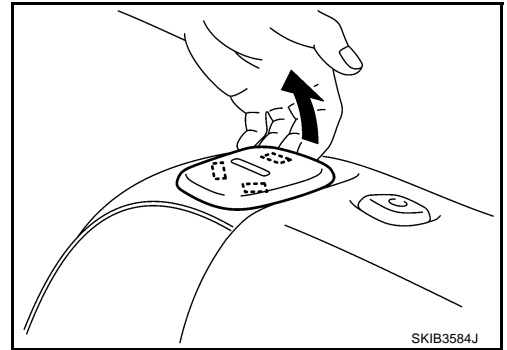
NKS0049L

1. Remove seat speaker grill as shown in the figure.

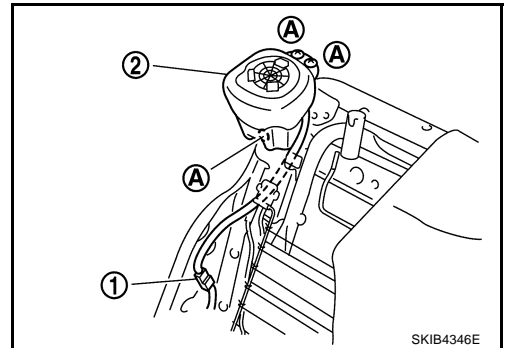
CAUTION:

Never reuse seat speaker grill. The pawl is broken when removing.

2. Remove front seat back trim and pad. Refer to [SE-168, "Removal and Installation"](#).



3. Remove screws (A) and disconnect connector (1).
4. Remove seat speaker (2).



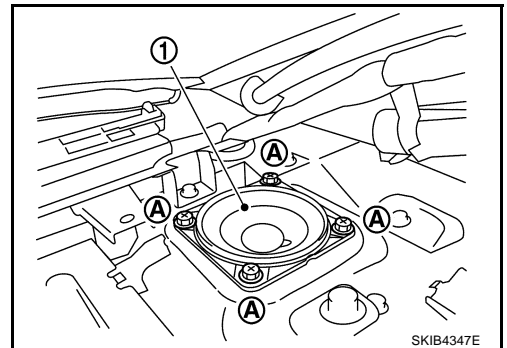
INSTALLATION

Installation is the reverse order of removal.

Rear Surround Speaker REMOVAL

NKS0049M

1. Remove rear parcel shelf finisher. Refer to [EI-42, "Removal and Installation"](#).
2. Remove screws (A) and disconnect connector.
3. Remove rear surround speaker (1).



INSTALLATION

Installation is the reverse order of removal.

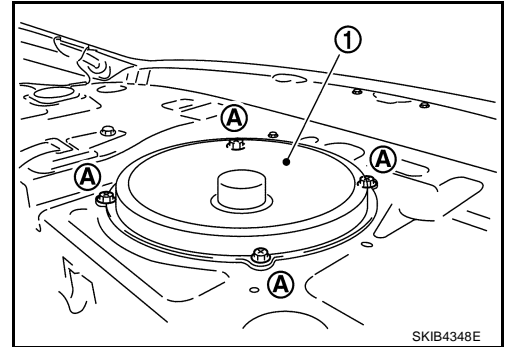
Woofers REMOVAL

NKS0049N

1. Remove rear parcel shelf finisher. Refer to [EI-42, "Removal and Installation"](#).

REMOVAL AND INSTALLATION [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

2. Remove screws (A) and disconnect connector.
3. Remove woofer (1).



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INSTALLATION

Installation is the reverse order of removal.

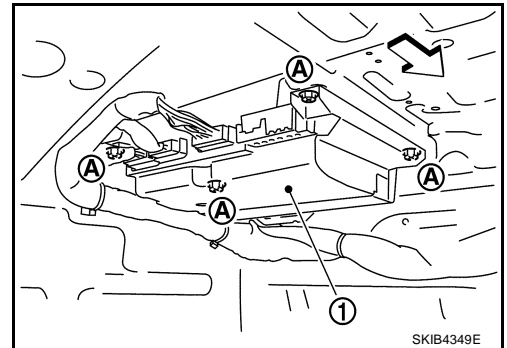
BOSE Amp

NKS00490

↔: Vehicle front

REMOVAL

1. Remove trunk front finisher. Refer to [EI-56, "Removal and Installation for Trunk Room Trim"](#).
2. Remove screws (A), and disconnect connector.
3. Remove BOSE amp (1).



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INSTALLATION

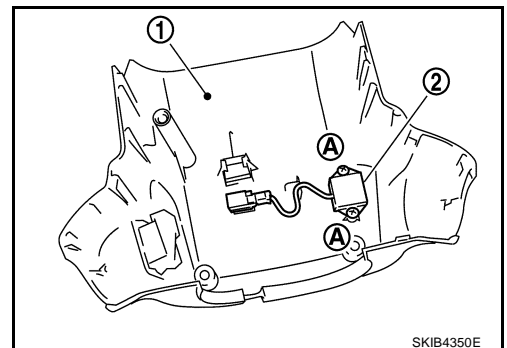
Installation is the reverse order of removal.

AudioPilot[®] Microphone

NKS0049P

REMOVAL

1. Remove steering column lower cover. Refer to [IP-11, "Removal and Installation of Instrument Panel & Pad"](#).
2. Remove screws (A) and disconnect connector.
3. Remove Microphone (2) from steering column lower cover (1).



AV
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INSTALLATION

Installation is the reverse order of removal.

Satellite Radio Tuner

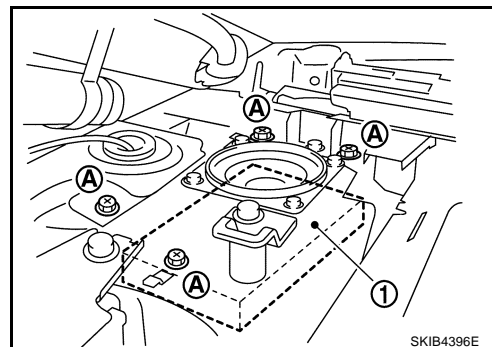
NKS0049Q

REMOVAL

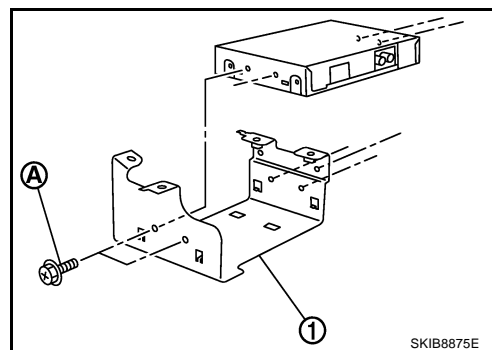
1. Remove trunk front finisher. Refer to [EI-56, "Removal and Installation for Trunk Room Trim"](#).
2. Remove rear parcel shelf finisher. Refer to [EI-42, "Removal and Installation"](#).

REMOVAL AND INSTALLATION [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

3. Remove screws (A).
4. Disconnect connector and remove satellite radio tuner (1) from trunk room side.



5. Disconnect screws (A), and remove bracket (1).



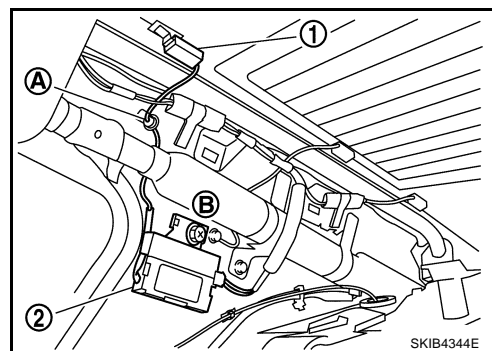
INSTALLATION

Installation is the reverse order of removal.

Antenna Amp REMOVAL

NKS0049R

1. Remove rear pillar finisher (RH). Refer to [EI-37, "Removal and Installation"](#).
2. Disengaged the clip (A) to separate glass terminal (1).
3. Remove screw (B) and remove antenna amp (2) from vehicle.



INSTALLATION

Installation is the reverse order of removal.

Satellite Radio Antenna

NKS0049S

↩: Vehicle front

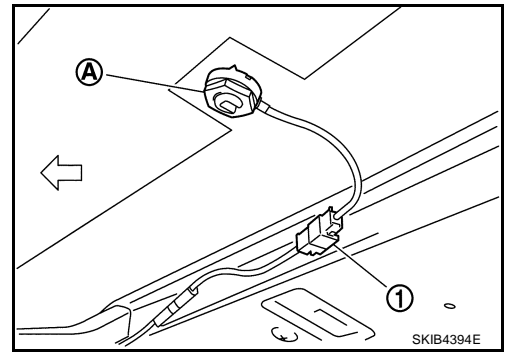
REMOVAL

1. Remove rear pillar finisher. Refer to [EI-37, "Removal and Installation"](#).
2. Remove personal lamp. Refer to [LT-289, "REMOVAL AND INSTALLATION"](#).
3. Remove assist grip (rear). Refer to [EI-52, "Removal and Installation"](#).
4. Remove rear display cover. Refer to [AV-283, "Rear Display Unit"](#).
5. Remove head lining assembly (rear) to obtain work space between the head lining assembly and vehicle.

REMOVAL AND INSTALLATION

[WITHOUT MOBILE ENTERTAINMENT SYSTEM]

6. Remove nut (A), and then disconnect connector (1).
7. Remove satellite radio antenna.



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INSTALLATION

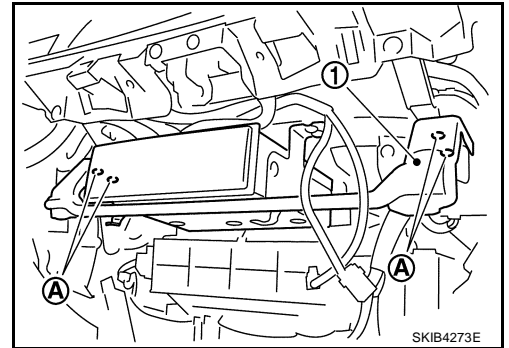
Installation is the reverse order of removal.

Roof antenna mounting nut  : 6.0 N·m (0.61 kg·m, 53 in·lb)

AV (NAVI) Control Unit REMOVAL

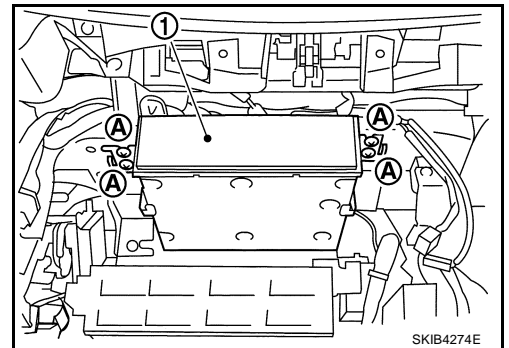
NKS0049U

1. Remove glove box cover. Refer to [IP-10, "INSTRUMENT PANEL ASSEMBLY"](#).
2. Remove screws (A), and remove knee assist protector assembly (1).



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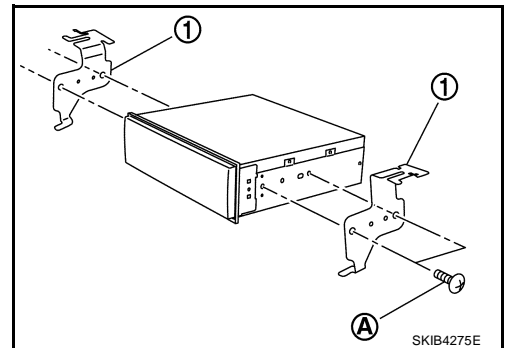
3. Remove screws (A), and disconnect connector.
4. Remove AV (NAVI) control unit (1).



AV

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5. Remove screws (A) and remove bracket (1).



INSTALLATION

Installation is the reverse order of removal.

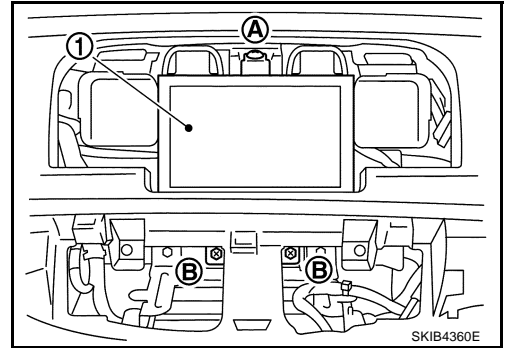
REMOVAL AND INSTALLATION [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

Front Display Unit (Base System)

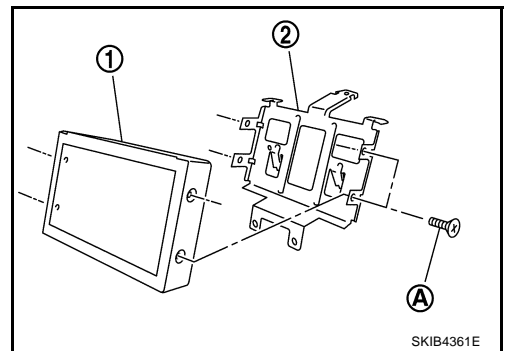
NKS0049V

REMOVAL

1. Remove upper ventilator grille. Refer to [IP-10, "INSTRUMENT PANEL ASSEMBLY"](#) .
2. Remove multifunction switch. Refer to [AV-133, "Multifunction Switch"](#) .
3. Remove screws (A) and screws (B).
4. Disconnect connector, and remove display (1).



5. Remove screws (A) separate front display unit (1) from bracket (2).



INSTALLATION

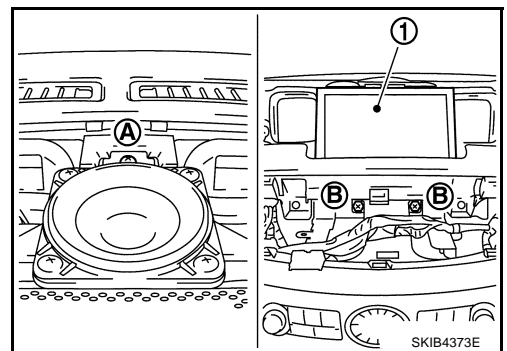
Installation is the reverse order of removal.

Front Display Unit (BOSE System)

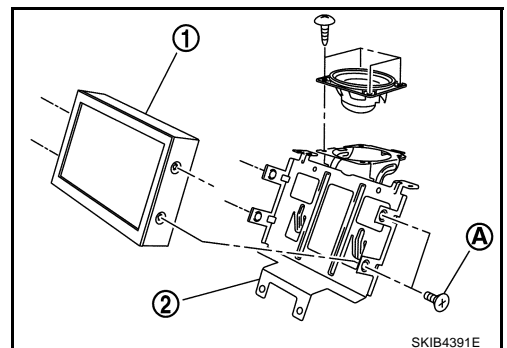
NKS0049W

REMOVAL

1. Remove upper ventilator grille. Refer to [IP-10, "INSTRUMENT PANEL ASSEMBLY"](#) .
2. Remove multifunction switch. Refer to [ATC-123, "Removal and Installation of Multifunction Switch"](#) .
3. Remove screw (A).
4. Remove screws (B) and disconnect connector, and remove display (1).



5. Remove screws (A) separate front display (1) unit from bracket (2).



REMOVAL AND INSTALLATION

[WITHOUT MOBILE ENTERTAINMENT SYSTEM]

INSTALLATION

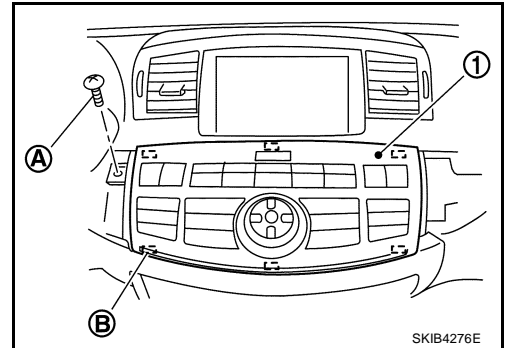
Installation is the reverse order of removal.

Multifunction Switch

REMOVAL

1. Remove instrument panel finisher B and C. Refer to [IP-10, "INSTRUMENT PANEL ASSEMBLY"](#).
2. Remove screw (A).
3. Disengage tabs (B) and connector to separate multifunction switch (1) from instrument panel.

NKS0049X



INSTALLATION

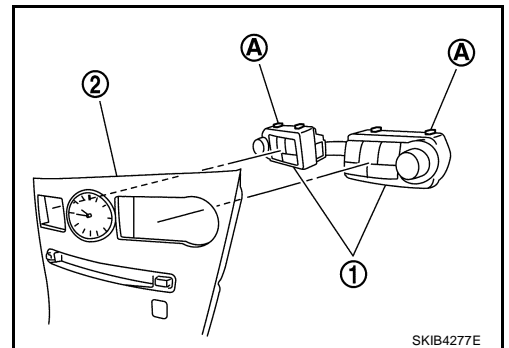
Installation is the reverse order of removal.

Preset Switch

REMOVAL

1. Remove cluster lid C. Refer to [IP-10, "INSTRUMENT PANEL ASSEMBLY"](#).
2. Disengage tabs (A) to separate preset switch (1) from cluster lid C (2).

NKS0049Y



INSTALLATION

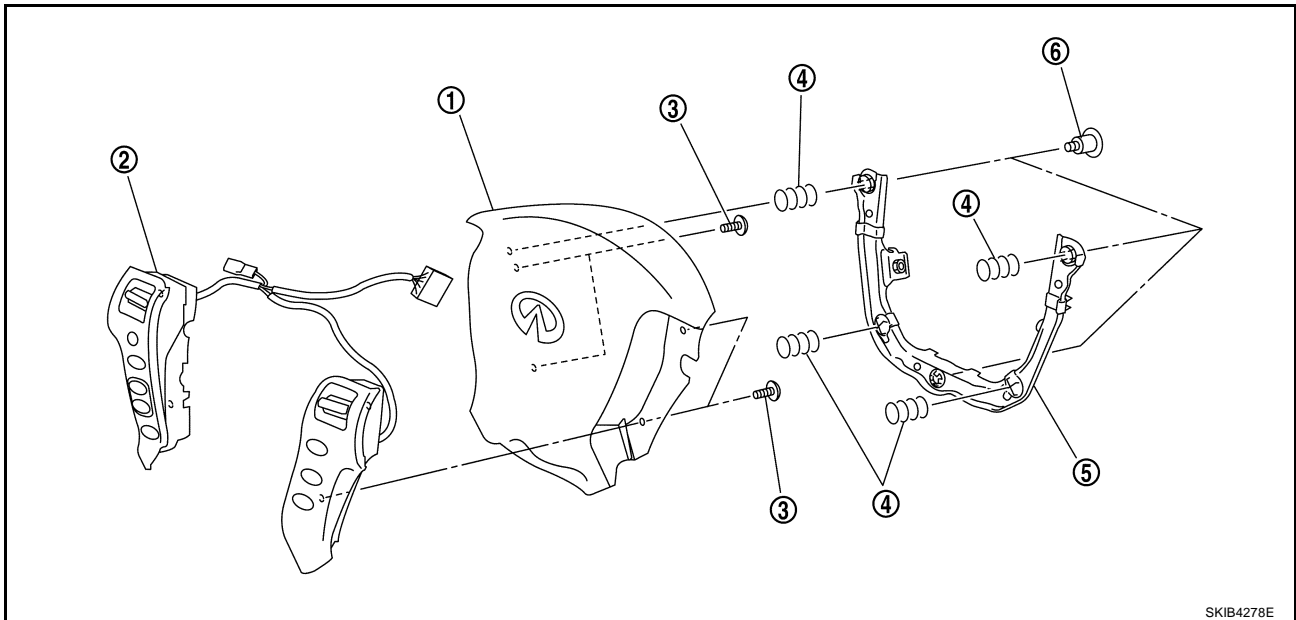
Installation is the reverse order of removal.

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REMOVAL AND INSTALLATION [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

NKS0049Z

Steering Switch REMOVAL



SKIB4278E

- | | | |
|------------|--------------------|----------|
| 1. Air bag | 2. Steering switch | 3. Screw |
| 4. Spring | 5. Bracket | 6. Screw |

1. Refer to [SRS-42, "DRIVER AIR BAG MODULE"](#) .

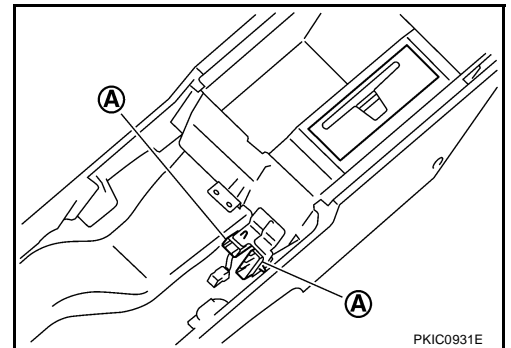
INSTALLATION

Installation is the reverse order of removal.

DVD Player REMOVAL

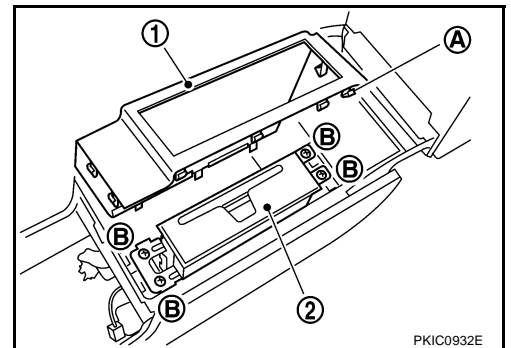
NKS004A0

1. Remove cup holder. Refer to [IP-11, "Removal and Installation of Instrument Panel & Pad"](#) .
2. Disconnect sub harness connector.
3. Remove sub harness connectors (A) from bracket.



PKIC0931E

4. Remove metal clips (A) and 8 pawls. Then remove DVD player cover (1).
5. Remove screws (B) and remove DVD player (2).

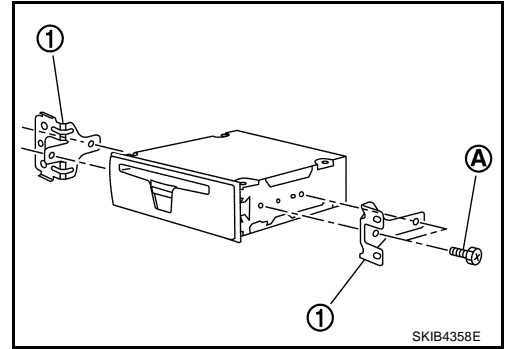


PKIC0932E

REMOVAL AND INSTALLATION

[WITHOUT MOBILE ENTERTAINMENT SYSTEM]

6. Remove screws (A) and remove brackets (1).



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INSTALLATION

Installation is the reverse order of removal.

AV

REMOVAL AND INSTALLATION

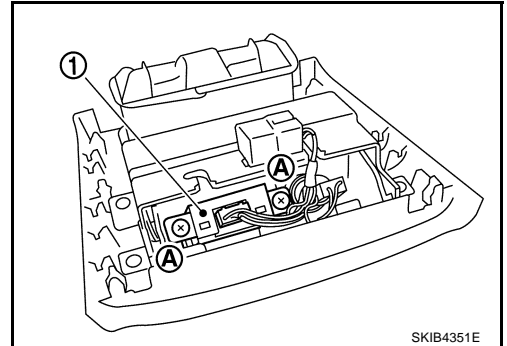
[WITHOUT MOBILE ENTERTAINMENT SYSTEM]

Auxiliary Input Jacks

NKS004A1

REMOVAL

1. Remove center console rear finisher. Refer to [IP-10, "INSTRUMENT PANEL ASSEMBLY"](#) .
2. Remove screws (A) and disconnect connector. Remove auxiliary input jacks (1) from center console rear finisher.



INSTALLATION

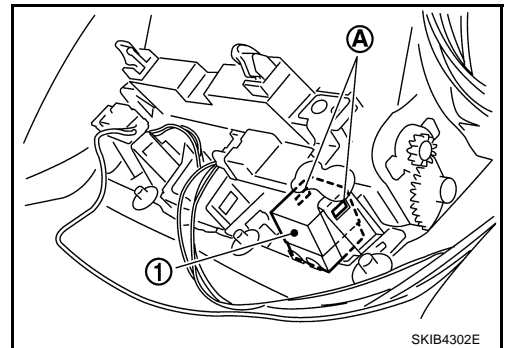
Installation is the reverse order of removal.

Microphone

NKS004A2

REMOVAL

1. Remove front pillar garnish. Refer to [EI-37, "BODY SIDE TRIM"](#) .
2. Remove sun-visor and sun-visor holder. Refer to [EI-52, "HEADLINING"](#) .
3. Remove dual-sunvisor. Refer to [EI-52, "HEADLINING"](#) .
4. Remove assistance grip (front). Refer to [EI-52, "HEADLINING"](#) .
5. Bear down headlining assembly (front) to obtain work space between headlining assembly and vehicle.
6. Disengage tabs (A) and connector to separate microphone unit (1).



INSTALLATION

Installation is the reverse order of removal.

GPS Antenna

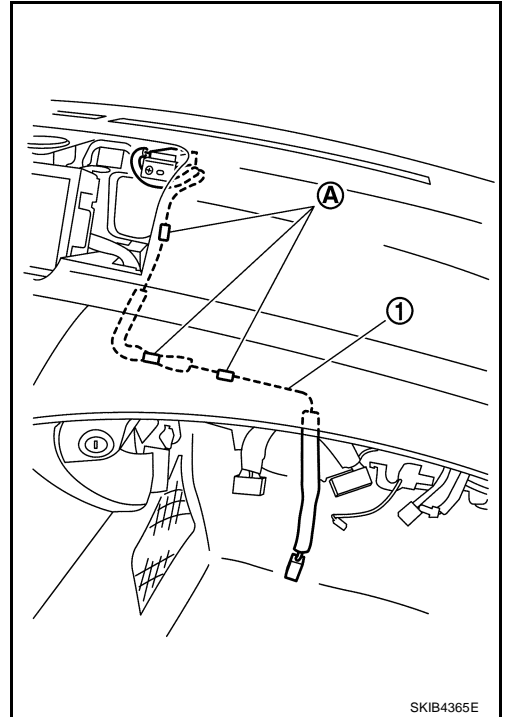
NKS004A3

REMOVAL

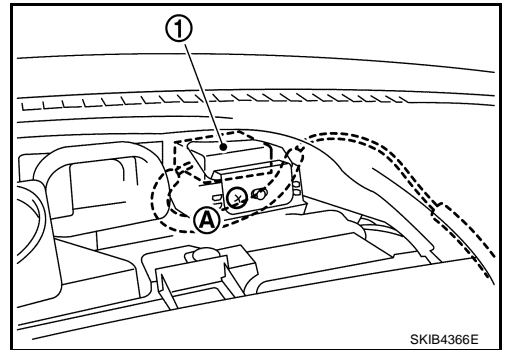
1. Remove NAVI control unit. Refer to [AV-131, "AV \(NAVI\) Control Unit"](#) .
2. Remove upper ventilator grille. Refer to [IP-10, "INSTRUMENT PANEL ASSEMBLY"](#) .

REMOVAL AND INSTALLATION [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

3. Remove clips (A) and remove antenna feeder (1) from instrument panel and pad.



4. Remove screw (A) and remove GPS antenna (1).



INSTALLATION

Installation is the reverse order of removal.

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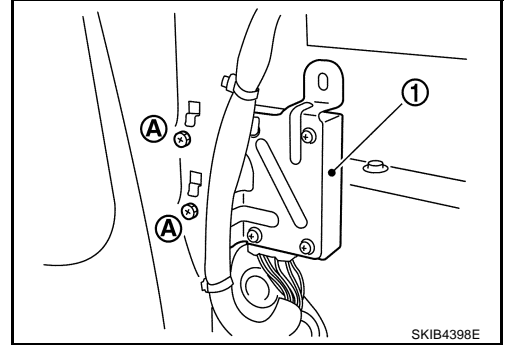
REMOVAL AND INSTALLATION

[WITHOUT MOBILE ENTERTAINMENT SYSTEM]

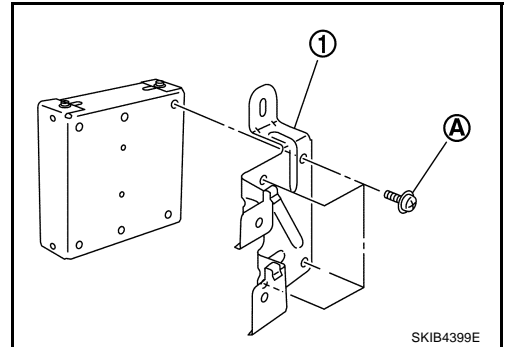
Camera Control Unit REMOVAL

NKS004A4

1. Remove trunk side finisher (RH). Refer to [EI-56, "Removal and Installation for Trunk Room Trim"](#) .
2. Remove screws (A) and disconnect connector, and remove rear view camera control unit (1).



3. Remove screws (A) and remove bracket (1).



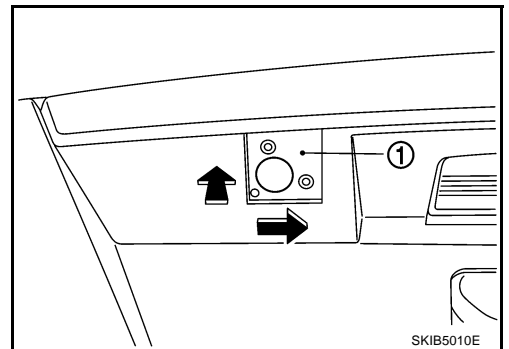
INSTALLATION

Installation is the reverse order of removal.

Rear View Camera REMOVAL

NKS004A5

1. Remove trunk lid finisher inner. Refer to [EI-56, "TRUNK ROOM TRIM & TRUNK LID FINISHER"](#) .
2. Remove screws attaching camera and camera bracket.
3. Remove connector and connector clip.
4. Remove camera bracket (1) while pushing right direction of vehicle.



INSTALLATION

1. Install rear view camera and camera bracket while pressing to trunk room side.
2. Install connector and connector clip.
3. Install trunk lid finisher inner.

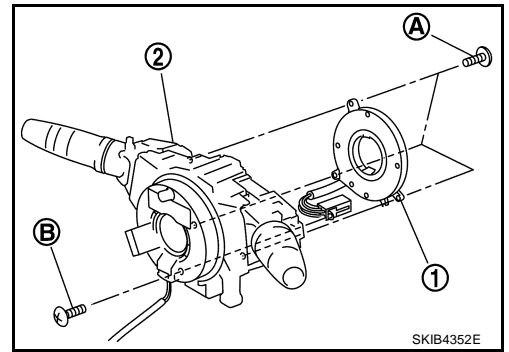
Steering Angle Sensor REMOVAL

NKS004A6

1. Remove combination switch. Refer to [SRS-44, "SPIRAL CABLE"](#) .

REMOVAL AND INSTALLATION [WITHOUT MOBILE ENTERTAINMENT SYSTEM]

2. Remove screws (A) and remove connector mount screw (B).
3. Remove steering angle sensor (1) from combination switch (2).



INSTALLATION

Installation is the reverse order of removal.

CAUTION:

Insert the projection area, and install steering wheel angle sensor while fitting adjusting the triangle marks (Larger mark should be upward.).

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PRECAUTION

[WITH MOBILE ENTERTAINMENT SYSTEM]

PRECAUTION

PF0:00011

Precautions for Supplemental Restraint System (SRS) “AIR BAG” and “SEAT BELT PRE-TENSIONER”

NKS004A7

The Supplemental Restraint System such as “AIR BAG” and “SEAT BELT PRE-TENSIONER”, used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. This system includes seat belt switch inputs and dual stage front air bag modules. The SRS system uses the seat belt switches to determine the front air bag deployment, and may only deploy one front air bag, depending on the severity of a collision and whether the front occupants are belted or unbelted. Information necessary to service the system safely is included in the SRS and SB section of this Service Manual.

WARNING:

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the SRS section.
- Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.

Precautions for Trouble Diagnosis

AV COMMUNICATION SYSTEM

NKS004A8

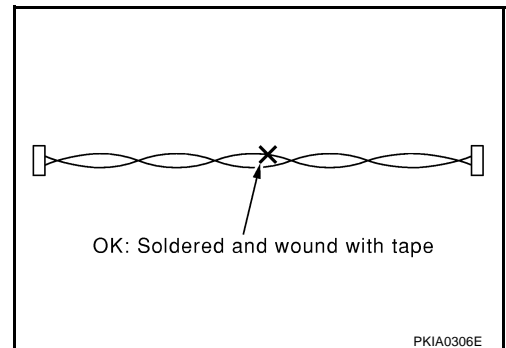
- Do not apply voltage of 7.0 V or higher to the measurement terminals.
- Use the tester with its open terminal voltage being 7.0 V or less.
- Be sure to turn ignition switch OFF and disconnect the battery cable from the negative terminal before checking the circuit.

Precautions for Harness Repair

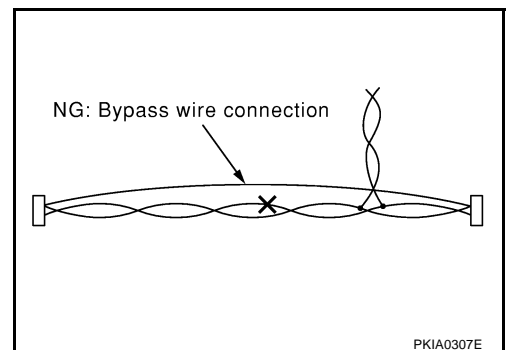
AV COMMUNICATION SYSTEM

NKS004A9

- Solder the repaired parts, and wrap with tape. [Frays of twisted line must be within 110 mm (4.33 in).]



- Do not perform bypass wire connections for the repair parts. (The spliced wire will become separated and the characteristics of twisted line will be lost.)



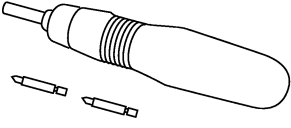
PREPARATION
[WITH MOBILE ENTERTAINMENT SYSTEM]

PREPARATION

PFP:00002

Commercial Service Tools

NKS004AA

| Tool name | Description |
|--|---------------------------------|
| <p>Power tool</p>  <p>PBIC0191E</p> | <p>Loosening bolts and nuts</p> |

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AV

SYSTEM DESCRIPTION

[WITH MOBILE ENTERTAINMENT SYSTEM]

SYSTEM DESCRIPTION

PFP:00000

System Functions

NKS004AB

Here is an example of functions. For details, refer to the owner's manual or navigation system owner's manual.

AUDIO

AudioPilot® (for BOSE System)

AudioPilot® is the sound improving system that picks up any noises and the sound of music coming into the vehicle by a microphone under the steering, and that the BOSE amp revises the frequency feature of music at real time in response to the frequency feature of the noise while driving and listening to music.

- If low frequency area noise from vehicle is loud, it adjusts low frequency element of music to be bigger than vehicle noise.
- If high frequency area noise from vehicle is loud, it adjusts all frequency element of music to be bigger than vehicle noise.

Centerpoint® (for BOSE Surround 5.1ch System)

CD and 2.0ch DVD stereo sound played at audio unit and DVD player are subjected to signal processing in BOSE amp. It can play the surround sound with presence.

VEHICLE INFORMATION SYSTEM

- The status of audio, climate control system, fuel consumption, and navigation system (if equipped) are displayed.
- AV (NAVI) control unit receives the data signal from ECM, unified meter and A/C amp and low tire pressure warning control unit via CAN communication. It calculates the values of fuel economy, tire pressure, and trip computer from the received information and displays them.

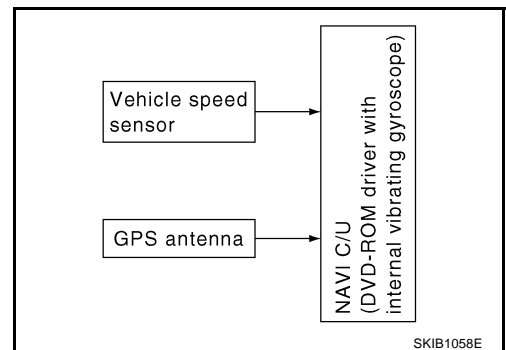
NAVIGATION SYSTEM

Location Detection Principle

The navigation system periodically calculates the vehicle's current position according to the following three signals:

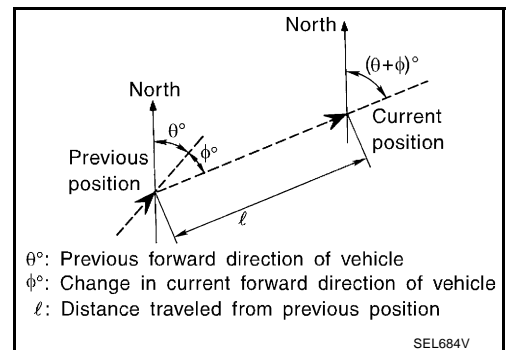
- Travel distance of the vehicle as determined by the vehicle speed sensor
- Turning angle of the vehicle as determined by the gyroscope (angular velocity sensor)
- Direction of vehicle travel as determined by the GPS antenna (GPS information)

The current position of the vehicle is then identified by comparing the calculated vehicle position with map data read from the map DVD-ROM, which is stored in the DVD-ROM drive (map-matching), and indicated on the screen as a vehicle mark. More accurate data is judged and used by comparing vehicle position detection results found by the GPS with the result by map-matching.



The current vehicle position will be calculated by detecting the distance the vehicle moved from the previous calculation point and its direction.

- Travel distance
Travel distance calculations are based on the vehicle speed sensor input signal. Therefore, the calculation may become incorrect as the tires wear down. To prevent this, an automatic distance correction function has been adopted.
- Travel direction
Change in the travel direction of the vehicle is calculated by a gyroscope (angular velocity sensor) and a GPS antenna (GPS information). They have both advantages and disadvantages.



SYSTEM DESCRIPTION [WITH MOBILE ENTERTAINMENT SYSTEM]

| Type | Advantage | Disadvantage |
|--|--|---|
| Gyroscope (angular velocity sensor) | Can detect the vehicle's turning angle quite accurately. | Direction errors may accumulate when vehicle is driven for long distances without stopping. |
| GPS antenna (GPS information) | Can detect the vehicle's travel direction (North/South/East/West). | Correct direction cannot be detected when vehicle speed is low. |

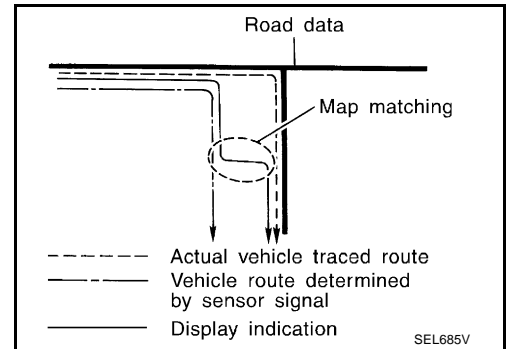
More accurate traveling direction is detected because priorities are set for the signals from these two devices according to the situation.

Map-Matching

Map-matching compares a current location detected by the method in the "Location Detection Principle" with a road map data from Map DVD-ROM stored in DVD-ROM drive.

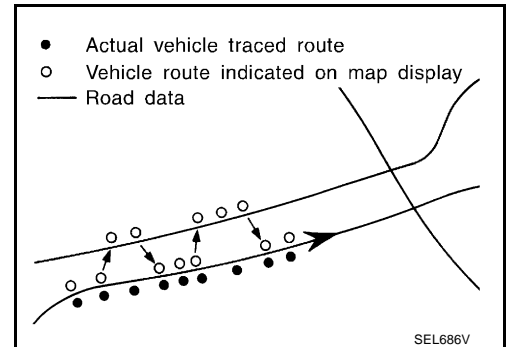
NOTE:

The road map data is based on data stored in the map DVD-ROM.

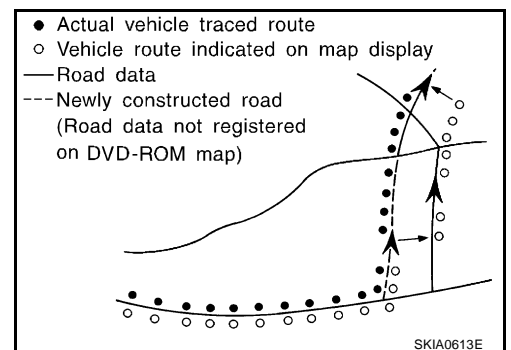


The vehicle position may not be corrected under the following circumstances and after driving for a certain time when GPS information is difficult to receive. In this case, the vehicle mark on the display must be corrected manually.

- In map-matching, alternative routes to reach the destination will be shown and prioritized, after the road on which the vehicle is currently driven has been judged and the vehicle mark has been repositioned.
If there is an error in distance and/or direction, alternative routes will be shown in different order of priority, and the incorrect road can be avoided.
If two roads are running in parallel, they are of the same priority. Therefore, the vehicle mark may appear on either of them alternately, depending on maneuvering of the steering wheel and configuration of the road.



- Map-matching does not function correctly when a road on which the vehicle is driving is new and not recorded in the map DVD-ROM, or when road pattern stored in the map data and the actual road pattern are different due to repair.
When driving on a road not present in the map, the map-matching function may find another road and position the vehicle mark on it. Then, when the correct road is detected, the vehicle mark may change to it.
- Effective range for comparing the vehicle position and travel direction calculated by the distance and direction with the road data read from the map DVD-ROM is limited. Therefore, when there is an excessive gap between current vehicle position and the position on the map, correction by map-matching is not possible.



SYSTEM DESCRIPTION

[WITH MOBILE ENTERTAINMENT SYSTEM]

GPS (Global Positioning System)

GPS (Global Positioning System) was developed for and is controlled by the US Department of Defense. The system utilizes GPS satellites (NAVSTAR), sending out radio waves while flying on an orbit around the earth at an altitude of approximately 21,000 km (13,100miles).

The GPS receiver calculates the vehicle's position in three dimensions (latitude/longitude/altitude) according to the time lag of the radio waves received from four or more GPS satellites (three-dimensional positioning). If radio waves were received only from three GPS satellites, the GPS receiver calculates the vehicle's position in two dimensions (latitude/longitude), utilizing the altitude data calculated previously with radio waves from four or more GPS satellites (two-dimensional positioning).

Position correction by GPS is not available while the vehicle is stopped.

Accuracy of GPS will deteriorate under the following conditions:

- In two-dimensional positioning, GPS accuracy will deteriorate when altitude of the vehicle position changes.
- The accuracy can be even lower depending on the arrangement of the GPS satellites utilized for the positioning.
- Position detection is not possible when vehicle is in an area where radio waves from the GPS satellite do not reach, such as in a tunnel, parking lot in a building, and under an elevated highway. Radio waves from the GPS satellites may not be received when some object is located over the GPS antenna.

NOTE:

- Even a high-precision three dimensional positioning, the detection result has an error about 10 m (30ft).
- Because the signals of GPS satellite is controlled by the Tracking and Control Center in the United States, the accuracy may be degraded lower intentionally or the radio waves may stop.

MOBILE ENTERTAINMENT SYSTEM

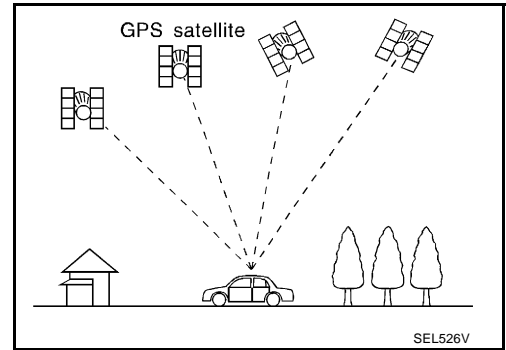
- The wireless headphone has been adopted to the rear seat. It is possible to listen to a separate sound in front seat and rear seat and to see a separate image in front display and rear display.
- When headphone mode is turned ON at radio/CD changer mode, AUX or DVD mode is turned ON only for rear seat. The image that is different from front seat is displayed and a separate sound is output from speaker and headphone.

HANDS-FREE PHONE

- AV (NAVI) control unit has a Bluetooth module. It can perform wireless hands-free telephone calls using the portable phone in a pocket.
- 5 or more portable phones can be registered into the AV (NAVI) control unit.

REAR VIEW MONITOR

- The small CCD camera is equipped into the rear end of the vehicle. The rear view monitor that displays the area behind the vehicle while backing up is equipped.
- Guiding lines indicating side and rear clearances are provided in the rear view monitor image, which allows the driver to more easily judge distances between the vehicle and objects in the display. The possible route lines that indicate the possible route according to the steering angle are provided to help backing up when parking.
- Image quality of the rear view image and of the navigation screen can be adjusted separately.



SYSTEM DESCRIPTION

[WITH MOBILE ENTERTAINMENT SYSTEM]

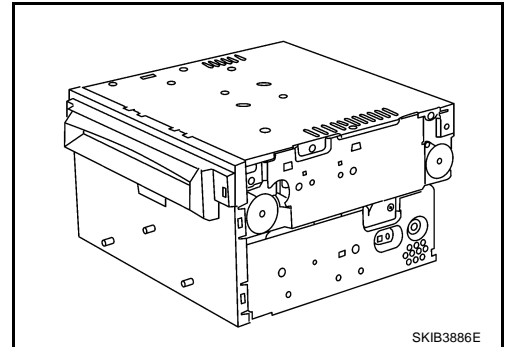
NKS004AC

Component Description

AUDIO UNIT

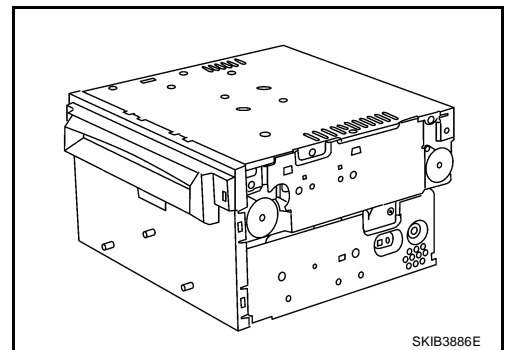
BOSE 2ch System

- It receives the TEL voice signal from AV (NAVI) control unit and output it to the BOSE amp.
- It receives the sound signal from DVD player and sends it to the BOSE amp.
- It controls sound volume of each speaker when outputting TEL voice and voice guidance.
- It subjects to AudioPilot[®] processing when receiving sound signal from microphone for AudioPilot[®].



BOSE Surround 5.1ch System

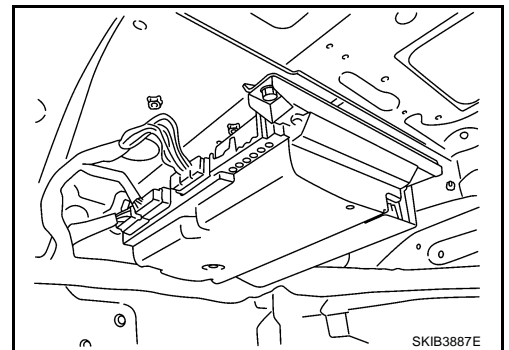
- It receives the TEL voice signal from AV (NAVI) control unit and output it to the BOSE amp.
- DVD player receives the received AUX sound and the downmix sound of DVD player, and then sends them to the BOSE amp.



BOSE AMP

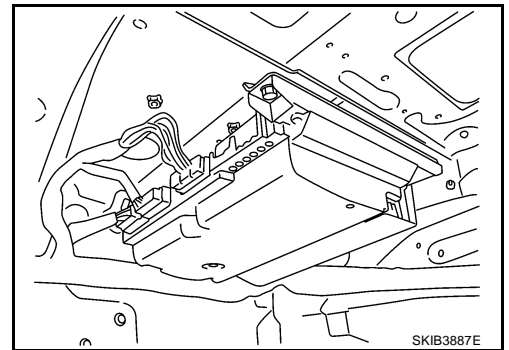
BOSE 2ch System

- It amplifies the sound signal from the audio unit and output it to each speaker.
- It receives the voice guidance signal from AV (NAVI) control unit and output it to the front speaker.
- It controls sound volume of each speaker when outputting TEL voice and voice guidance.
- It subjects to AudioPilot[®] processing when receiving sound signal from microphone for AudioPilot[®].



BOSE Surround 5.1ch System

- It amplifies the sound signal from the audio unit and the DVD sound signal from DVD player, and then output them to each speaker.
- It receives the voice guidance signal from AV (NAVI) control unit and output it to the front speaker.
- It controls sound volume of each speaker when outputting TEL voice and voice guidance.
- It subjects to AudioPilot[®] processing when receiving sound signal from microphone for AudioPilot[®].
- It subjects to Centerpoint[®] processing.



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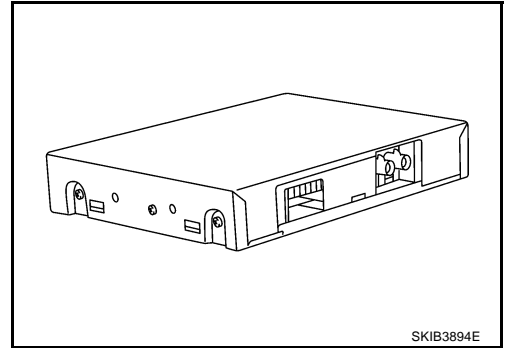
AV

SYSTEM DESCRIPTION

[WITH MOBILE ENTERTAINMENT SYSTEM]

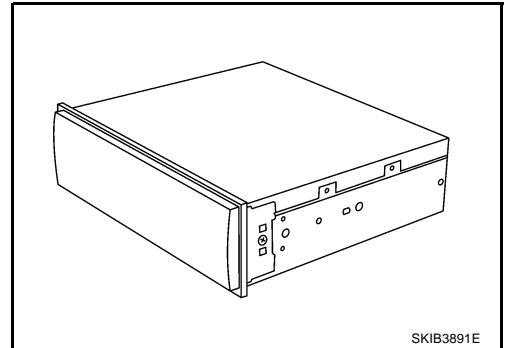
SATELLITE TUNER

- The satellite tuner is connected with the audio unit via communication line.
- It sends the received sound signal from the satellite radio antenna to the audio unit.



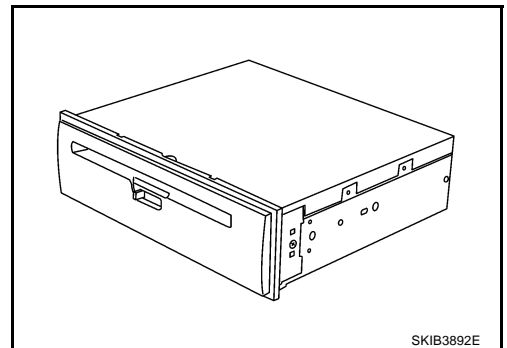
AV CONTROL UNIT (WITHOUT NAVI)

- It controls each unit of the system by the operation signal from the multifunction switch and sends the image signal of operating condition or vehicle information, etc. to the display unit.
- It receives the TEL input voice or the input voice at voice control from the microphone. It receives the received TEL voice, and then sends it to the audio unit.
- It sends the voice guidance signal to BOSE amp (BOSE system).



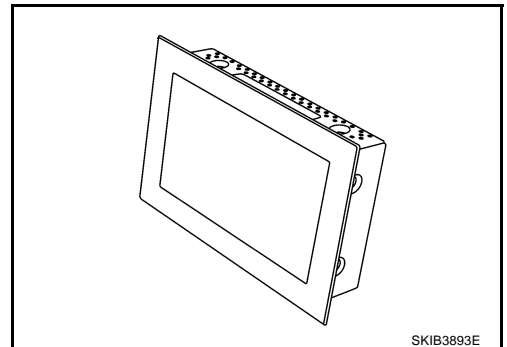
NAVI CONTROL UNIT (WITH NAVI)

- It controls each unit of the system by the operation signal from the multifunction switch and sends the image signal of operating condition or vehicle information, etc. to the display unit.
- It receives the TEL input voice or the input voice at voice control from the microphone. It receives the received TEL voice, and then sends it to the audio unit.
- The gyro (angle speed sensor) and the DVD-ROM drive are built-in units that control the navigation functions.
- Signals are received from the gyro, the vehicle speed sensor, and the GPS antenna. Vehicle location is determined by combining this data with the data contained in the DVD-ROM map. Location information is shown on liquid crystal display panel.



FRONT DISPLAY UNIT

- It receives the RGB signal and the image signal of video distributor and camera control unit from AV (NAVI) control unit.
- The changing of image is controlled by the communication with AV (NAVI) control unit.

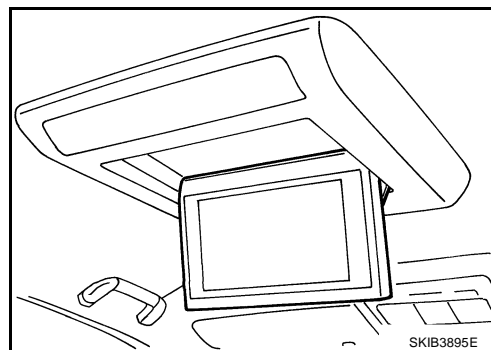


SYSTEM DESCRIPTION

[WITH MOBILE ENTERTAINMENT SYSTEM]

REAR DISPLAY UNIT

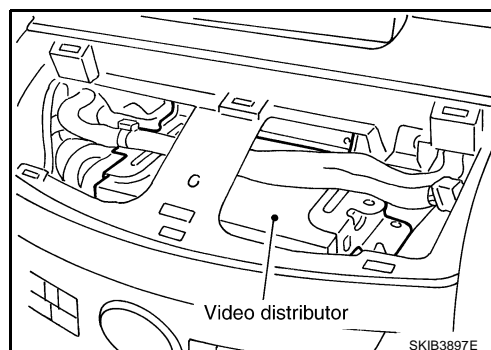
- It receives the image signal from the video distributor.
- The changing of image is controlled by the communication with video distributor.
- It receives the operation signal from remote control, and then sends it to the video distributor.



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VIDEO DISTRIBUTOR

- It receives the image signal from the AV (NAVI) control unit, DVD player, and auxiliary input jack, and then sends it to the front display and rear display.
- It supplies the power to the remote control receiver, and then receives the operation signal from the remote control receiver.
- It sends ON signal to headphone amp.

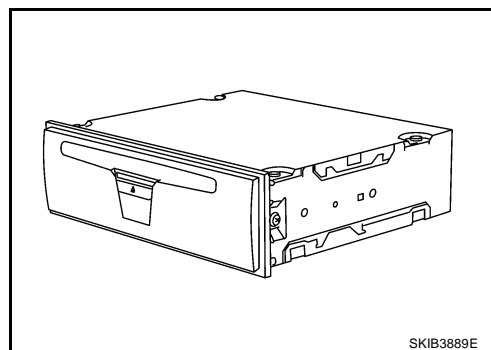


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DVD PLAYER

BOSE 2ch System

- It sends the sound signal when playing DVD to the audio unit, headphone amp, and then it sends the image signal to the video distributor.
- It inputs the sound signal from auxiliary input jacks, and then sends it to audio unit, headphone amp.



AV

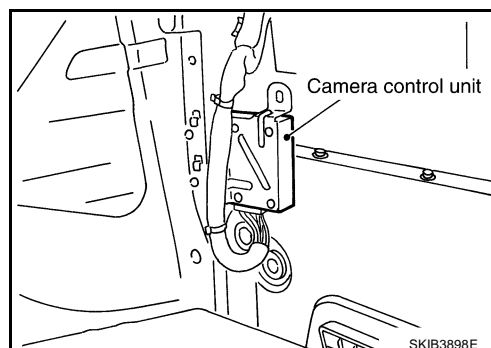
L

BOSE Surround 5.1ch System

- It sends the sound signal when playing DVD to the BOSE amp, headphone amp, and then it sends the image signal to the video distributor.
- When the downmix function is turned ON when playing DVD, the sound signal is sent to the audio unit.
- It inputs the sound signal from auxiliary input jacks, and then sends it to audio unit, headphone amp.

CAMERA CONTROL UNIT

- When the reverse signal is input, the power is supplied to the rear view camera, and then the image signal from the rear view camera is sent to the display unit.
- The camera control unit displays the guiding lines and possible route lines, and then it synthesizes them to the camera image.



M

SYSTEM DESCRIPTION

[WITH MOBILE ENTERTAINMENT SYSTEM]

CAN Communication System Description

NKS004AD

CAN (Controller Area Network) is a serial communication line for real time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Many electronic control units are equipped onto a vehicle, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN H line, CAN L line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.

CAN Communication Unit

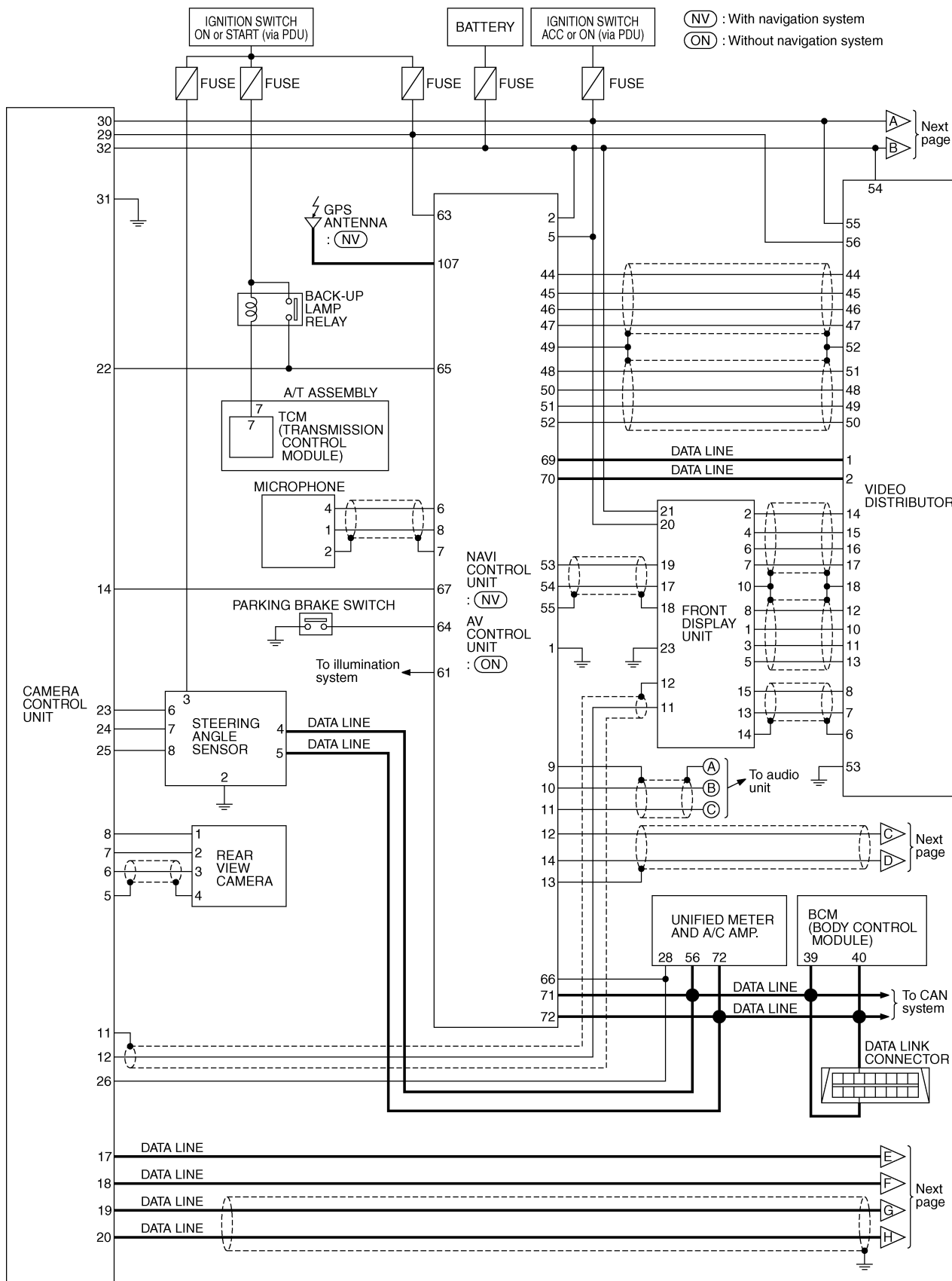
NKS004AE

Refer to [LAN-50. "CAN System Specification Chart"](#) .

SYSTEM DESCRIPTION [WITH MOBILE ENTERTAINMENT SYSTEM]

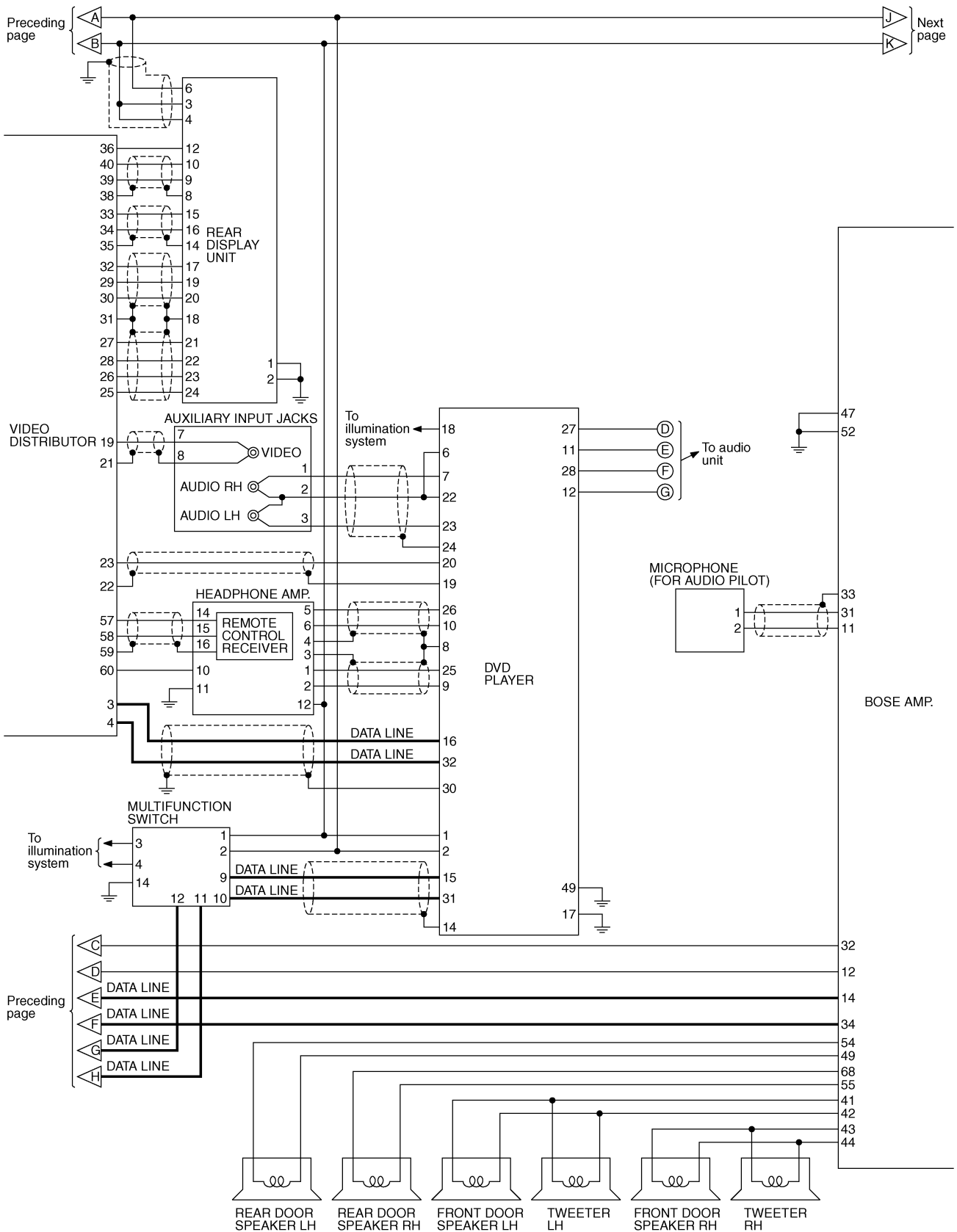
Schematic — BOSE Audio 2ch System —

NKS004AF



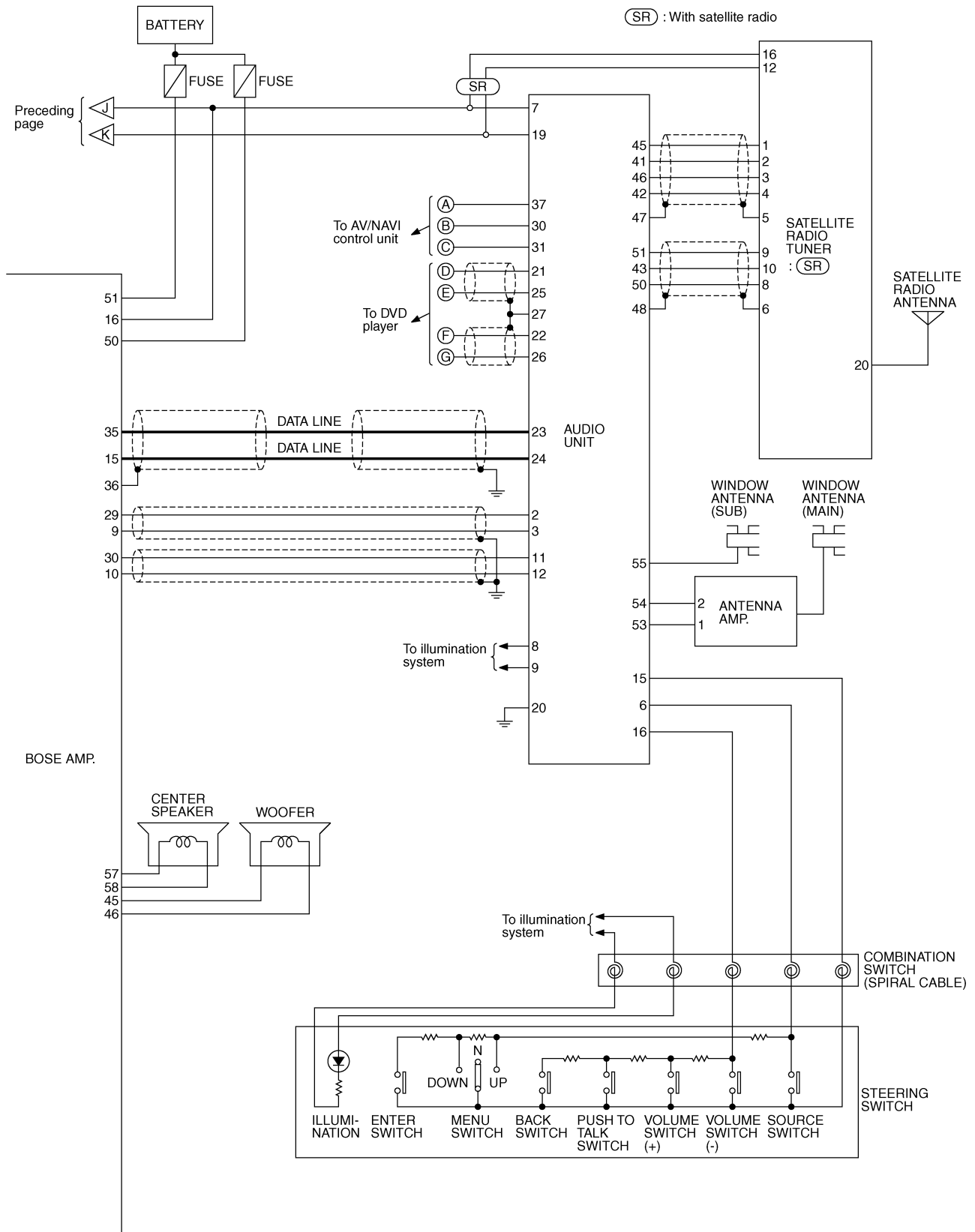
TKWT3540E

SYSTEM DESCRIPTION [WITH MOBILE ENTERTAINMENT SYSTEM]



TKWT3541E

SYSTEM DESCRIPTION [WITH MOBILE ENTERTAINMENT SYSTEM]



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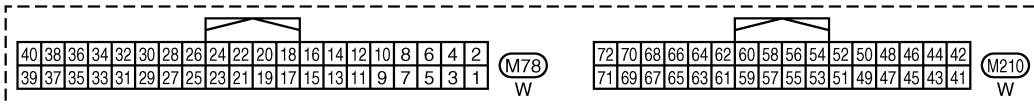
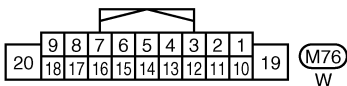
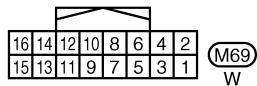
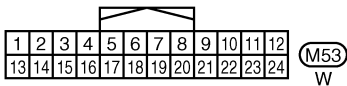
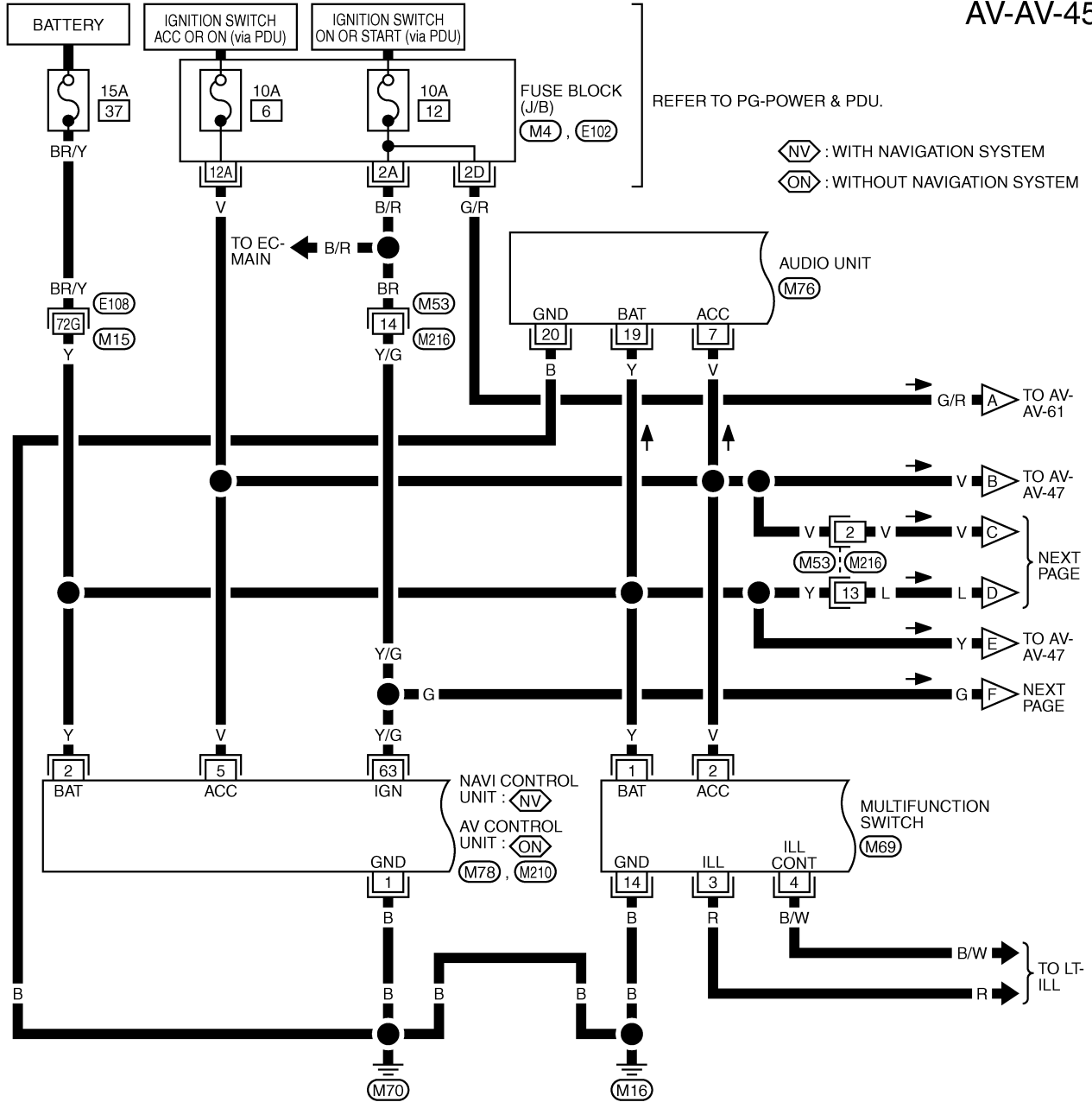
TKWT5128E

SYSTEM DESCRIPTION [WITH MOBILE ENTERTAINMENT SYSTEM]

Wiring Diagram — AV — / BOSE Audio 2ch System

NKS004AG

AV-AV-45



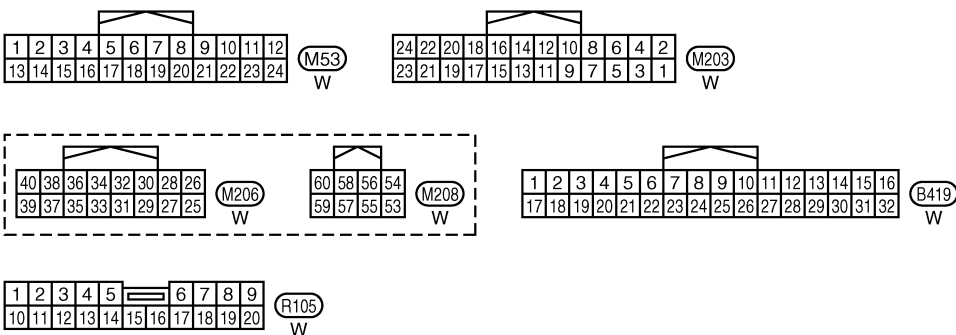
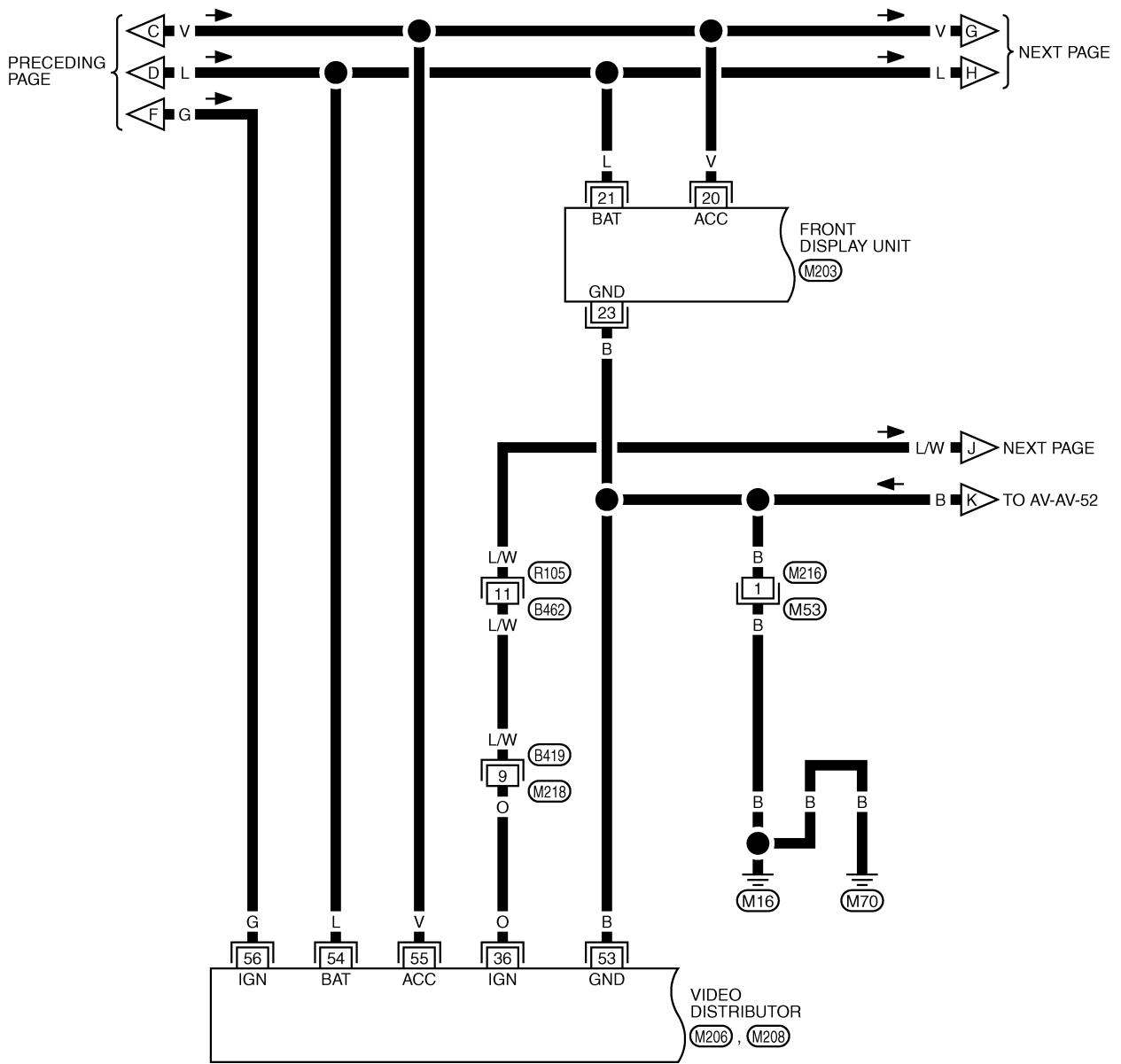
REFER TO THE FOLLOWING.

- (E108) -SUPER MULTIPLE JUNCTION (SMJ)
- (M4), (E102) -FUSE BLOCK-JUNCTION BOX (J/B)

TKWT5325E

SYSTEM DESCRIPTION [WITH MOBILE ENTERTAINMENT SYSTEM]

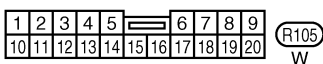
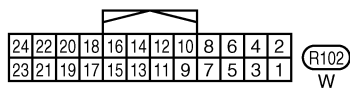
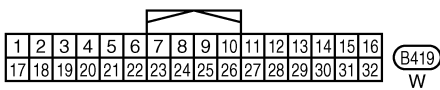
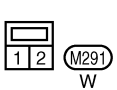
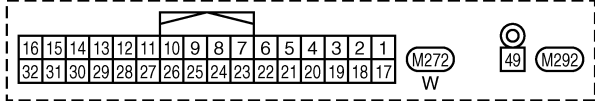
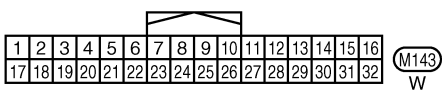
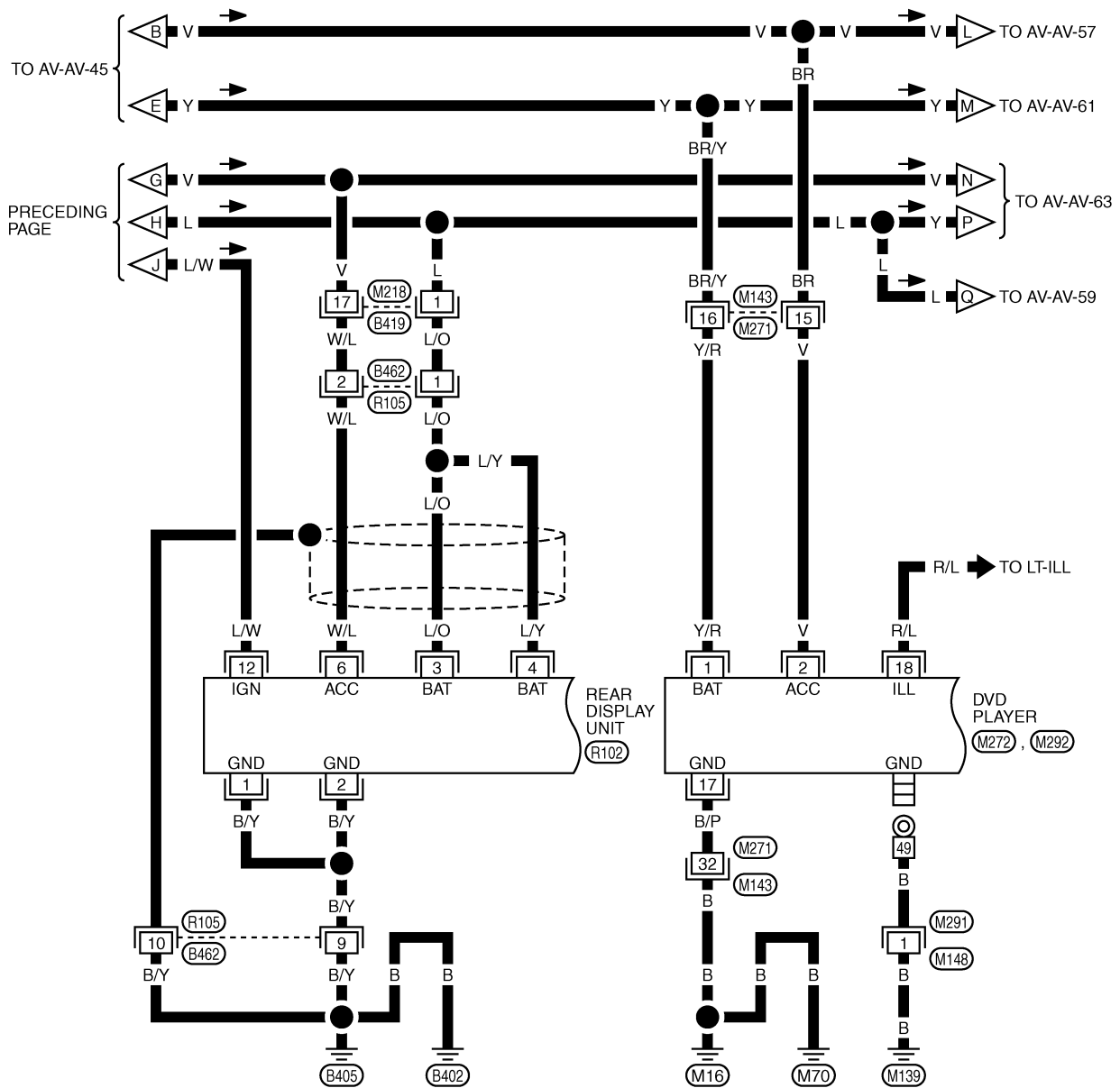
AV-AV-46



TKWT5129E

SYSTEM DESCRIPTION [WITH MOBILE ENTERTAINMENT SYSTEM]

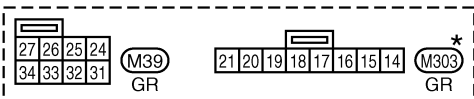
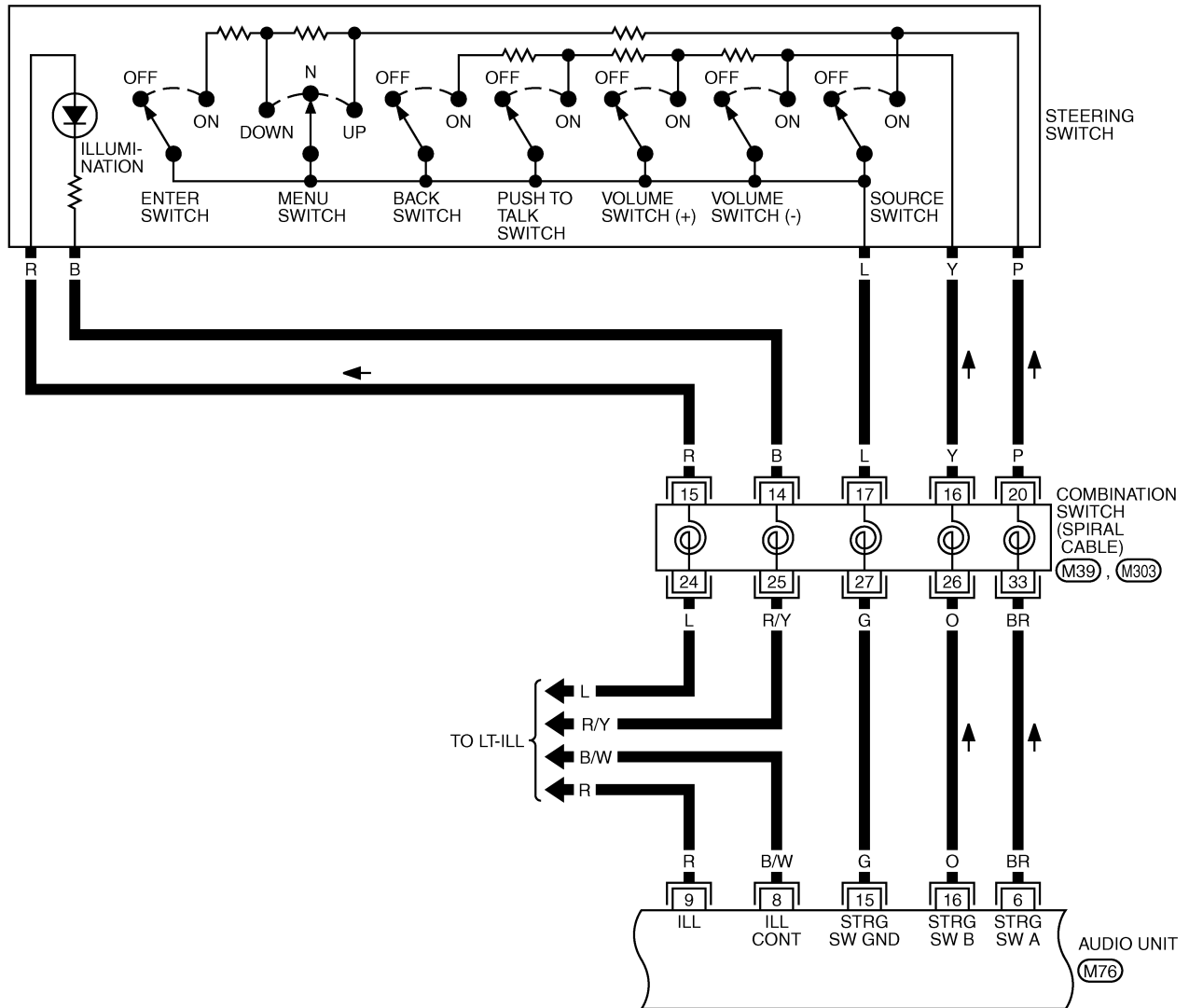
AV-AV-47



TKWT5130E

SYSTEM DESCRIPTION [WITH MOBILE ENTERTAINMENT SYSTEM]

AV-AV-48

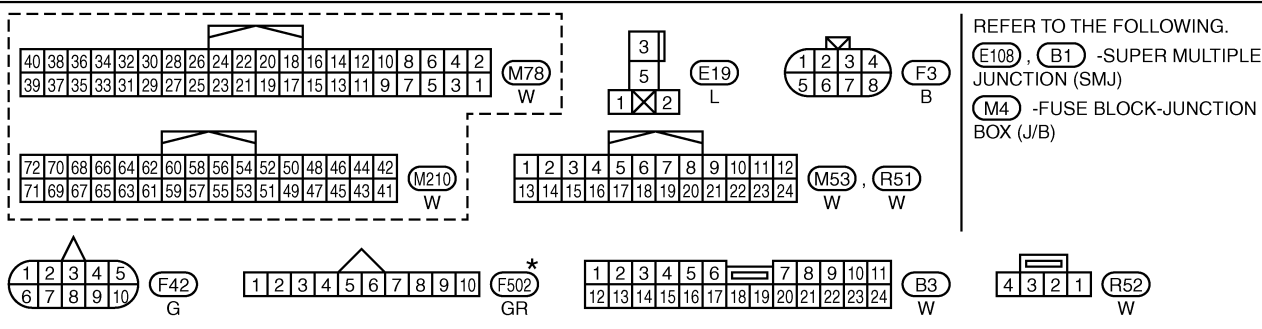
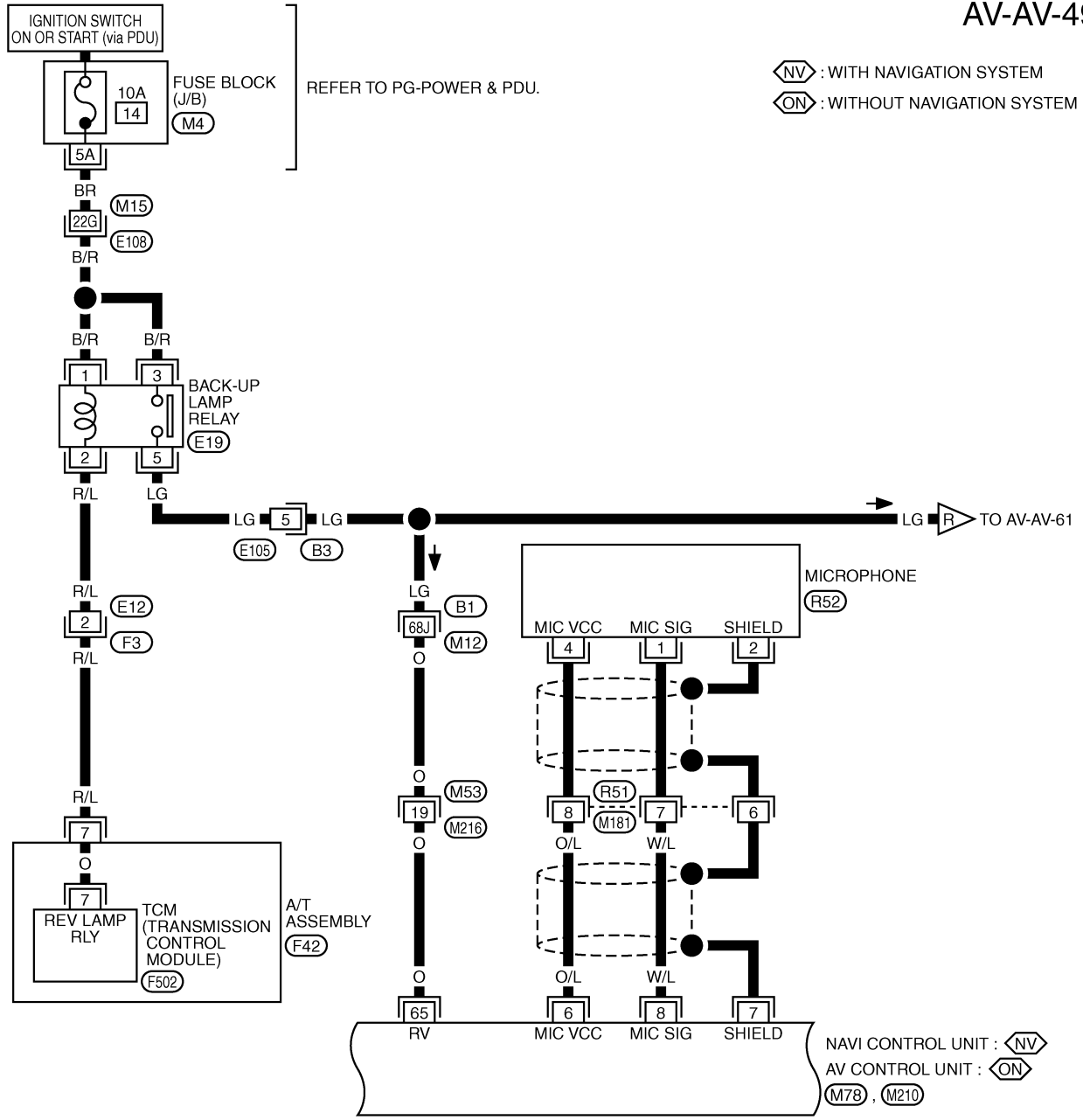


★: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

TKWT5326E

SYSTEM DESCRIPTION [WITH MOBILE ENTERTAINMENT SYSTEM]

AV-AV-49

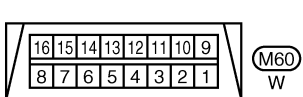
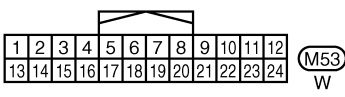
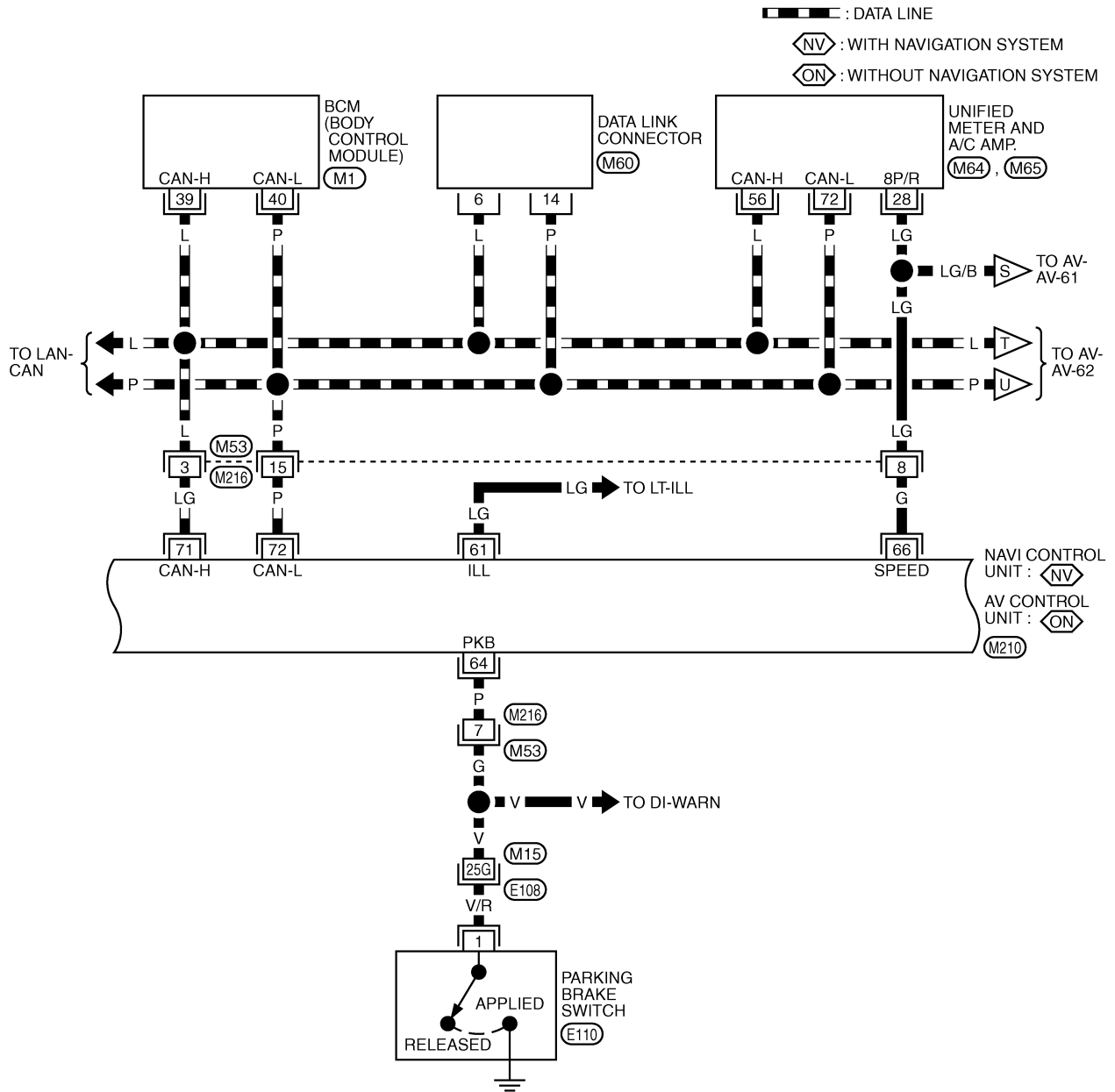


*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

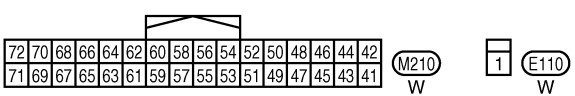
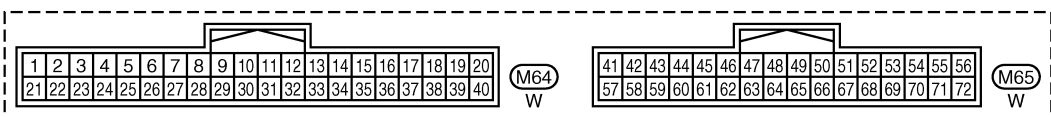
TKWT3547E

SYSTEM DESCRIPTION [WITH MOBILE ENTERTAINMENT SYSTEM]

AV-AV-50



REFER TO THE FOLLOWING.
 (E108) -SUPER MULTIPLE JUNCTION (SMJ)
 (M1) -ELECTRICAL UNITS



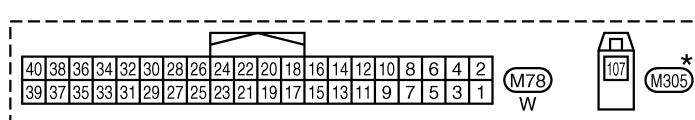
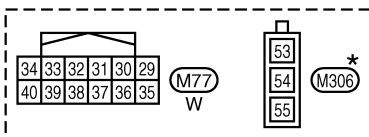
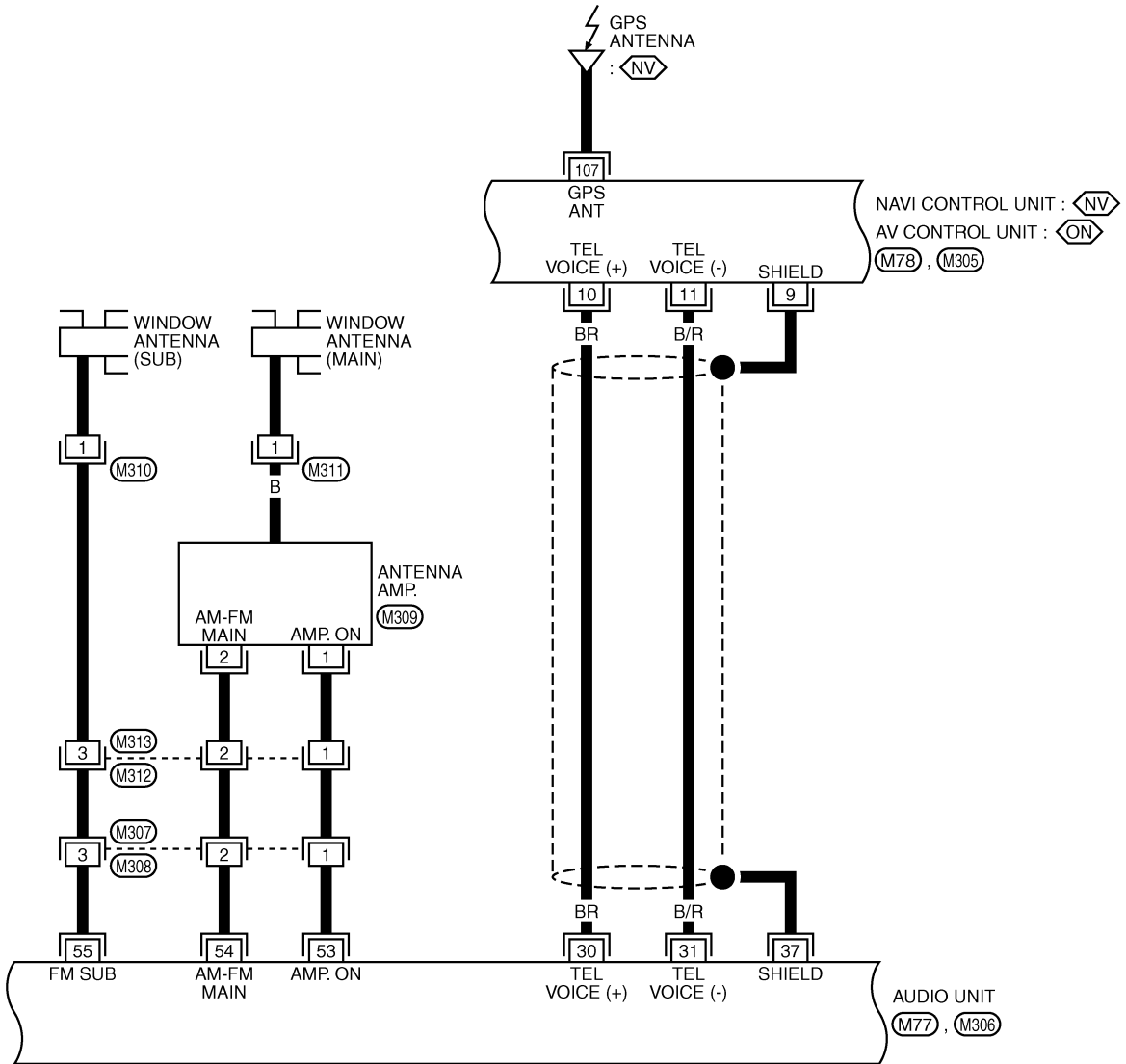
TKWT3548E

SYSTEM DESCRIPTION [WITH MOBILE ENTERTAINMENT SYSTEM]

AV-AV-51

(NV) : WITH NAVIGATION SYSTEM

(ON) : WITHOUT NAVIGATION SYSTEM

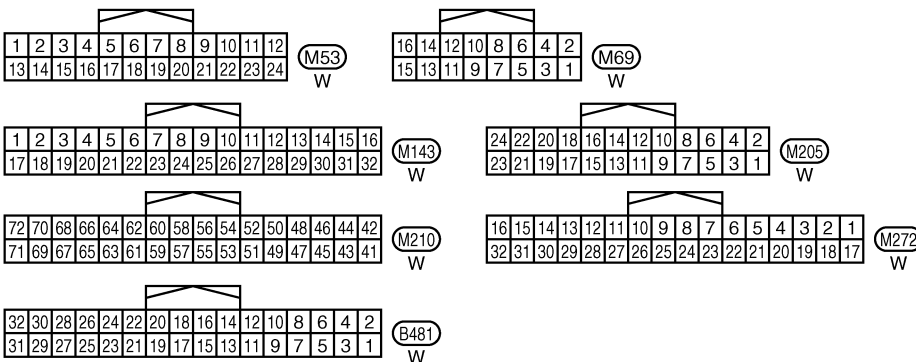
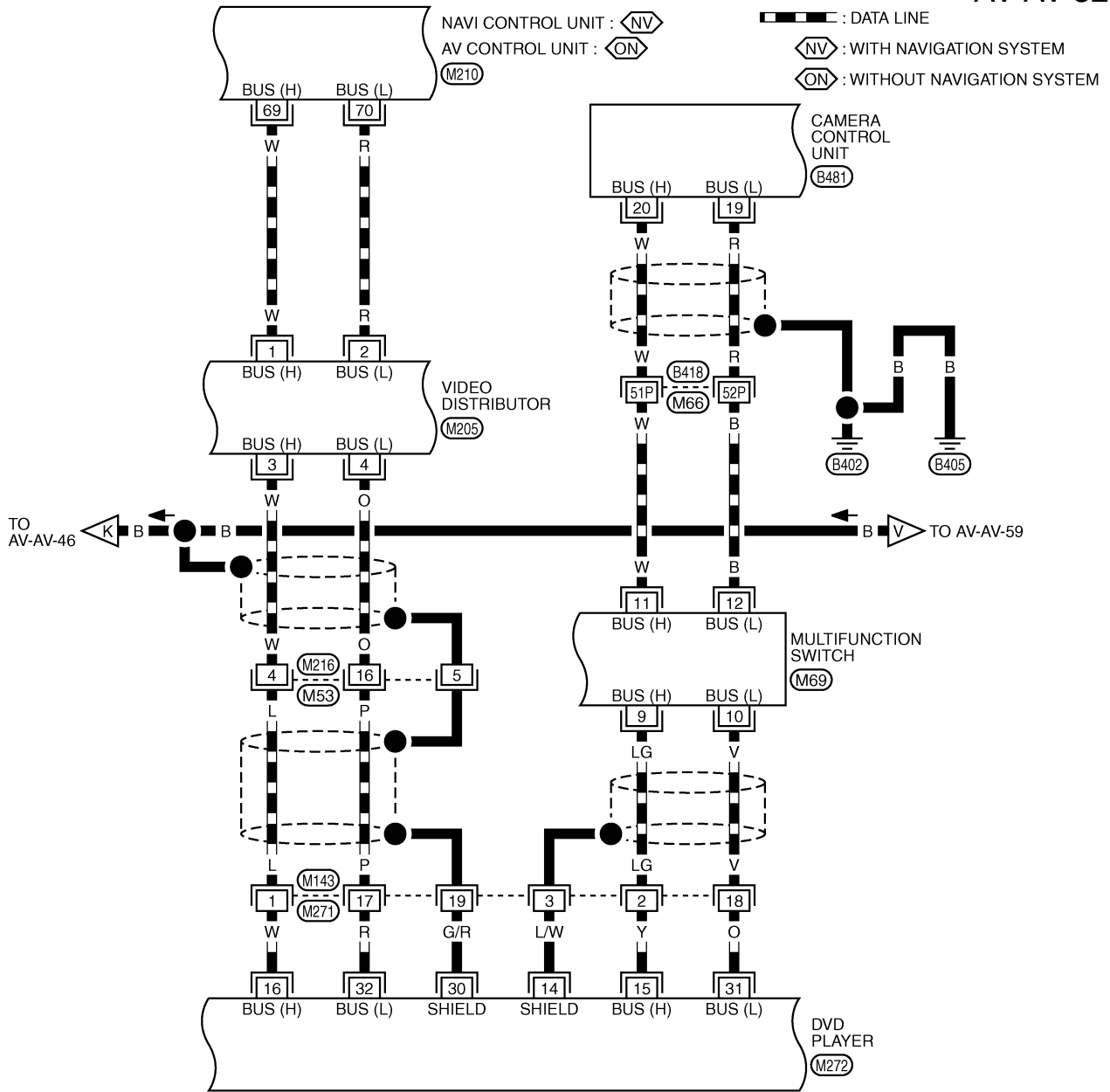


*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

TKWT5131E

SYSTEM DESCRIPTION [WITH MOBILE ENTERTAINMENT SYSTEM]

AV-AV-52



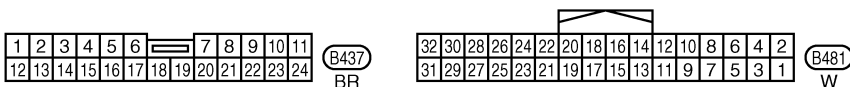
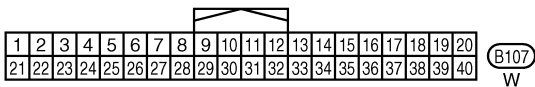
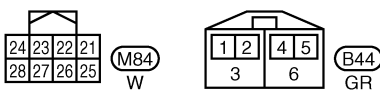
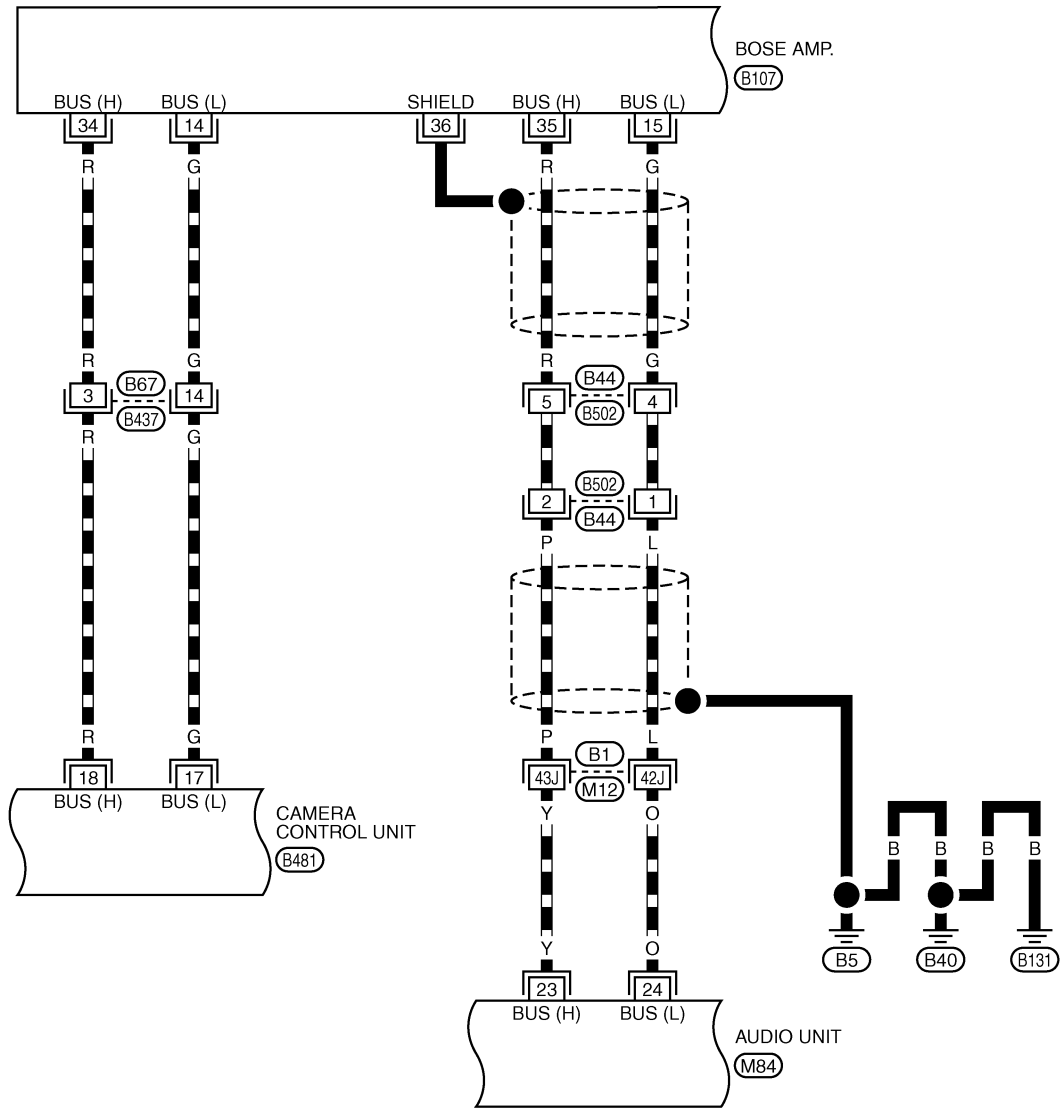
REFER TO THE FOLLOWING.
 (B418) -SUPER MULTIPLE JUNCTION (SMJ)

TKWT5132E

SYSTEM DESCRIPTION [WITH MOBILE ENTERTAINMENT SYSTEM]

AV-AV-53

▬ : DATA LINE



REFER TO THE FOLLOWING.

(B1) -SUPER MULTIPLE JUNCTION (SMJ)

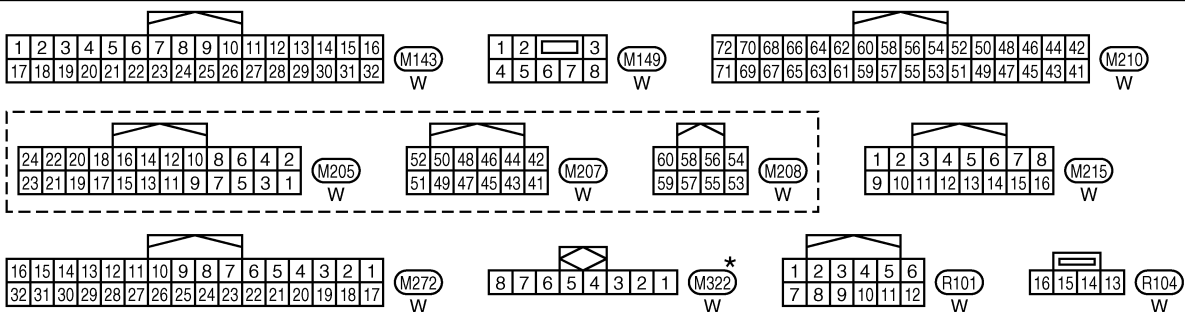
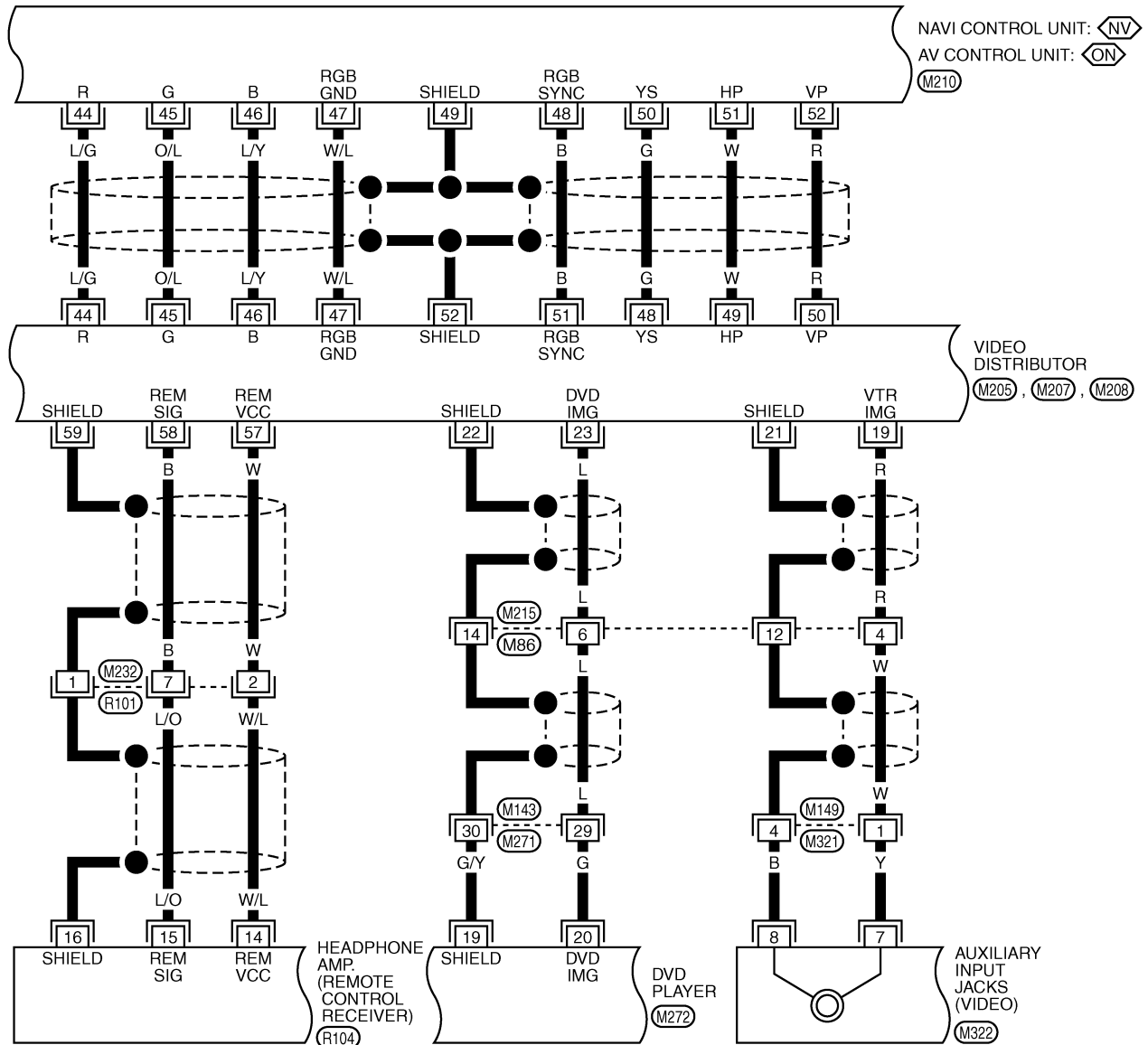
TKWT5133E

SYSTEM DESCRIPTION [WITH MOBILE ENTERTAINMENT SYSTEM]

AV-AV-54

NV : WITH NAVIGATION SYSTEM

ON : WITHOUT NAVIGATION SYSTEM



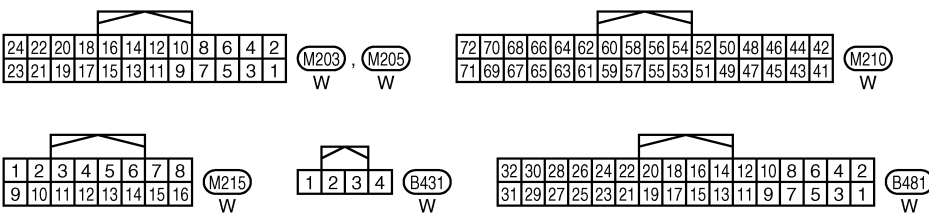
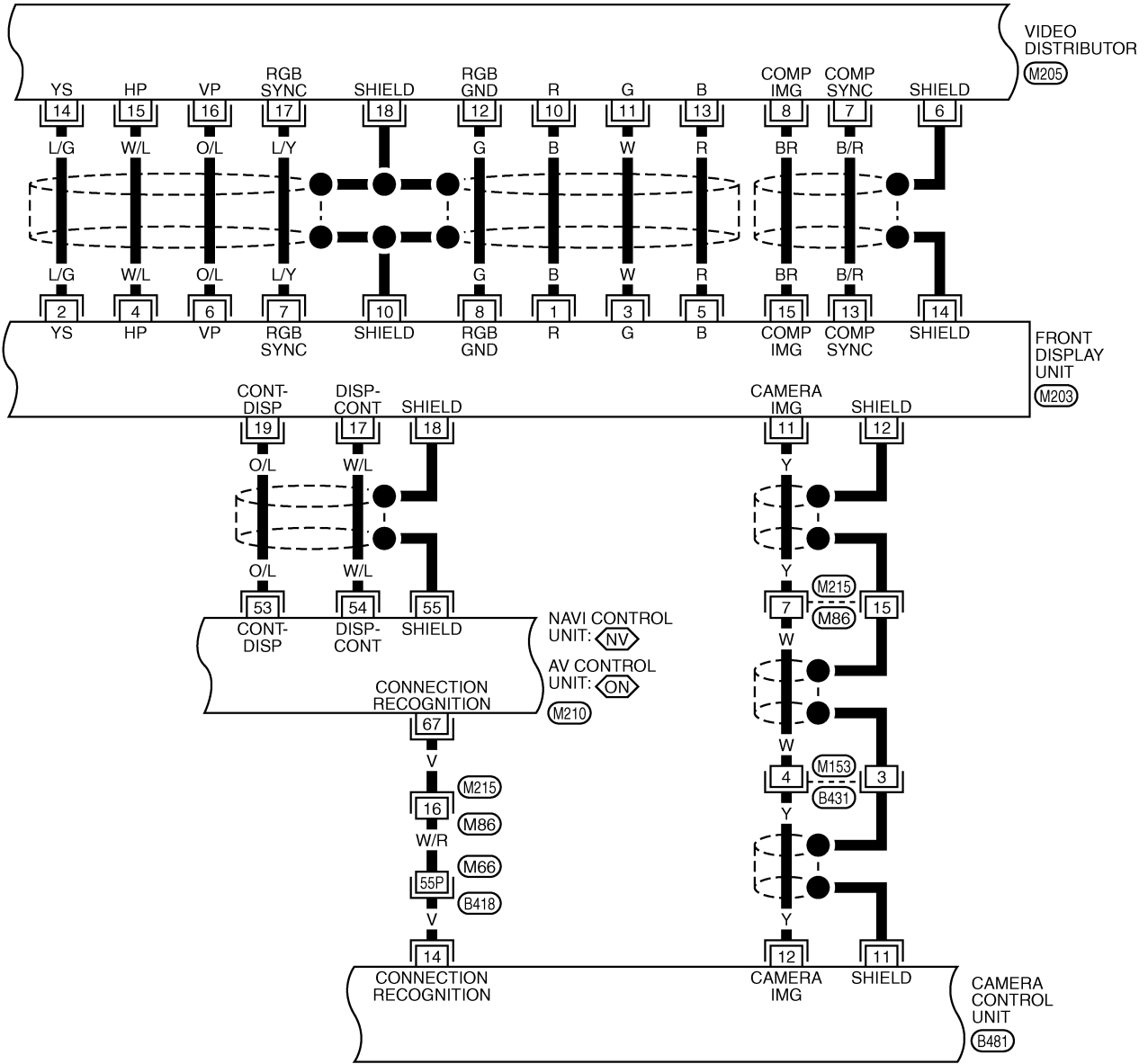
TKWT5134E

SYSTEM DESCRIPTION [WITH MOBILE ENTERTAINMENT SYSTEM]

AV-AV-55

(NV) : WITH NAVIGATION SYSTEM

(ON) : WITHOUT NAVIGATION SYSTEM



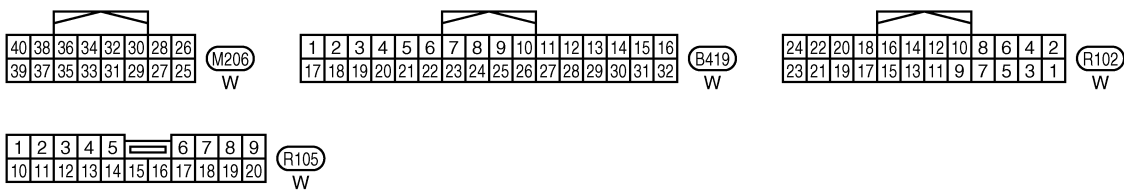
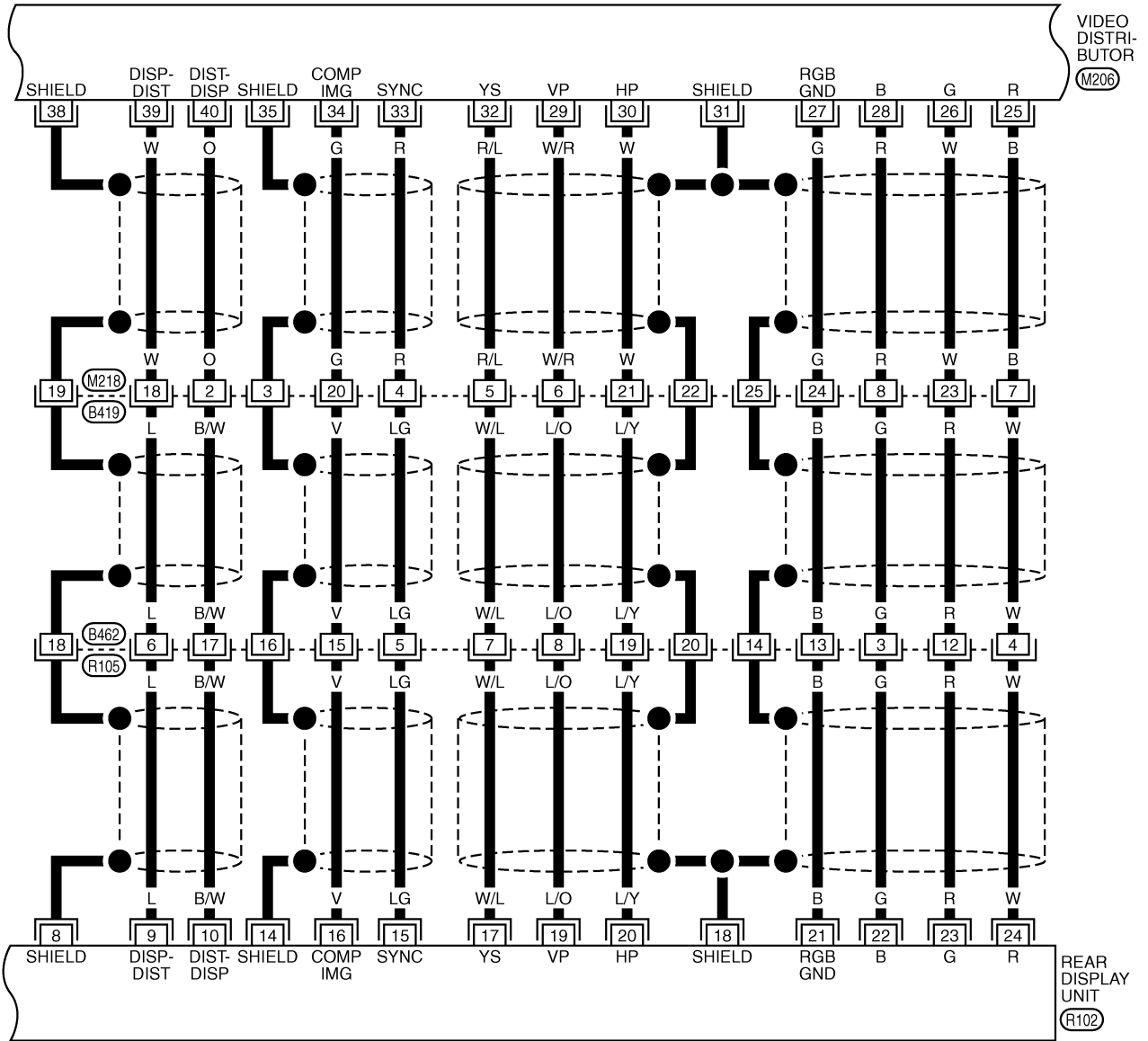
REFER TO THE FOLLOWING.
(B418) -SUPER MULTIPLE JUNCTION (SMJ)

TKWT5135E

SYSTEM DESCRIPTION [WITH MOBILE ENTERTAINMENT SYSTEM]

AV-AV-56

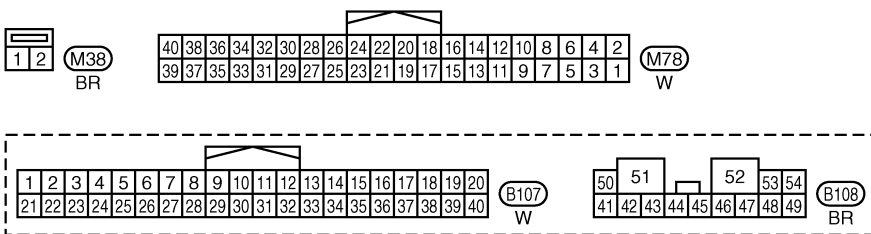
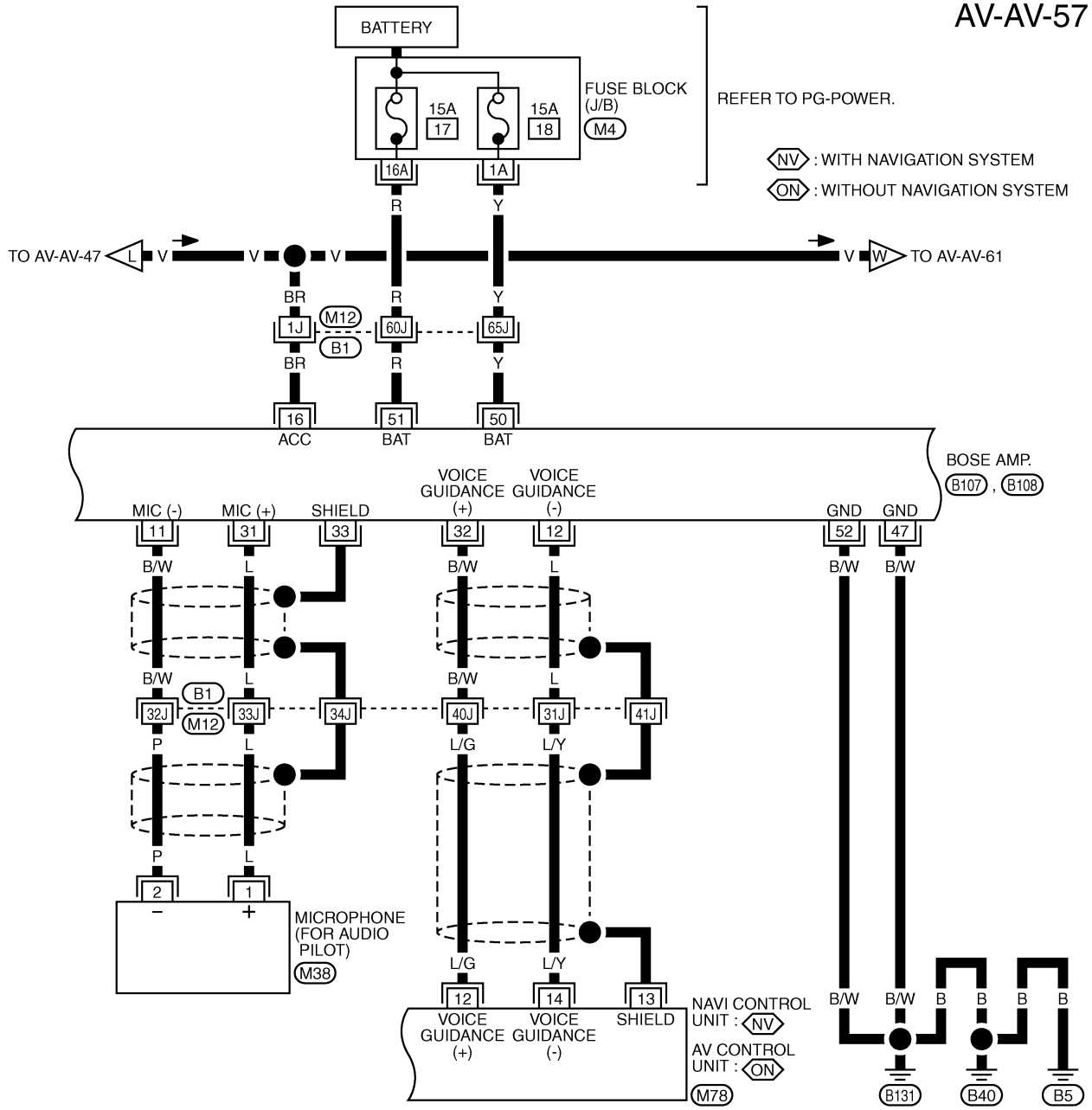
A
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TKWT5136E

SYSTEM DESCRIPTION [WITH MOBILE ENTERTAINMENT SYSTEM]

AV-AV-57



REFER TO THE FOLLOWING.

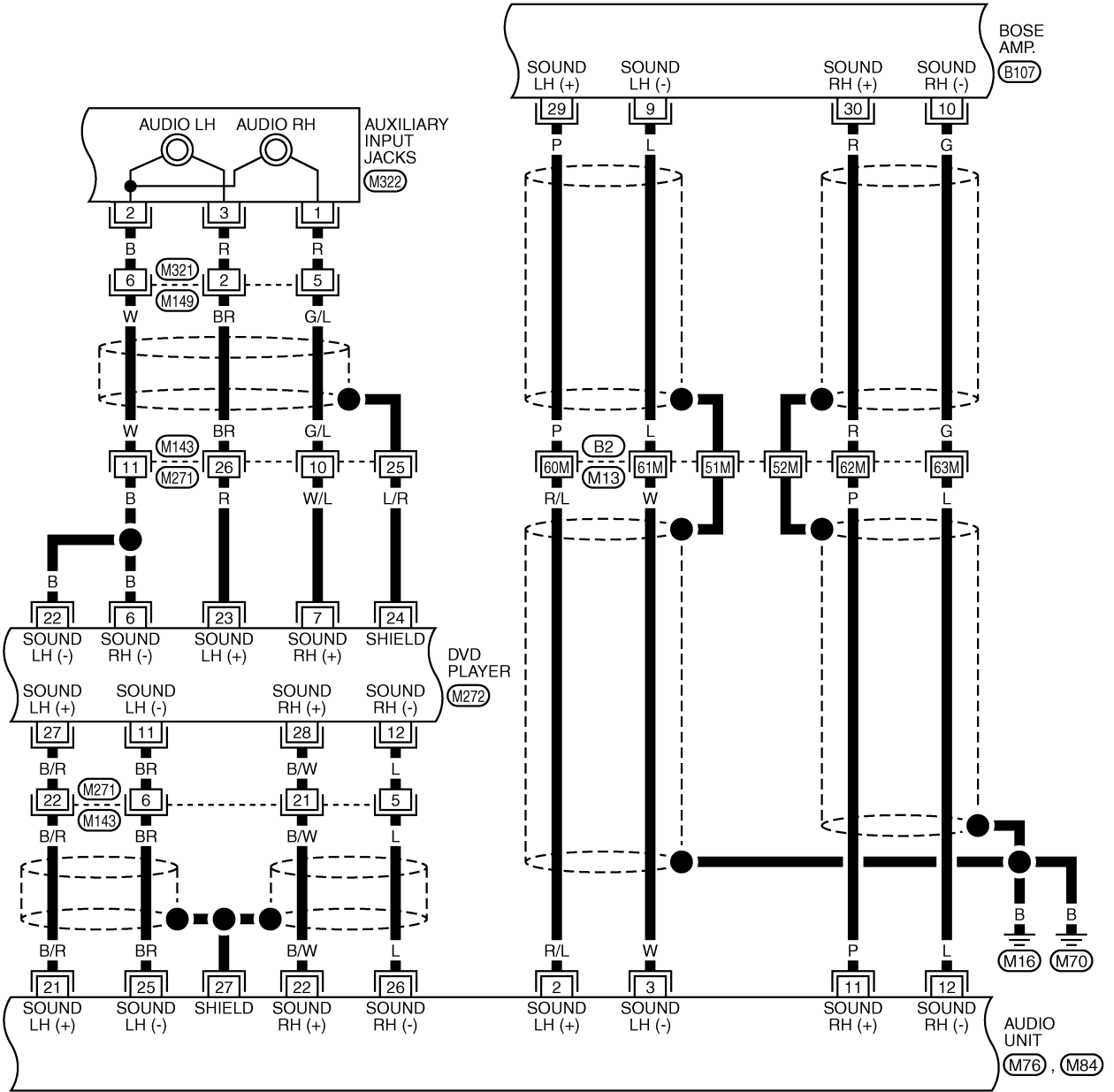
(B1) -SUPER MULTIPLE JUNCTION (SMJ)

(M4) -FUSE BLOCK-JUNCTION BOX (J/B)

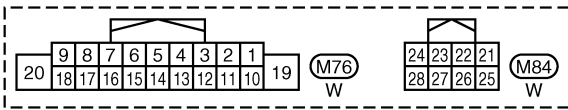
TKWT5137E

SYSTEM DESCRIPTION [WITH MOBILE ENTERTAINMENT SYSTEM]

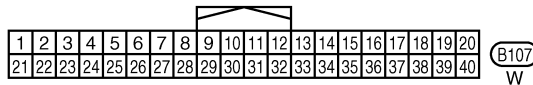
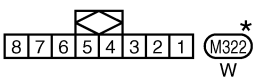
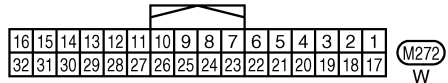
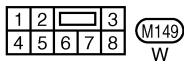
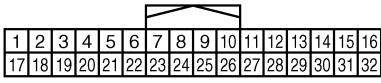
AV-AV-58



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REFER TO THE FOLLOWING.
B2 -SUPER MULTIPLE JUNCTION (SMJ)

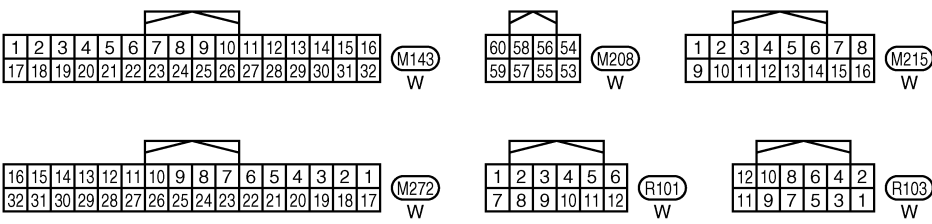
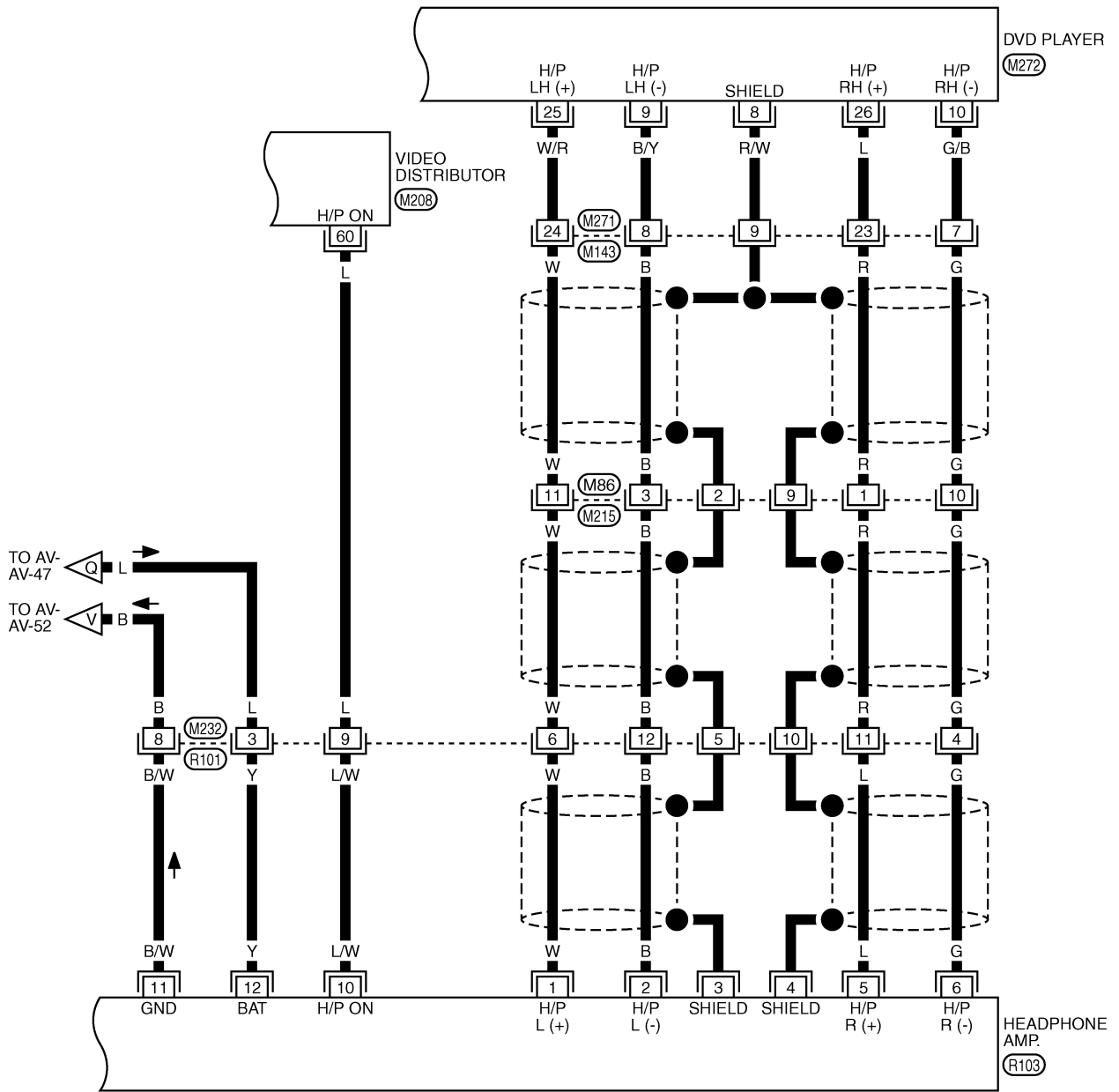


*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

TKWT6614E

SYSTEM DESCRIPTION [WITH MOBILE ENTERTAINMENT SYSTEM]

AV-AV-59

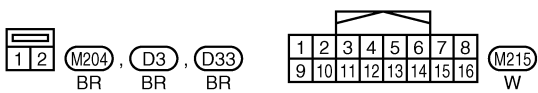
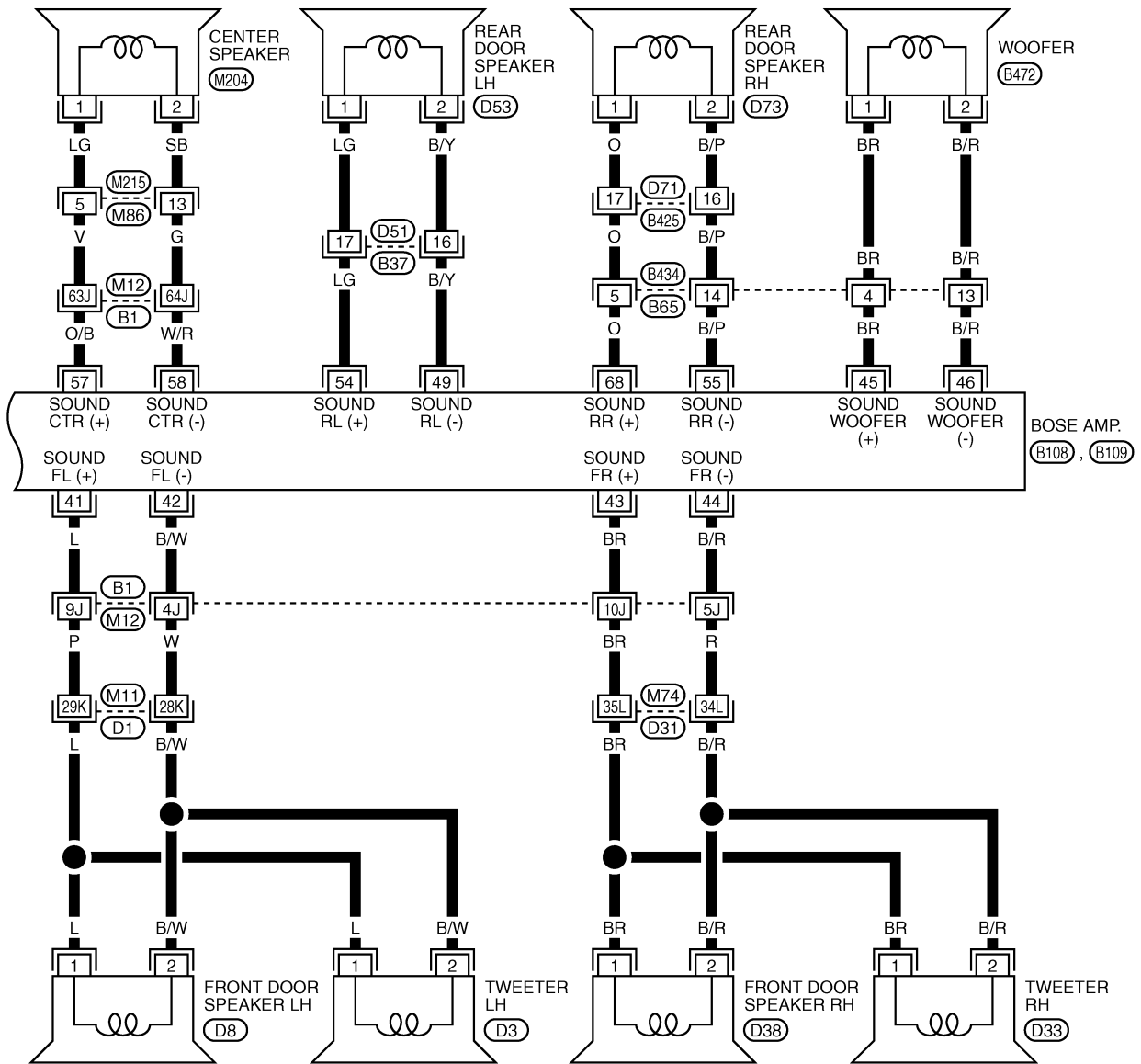


TKWT5139E

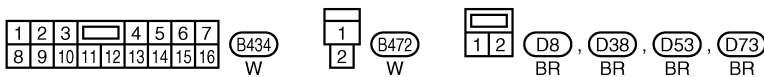
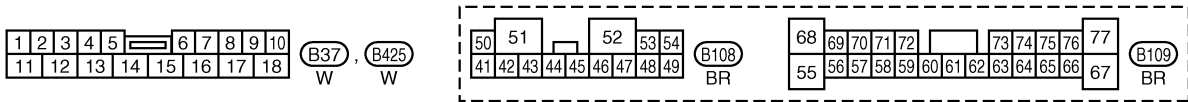
SYSTEM DESCRIPTION [WITH MOBILE ENTERTAINMENT SYSTEM]

AV-AV-60

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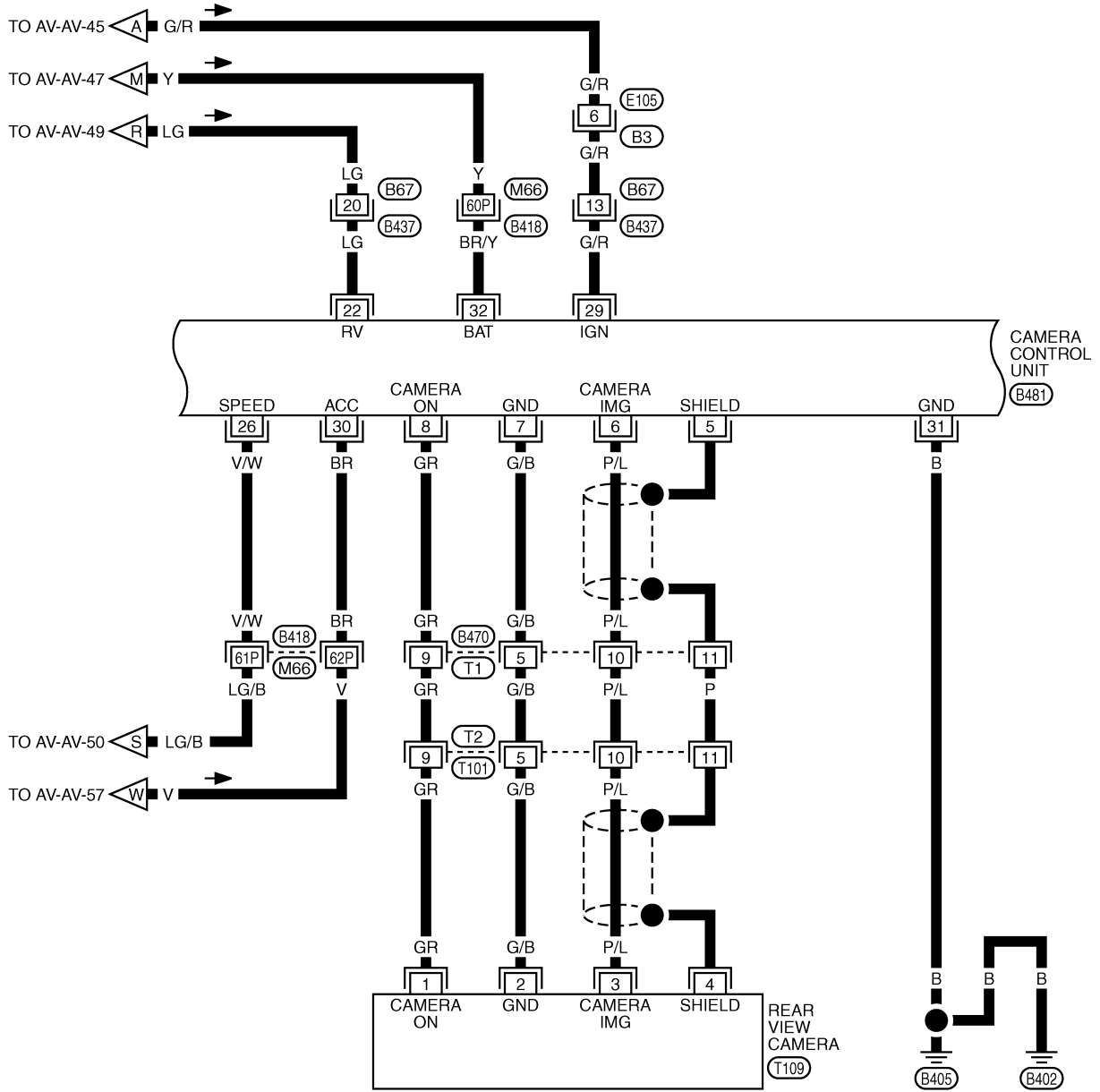
REFER TO THE FOLLOWING.
(B1), (D1), (D31) -SUPER
MULTIPLE JUNCTION (SMJ)



TKWT5327E

SYSTEM DESCRIPTION [WITH MOBILE ENTERTAINMENT SYSTEM]

AV-AV-61



| | | | | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | | |
| 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |

(B3) (B437)
W BR

| | | | | | | |
|---|---|---|---|----|----|----|
| 1 | 2 | 3 | 4 | 5 | | |
| 6 | 7 | 8 | 9 | 10 | 11 | 12 |

(B470) (T2)
W W

| | | | | | | | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|----|----|----|---|---|---|---|
| 32 | 30 | 28 | 26 | 24 | 22 | 20 | 18 | 16 | 14 | 12 | 10 | 8 | 6 | 4 | 2 |
| 31 | 29 | 27 | 25 | 23 | 21 | 19 | 17 | 15 | 13 | 11 | 9 | 7 | 5 | 3 | 1 |

(B481)
W

| | | | |
|---|---|---|---|
| 4 | 3 | 2 | 1 |
|---|---|---|---|

(T109)
W

REFER TO THE FOLLOWING.
(B418) -SUPER MULTIPLE JUNCTION (SMJ)

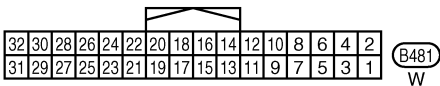
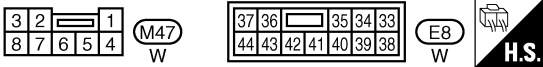
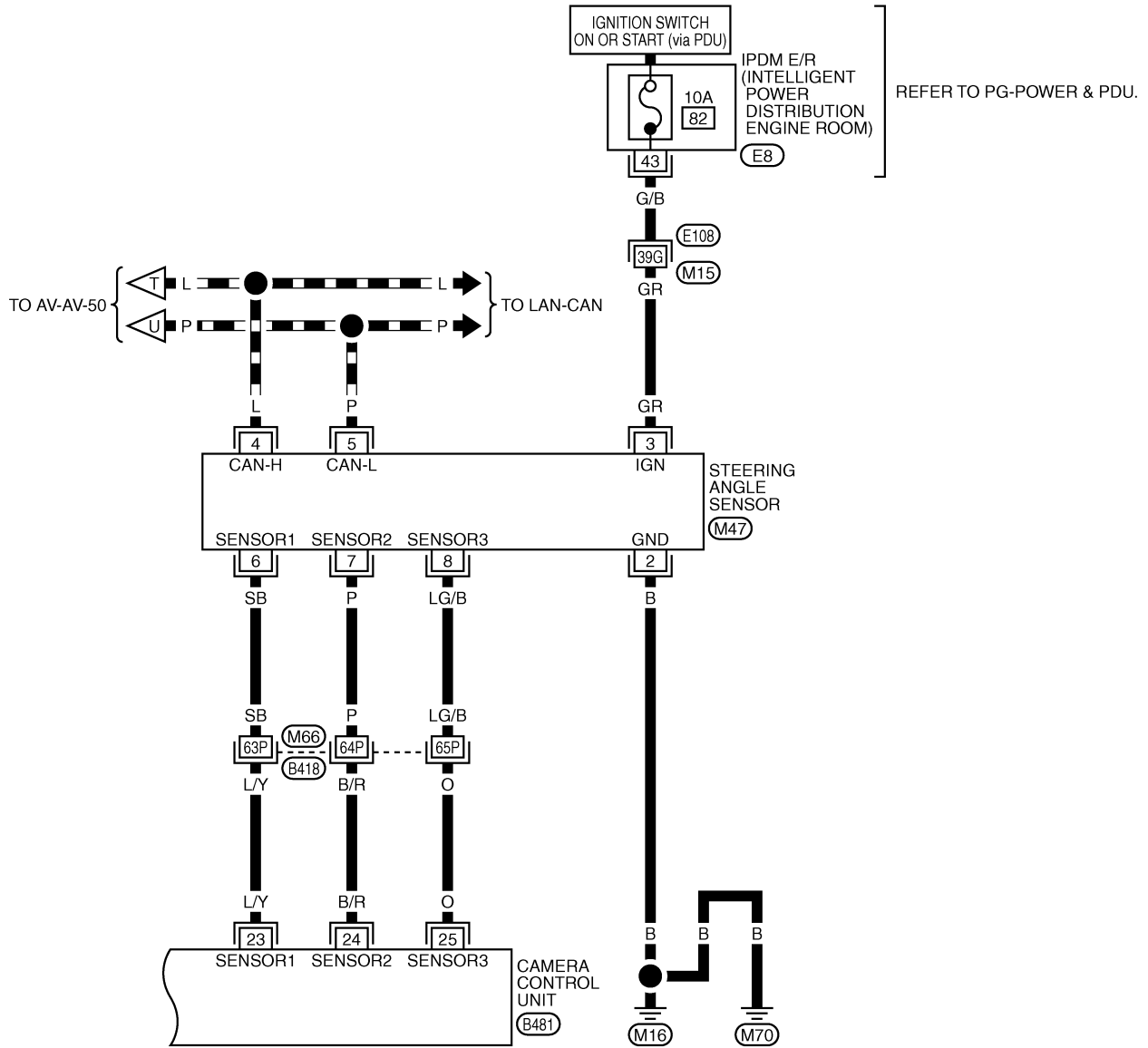
TKWT5140E

SYSTEM DESCRIPTION [WITH MOBILE ENTERTAINMENT SYSTEM]

AV-AV-62

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▬ : DATA LINE



REFER TO THE FOLLOWING.
E108, B418 -SUPER MULTIPLE JUNCTION (SMJ)

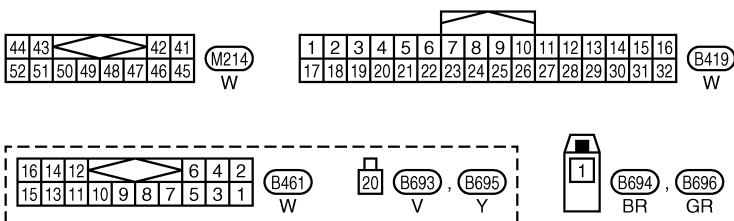
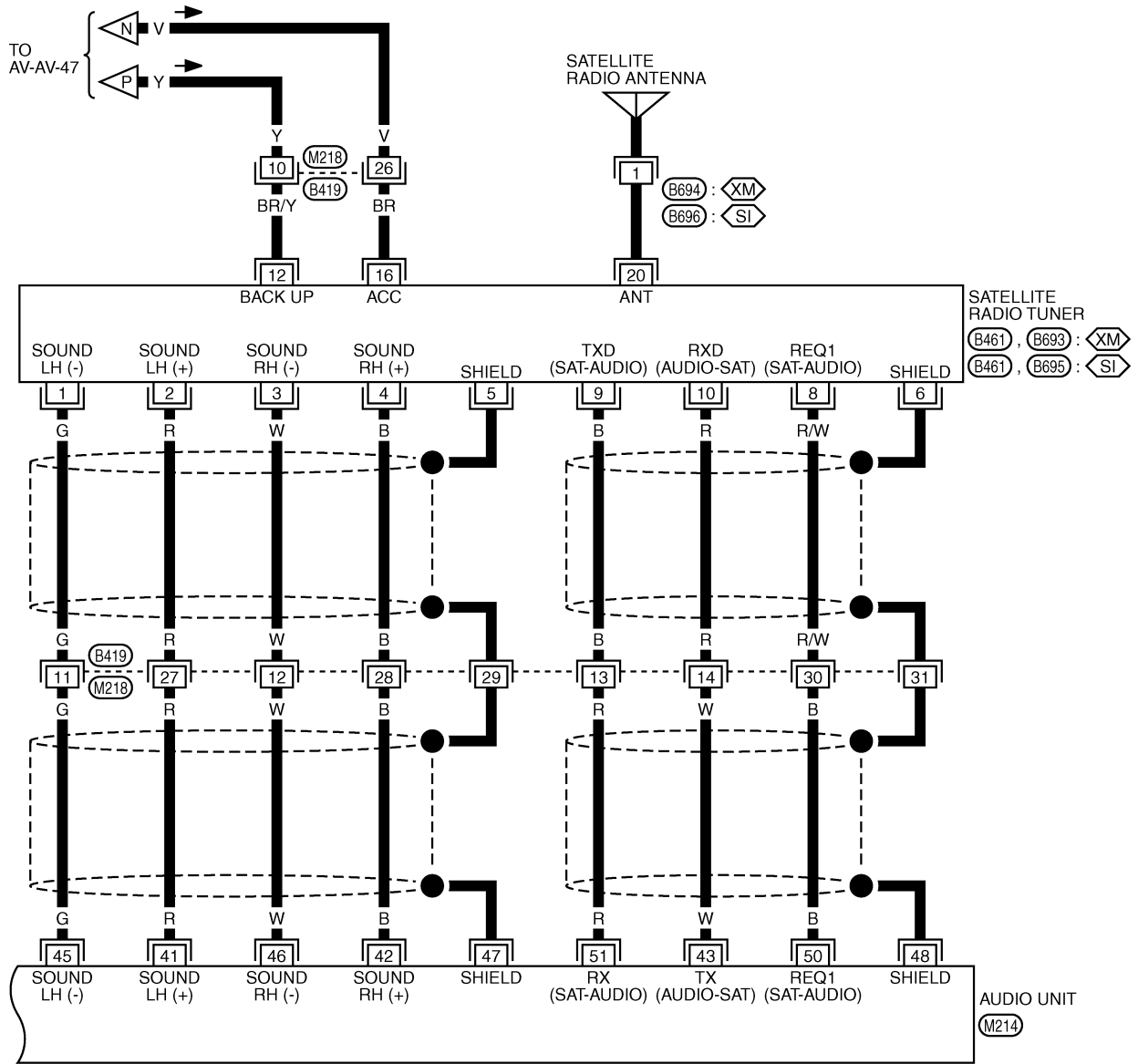
TKWT5328E

SYSTEM DESCRIPTION [WITH MOBILE ENTERTAINMENT SYSTEM]

AV-AV-63

◊XM : WITH SATELLITE RADIO (XM)

◊SI : WITH SATELLITE RADIO (SIRIUS)

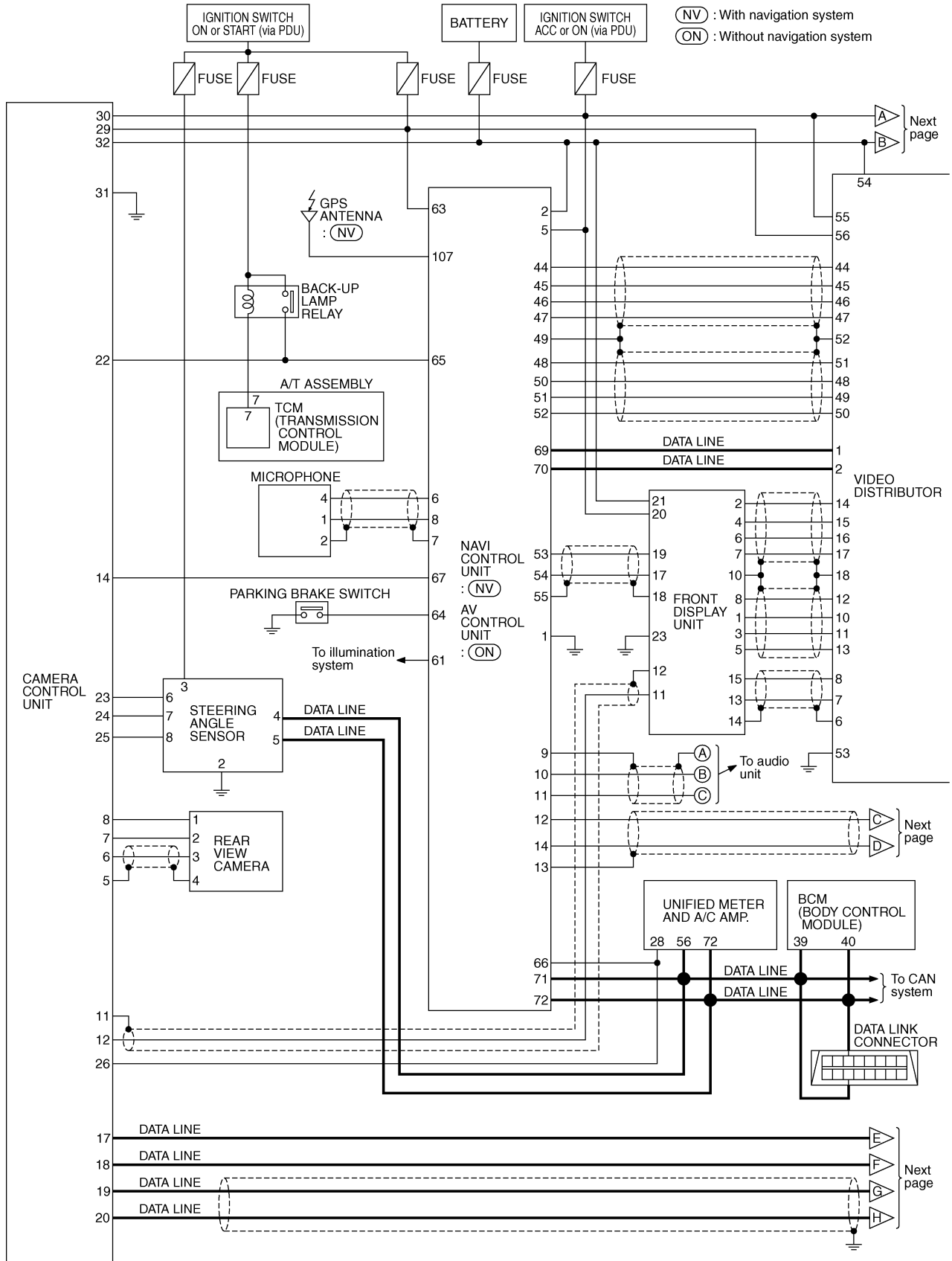


TKWT5141E

SYSTEM DESCRIPTION [WITH MOBILE ENTERTAINMENT SYSTEM]

Schematic — BOSE Surround Audio 5.1ch System —

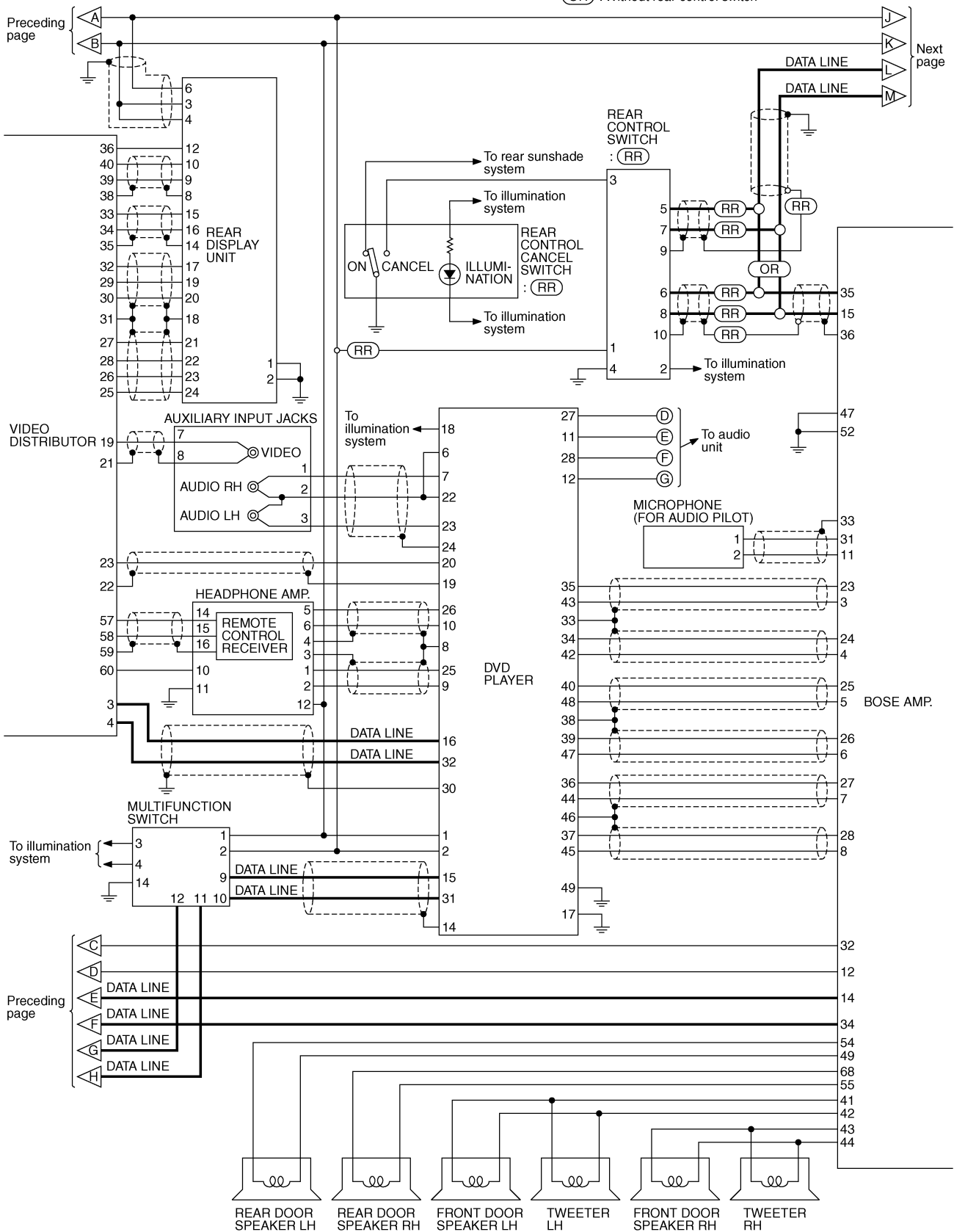
NKS004AH



TKWT3448E

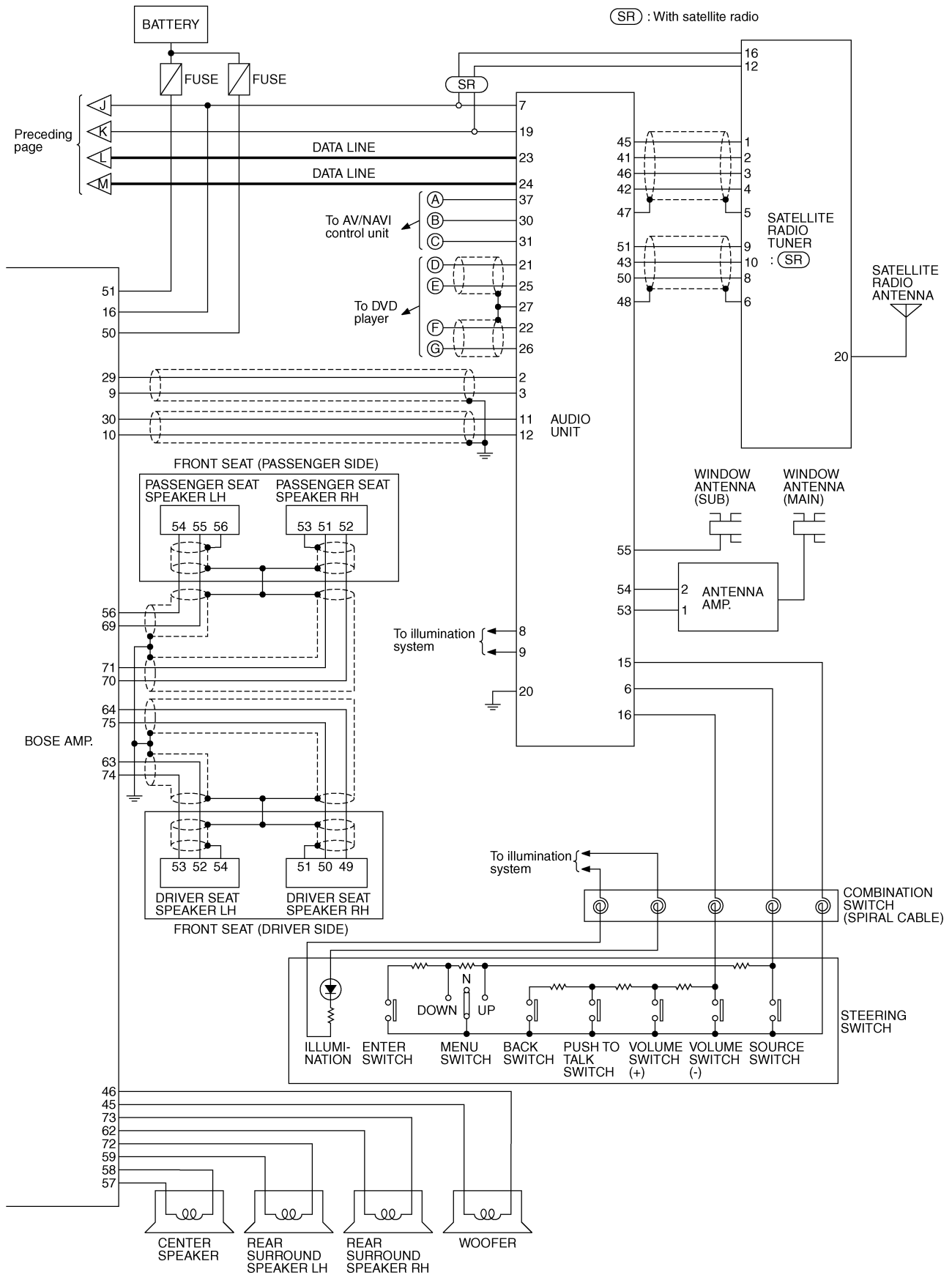
SYSTEM DESCRIPTION [WITH MOBILE ENTERTAINMENT SYSTEM]

(RR) : With rear control switch
(OR) : Without rear control switch



TKWT5142E

SYSTEM DESCRIPTION [WITH MOBILE ENTERTAINMENT SYSTEM]



A
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AV

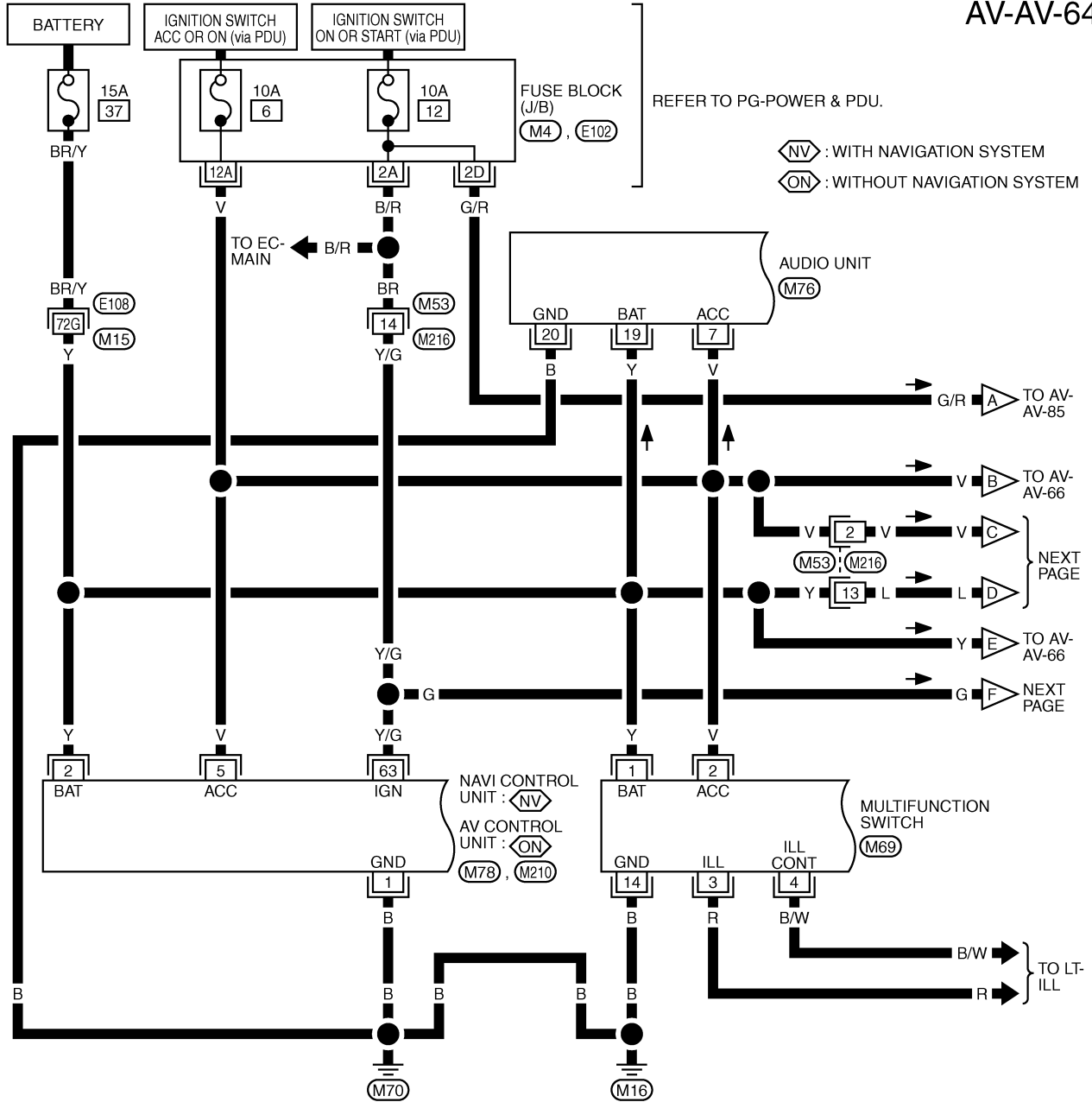
TKWT5143E

SYSTEM DESCRIPTION [WITH MOBILE ENTERTAINMENT SYSTEM]

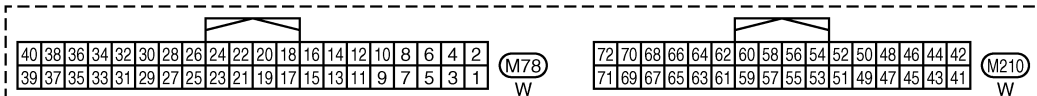
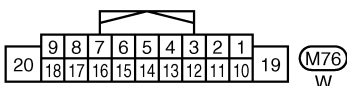
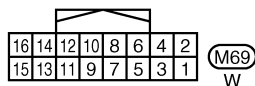
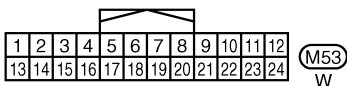
Wiring Diagram — AV — / BOSE Surround Audio 5.1ch System

NKS004AI

AV-AV-64



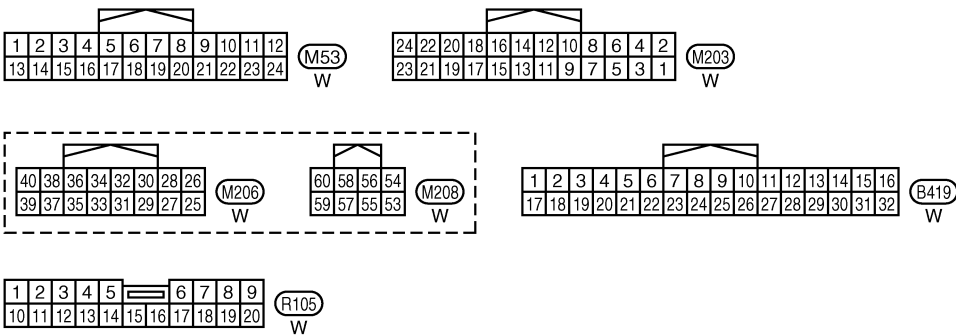
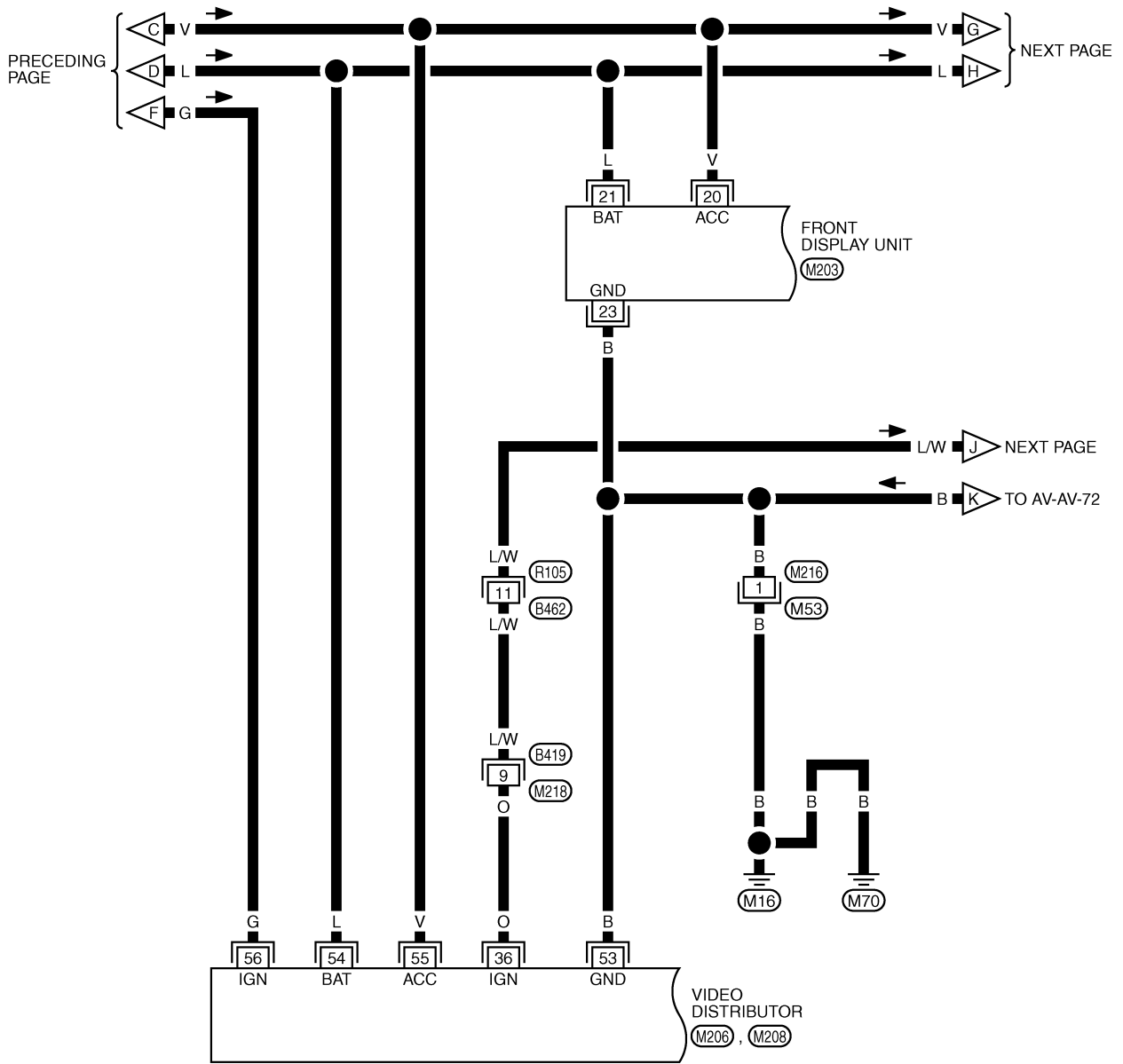
REFER TO PG-POWER & PDU.
 (NV) : WITH NAVIGATION SYSTEM
 (ON) : WITHOUT NAVIGATION SYSTEM



REFER TO THE FOLLOWING.
 (E108) -SUPER MULTIPLE JUNCTION (SMJ)
 (M4), (E102) -FUSE BLOCK-JUNCTION BOX (J/B)

SYSTEM DESCRIPTION [WITH MOBILE ENTERTAINMENT SYSTEM]

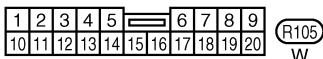
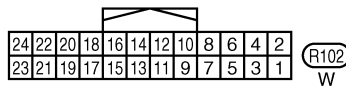
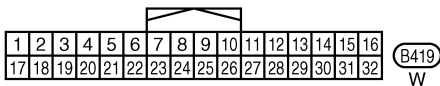
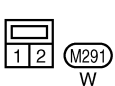
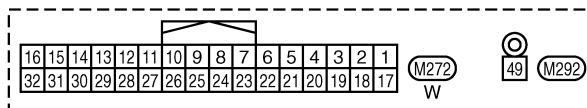
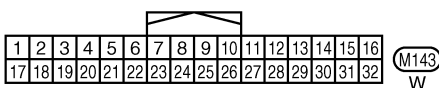
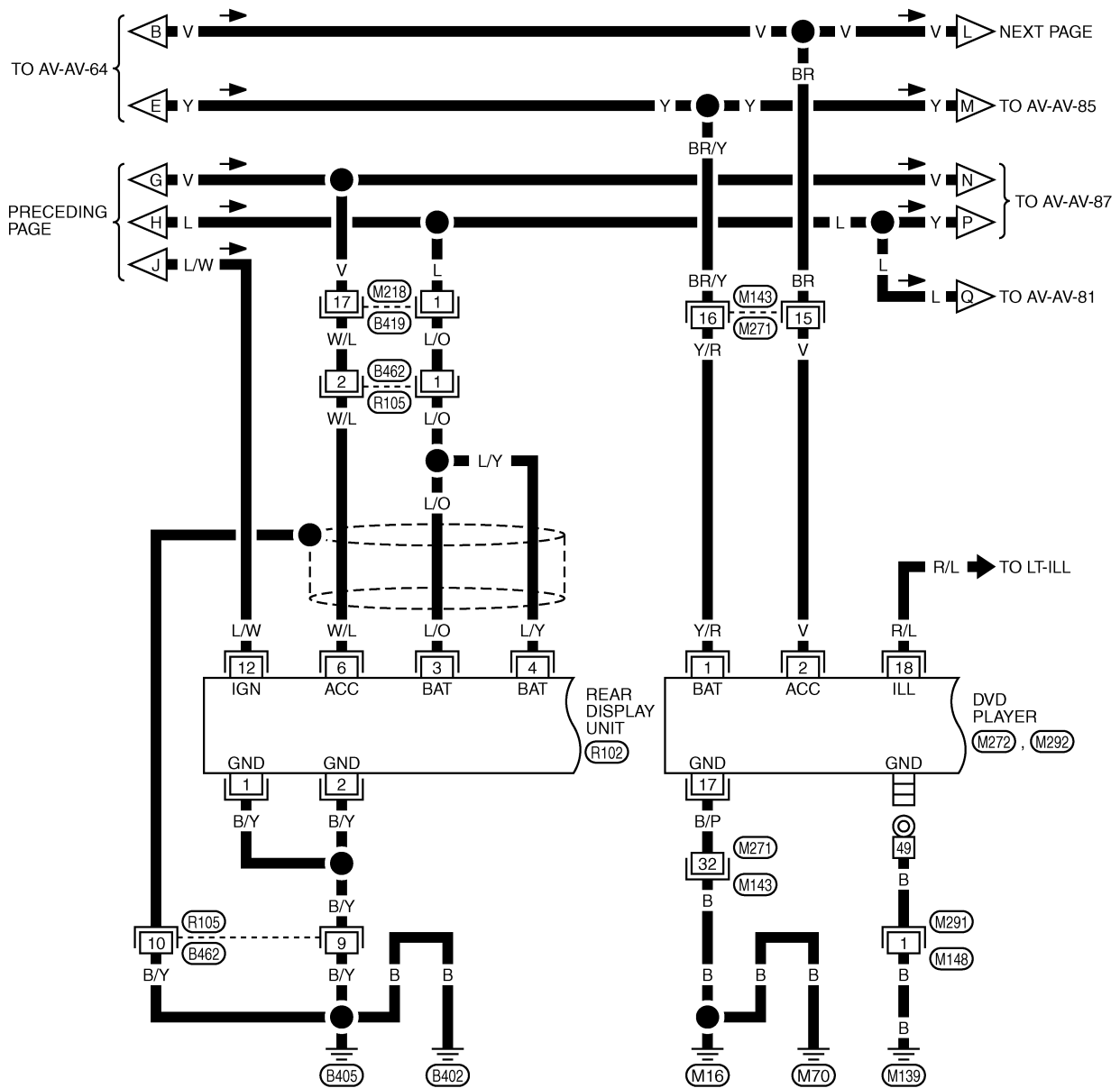
AV-AV-65



TKWT5144E

SYSTEM DESCRIPTION [WITH MOBILE ENTERTAINMENT SYSTEM]

AV-AV-66

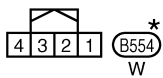
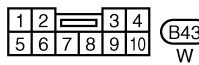
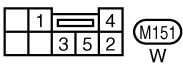
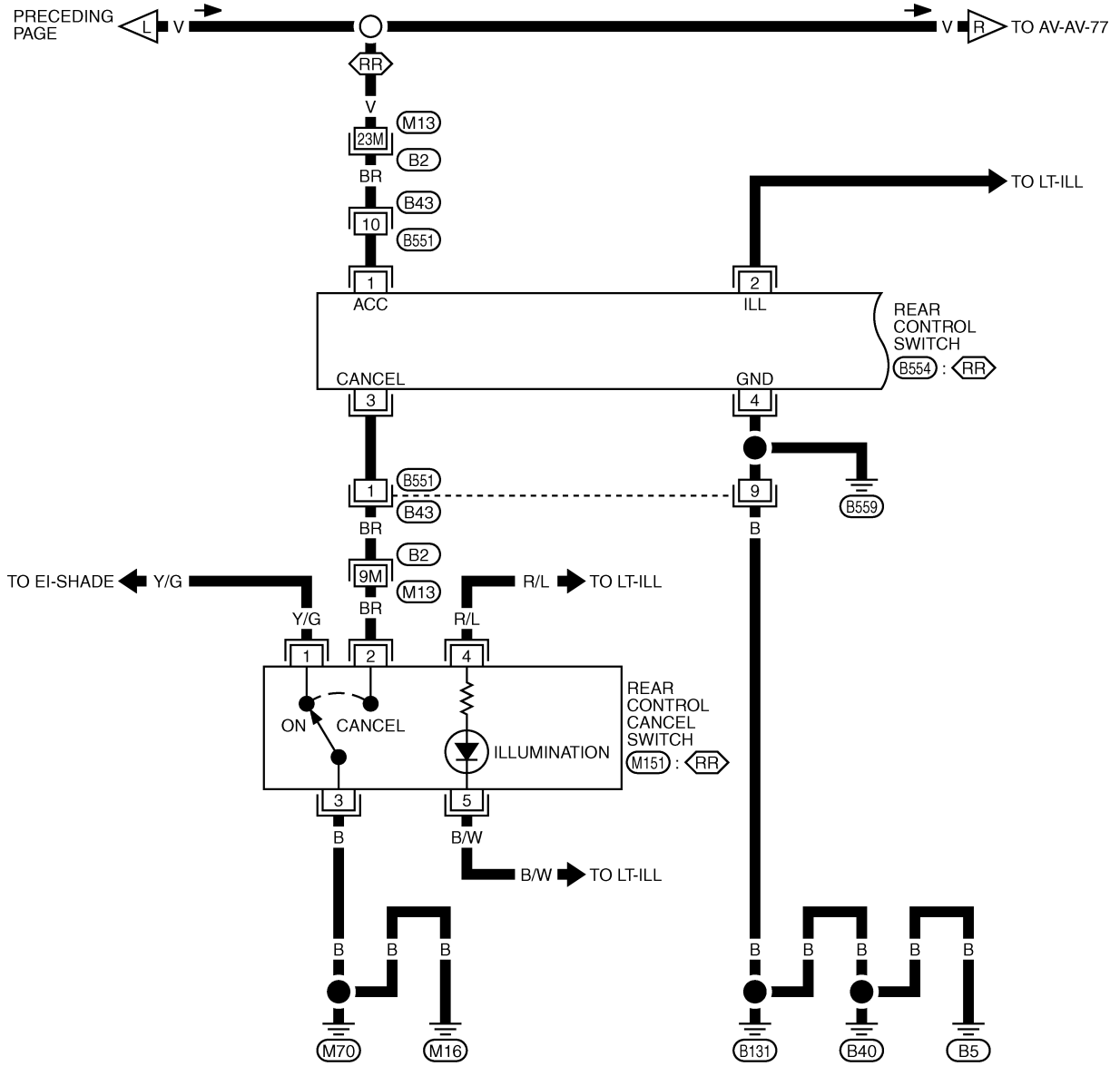


TKWT5145E

SYSTEM DESCRIPTION [WITH MOBILE ENTERTAINMENT SYSTEM]

AV-AV-67

(RR) : WITH REAR CONTROL SWITCH



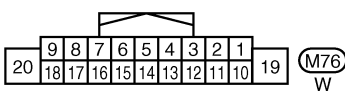
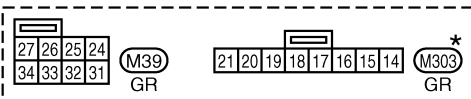
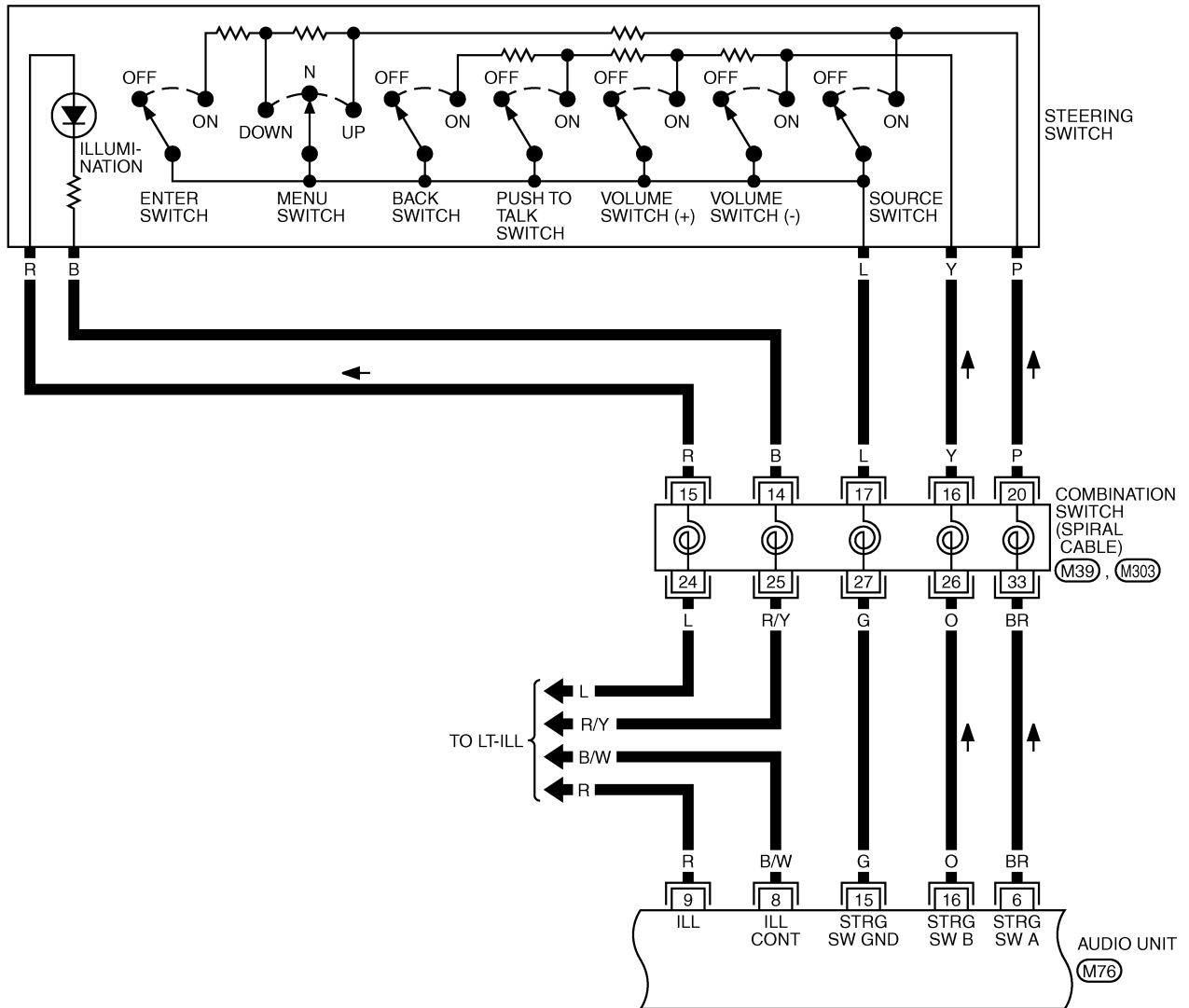
REFER TO THE FOLLOWING.
(B2) -SUPER MULTIPLE JUNCTION (SMJ)

*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

TKWT5146E

SYSTEM DESCRIPTION [WITH MOBILE ENTERTAINMENT SYSTEM]

AV-AV-68

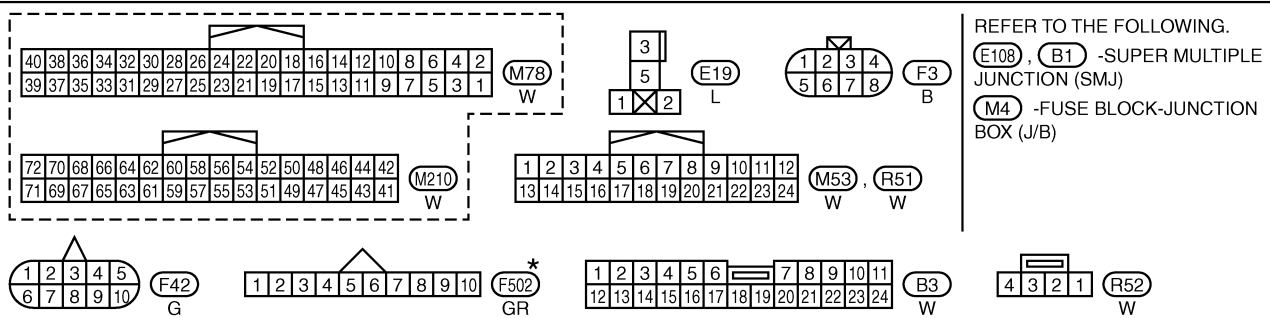
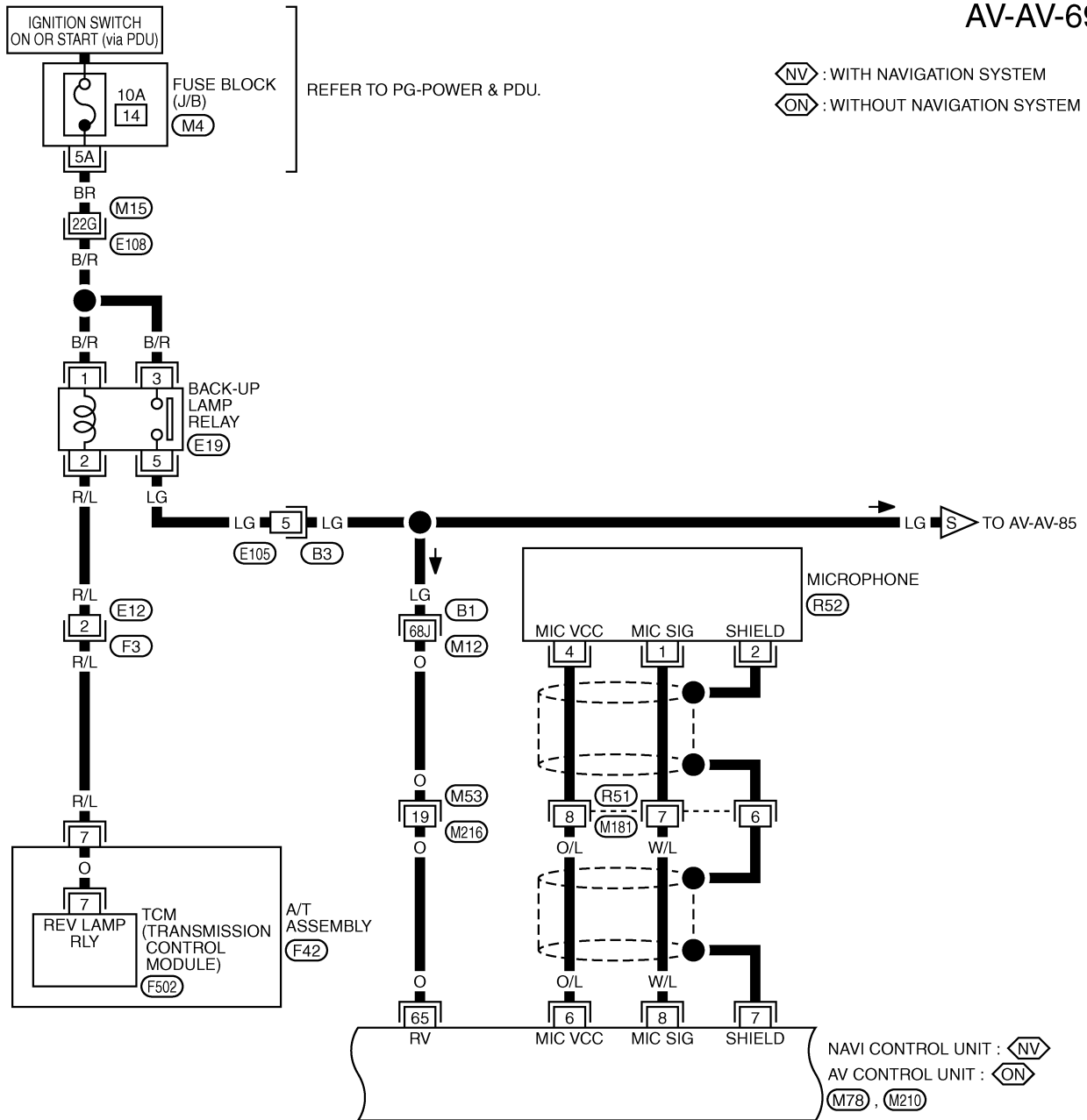


★: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

TKWT5330E

SYSTEM DESCRIPTION [WITH MOBILE ENTERTAINMENT SYSTEM]

AV-AV-69

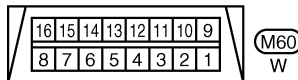
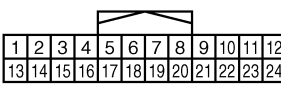
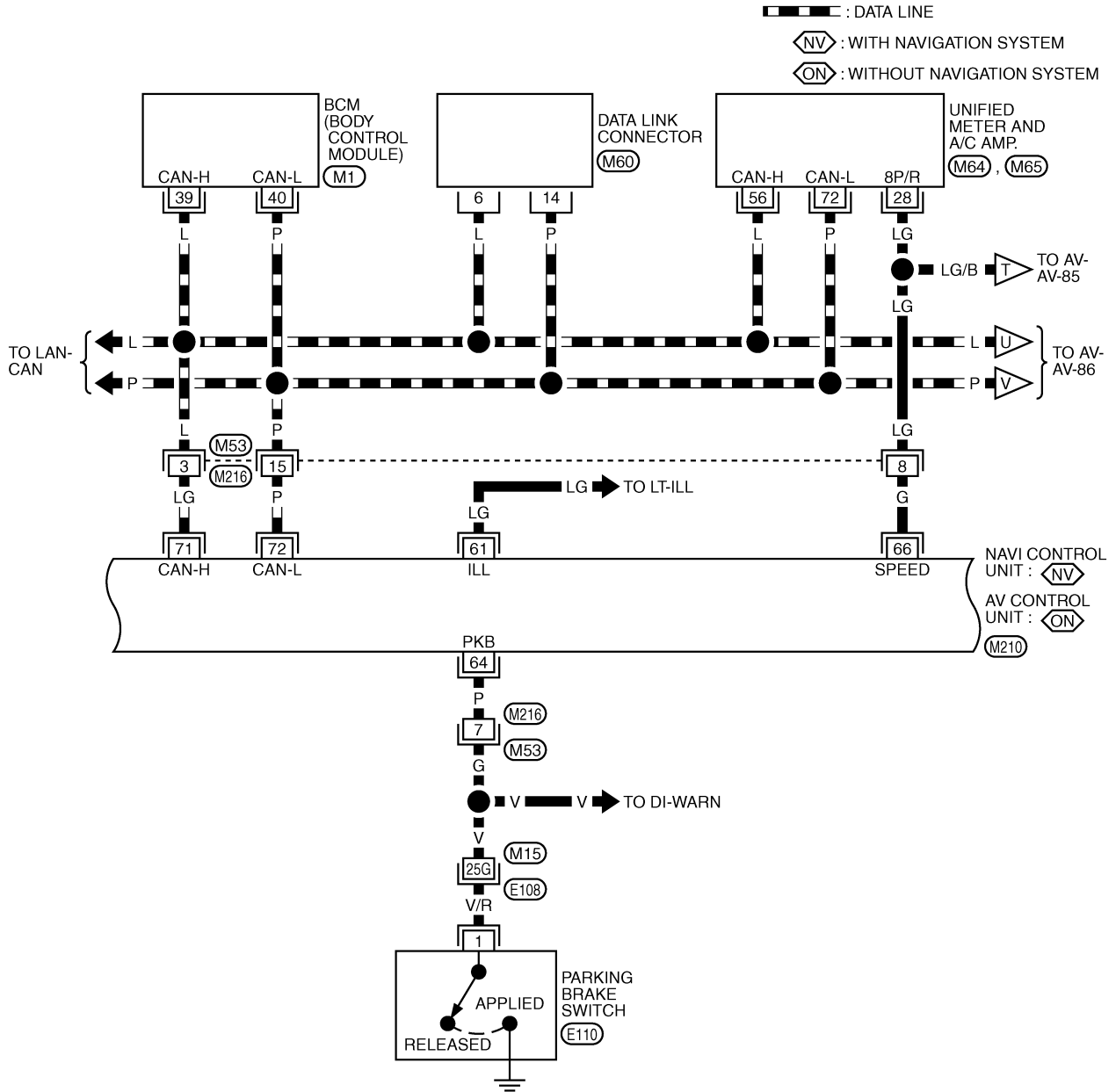


*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

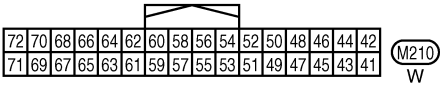
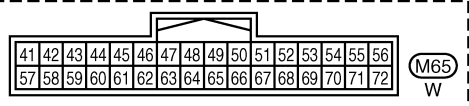
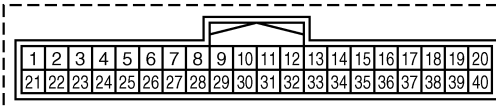
TKWT3456E

SYSTEM DESCRIPTION [WITH MOBILE ENTERTAINMENT SYSTEM]

AV-AV-70



REFER TO THE FOLLOWING.
E108 -SUPER MULTIPLE JUNCTION (SMJ)
M1 -ELECTRICAL UNITS



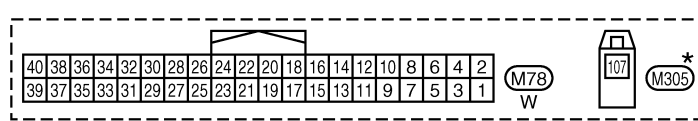
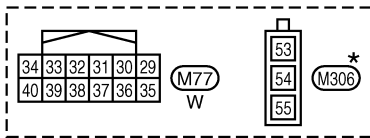
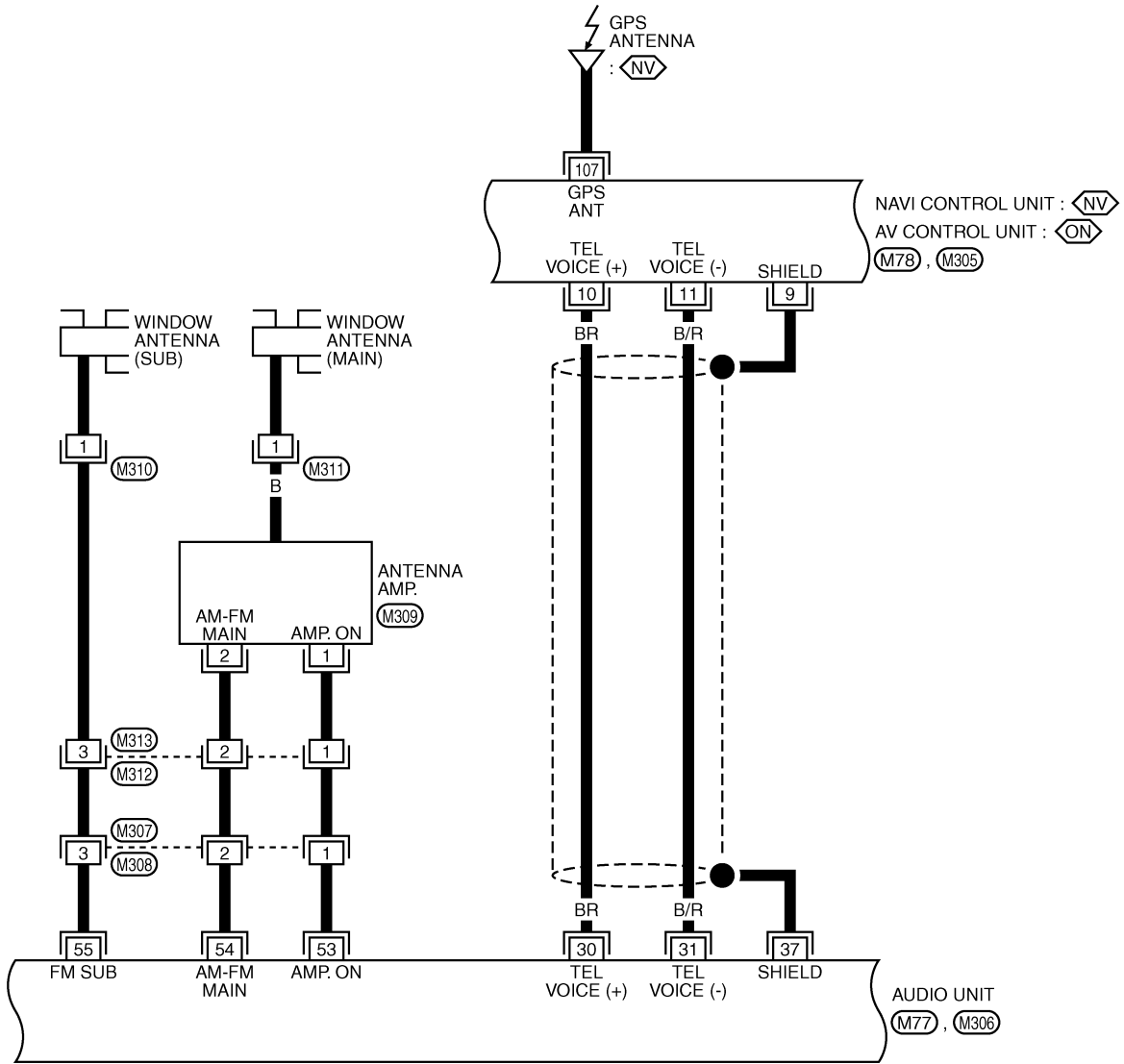
TKWT3457E

SYSTEM DESCRIPTION [WITH MOBILE ENTERTAINMENT SYSTEM]

AV-AV-71

(NV) : WITH NAVIGATION SYSTEM

(ON) : WITHOUT NAVIGATION SYSTEM

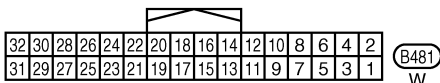
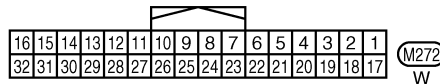
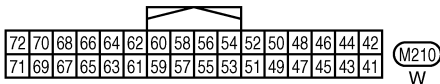
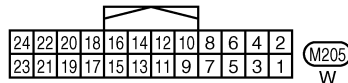
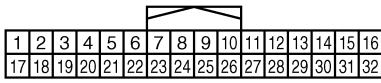
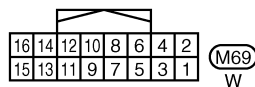
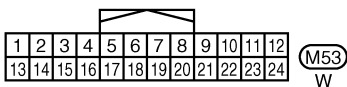
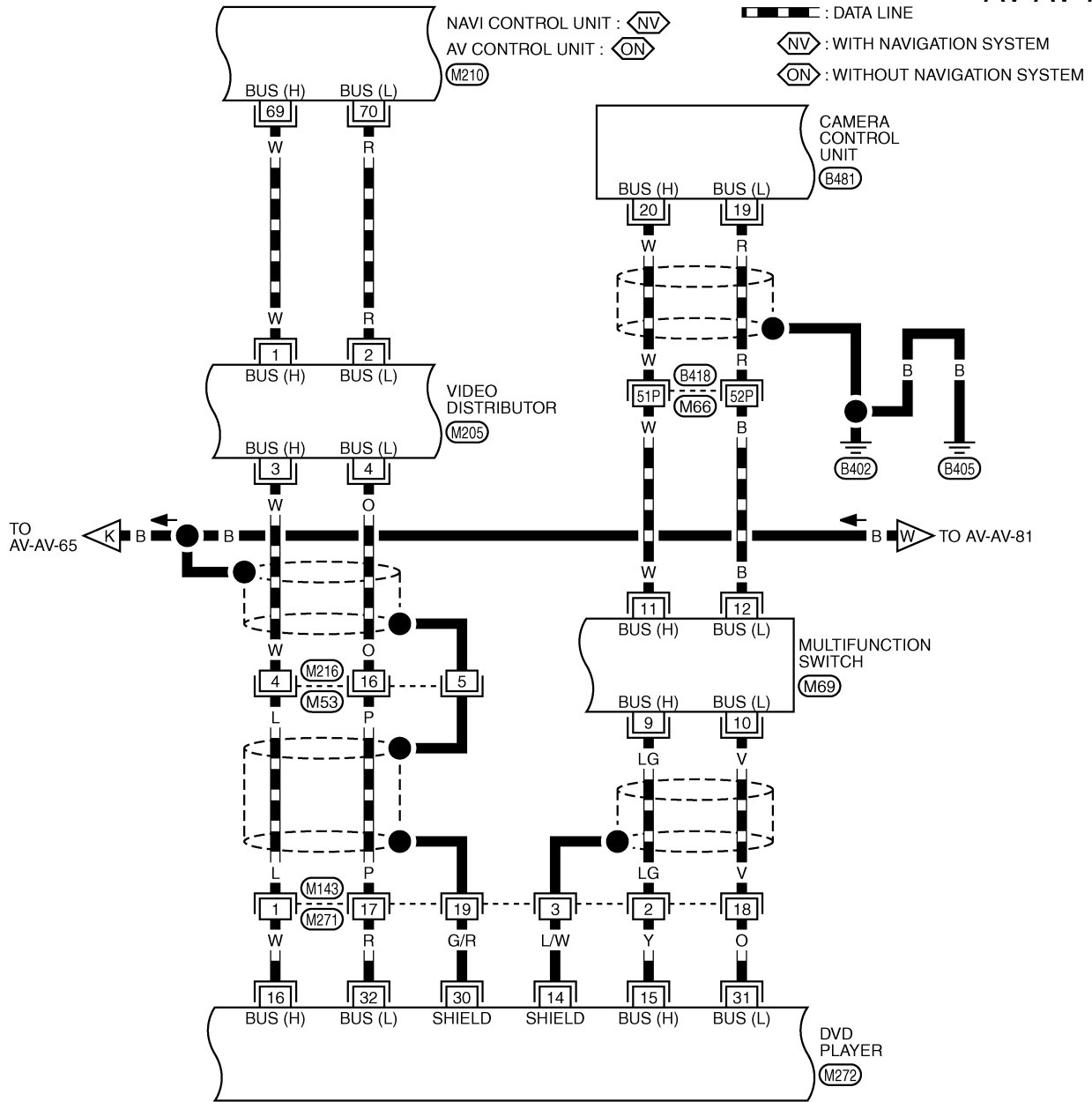


*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

TKWT5147E

SYSTEM DESCRIPTION [WITH MOBILE ENTERTAINMENT SYSTEM]

AV-AV-72



REFER TO THE FOLLOWING.

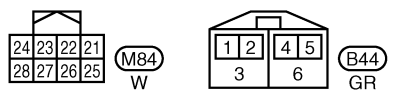
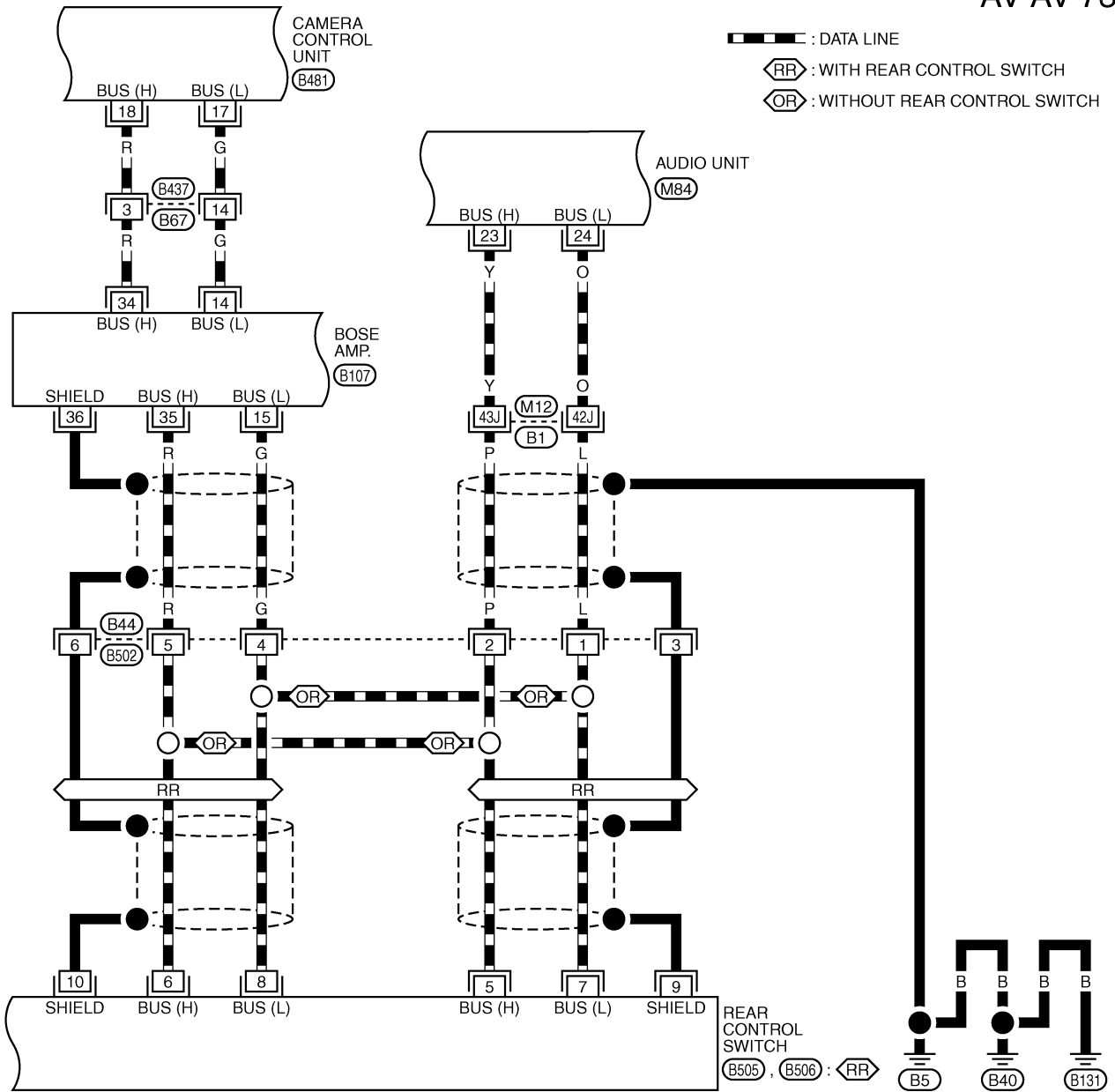
(B418) -SUPER MULTIPLE JUNCTION (SMJ)

TKWT5148E

SYSTEM DESCRIPTION [WITH MOBILE ENTERTAINMENT SYSTEM]

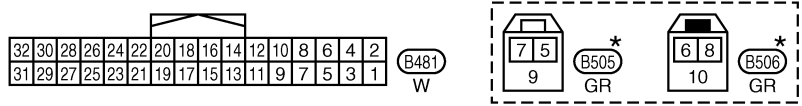
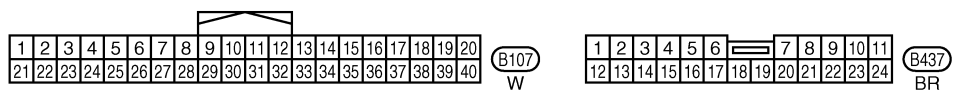
AV-AV-73

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*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

REFER TO THE FOLLOWING.
 (B1) -SUPER MULTIPLE JUNCTION (SMJ)



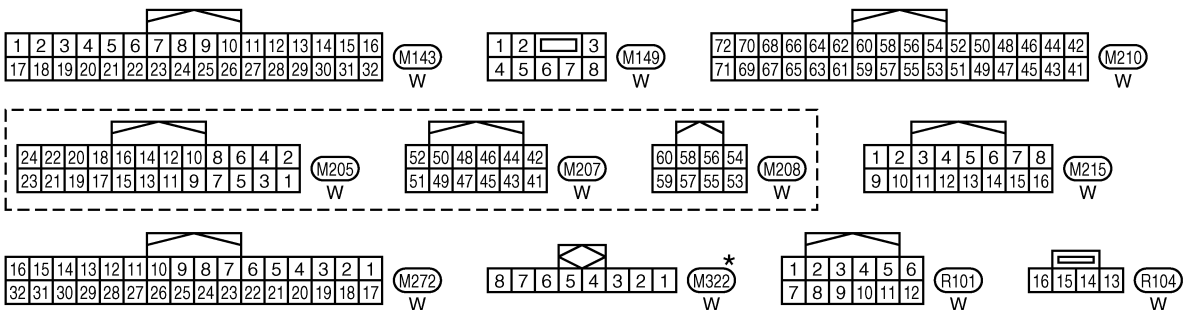
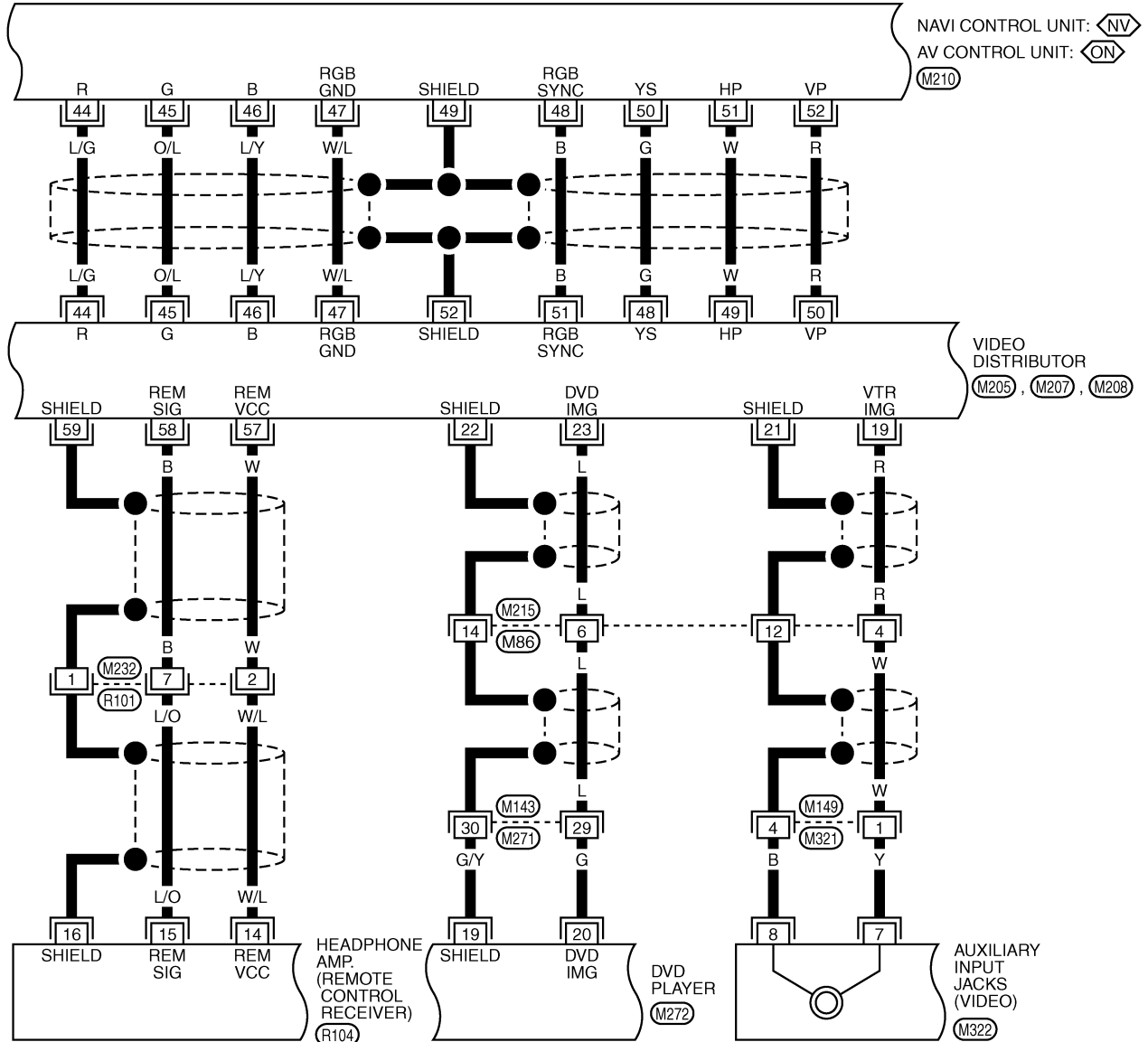
TKWT5149E

SYSTEM DESCRIPTION [WITH MOBILE ENTERTAINMENT SYSTEM]

AV-AV-74

(NV) : WITH NAVIGATION SYSTEM

(ON) : WITHOUT NAVIGATION SYSTEM



*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

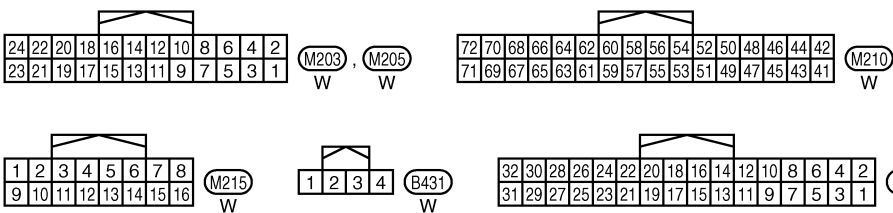
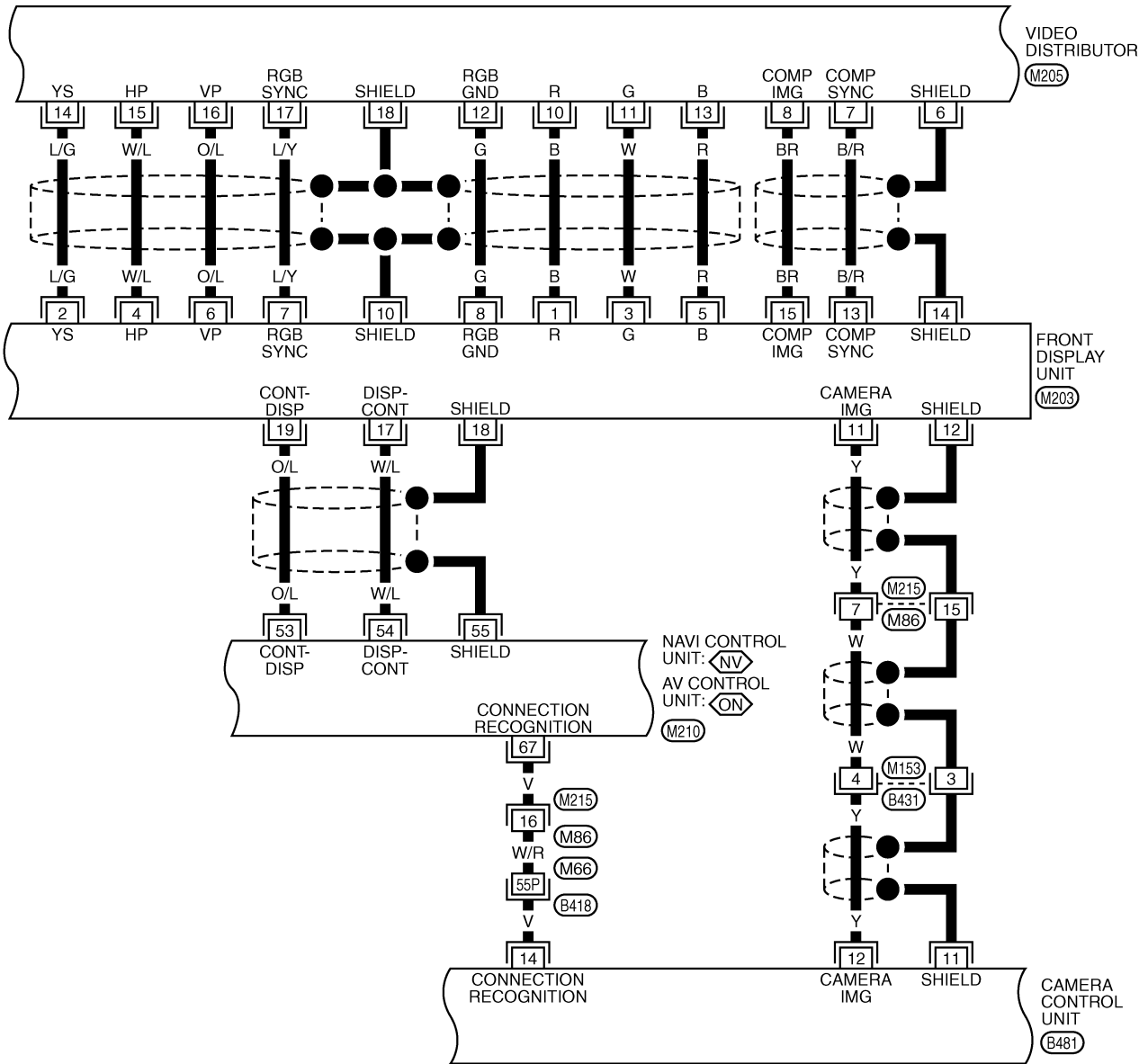
TKWT5150E

SYSTEM DESCRIPTION [WITH MOBILE ENTERTAINMENT SYSTEM]

AV-AV-75

: WITH NAVIGATION SYSTEM

: WITHOUT NAVIGATION SYSTEM

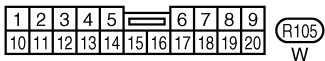
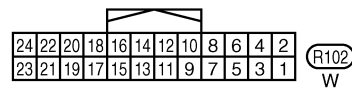
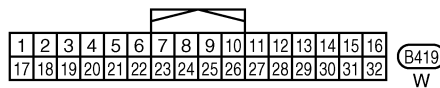
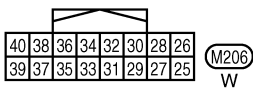
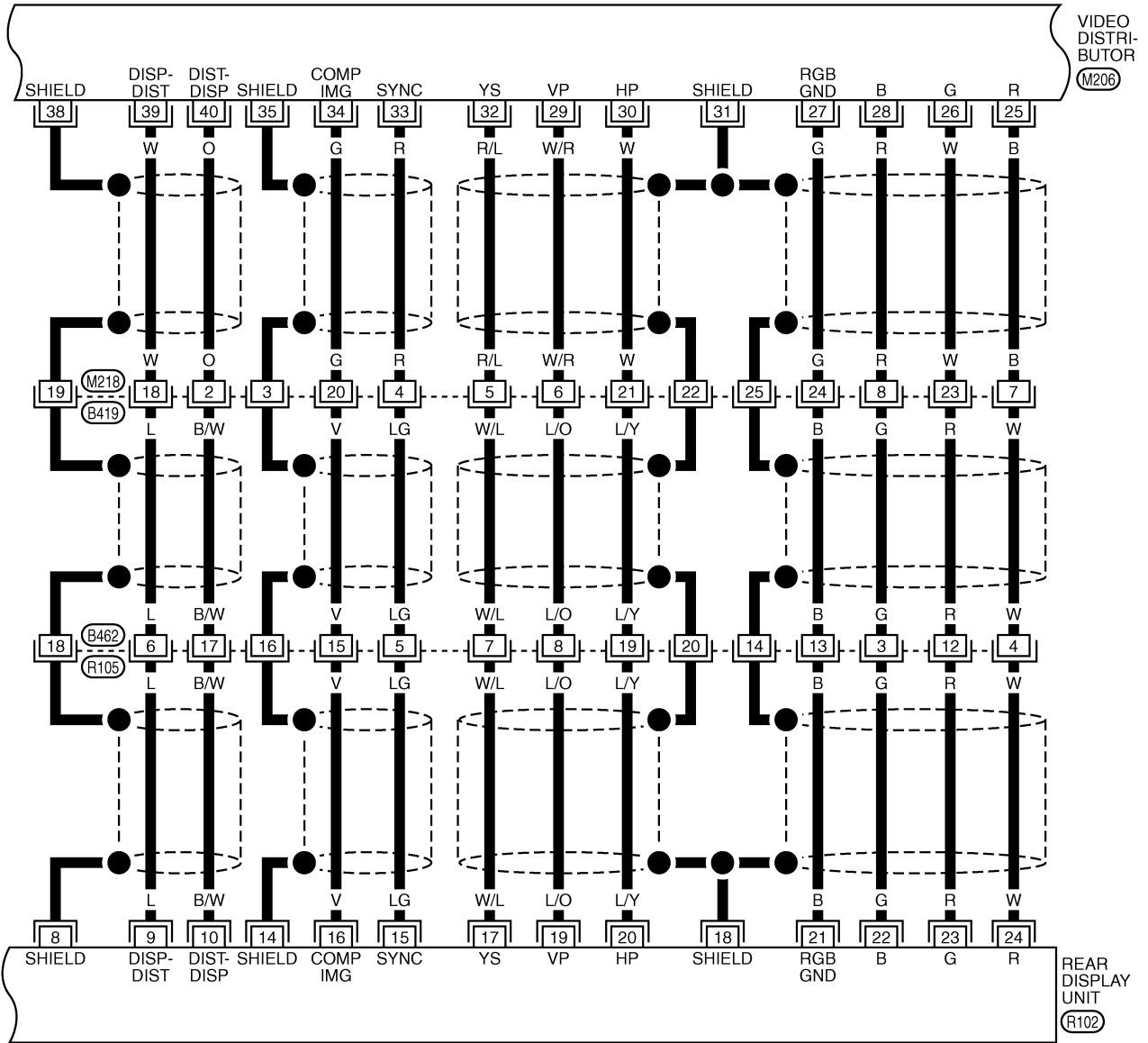


REFER TO THE FOLLOWING.
 -SUPER MULTIPLE JUNCTION (SMJ)

TKWT5151E

SYSTEM DESCRIPTION [WITH MOBILE ENTERTAINMENT SYSTEM]

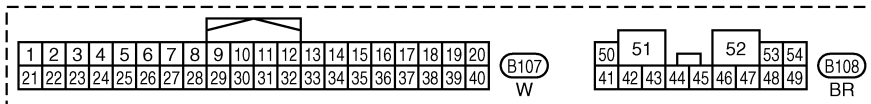
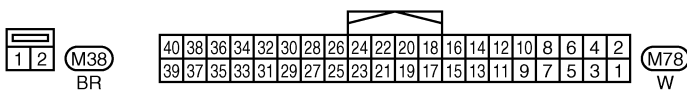
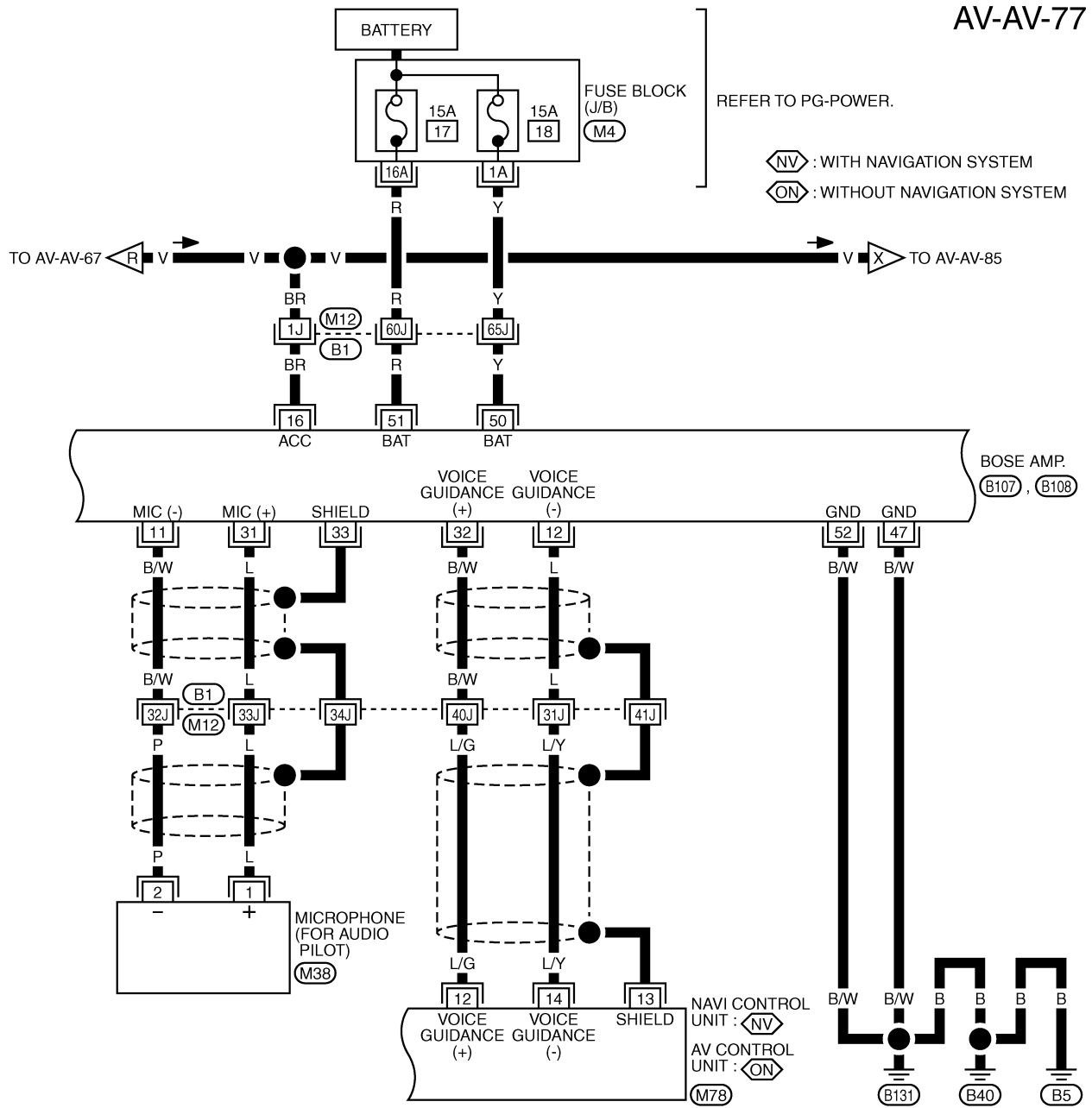
AV-AV-76



TKWT5152E

SYSTEM DESCRIPTION [WITH MOBILE ENTERTAINMENT SYSTEM]

AV-AV-77



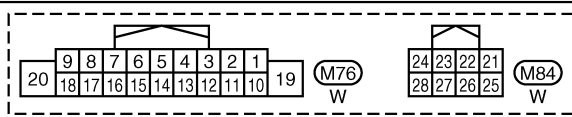
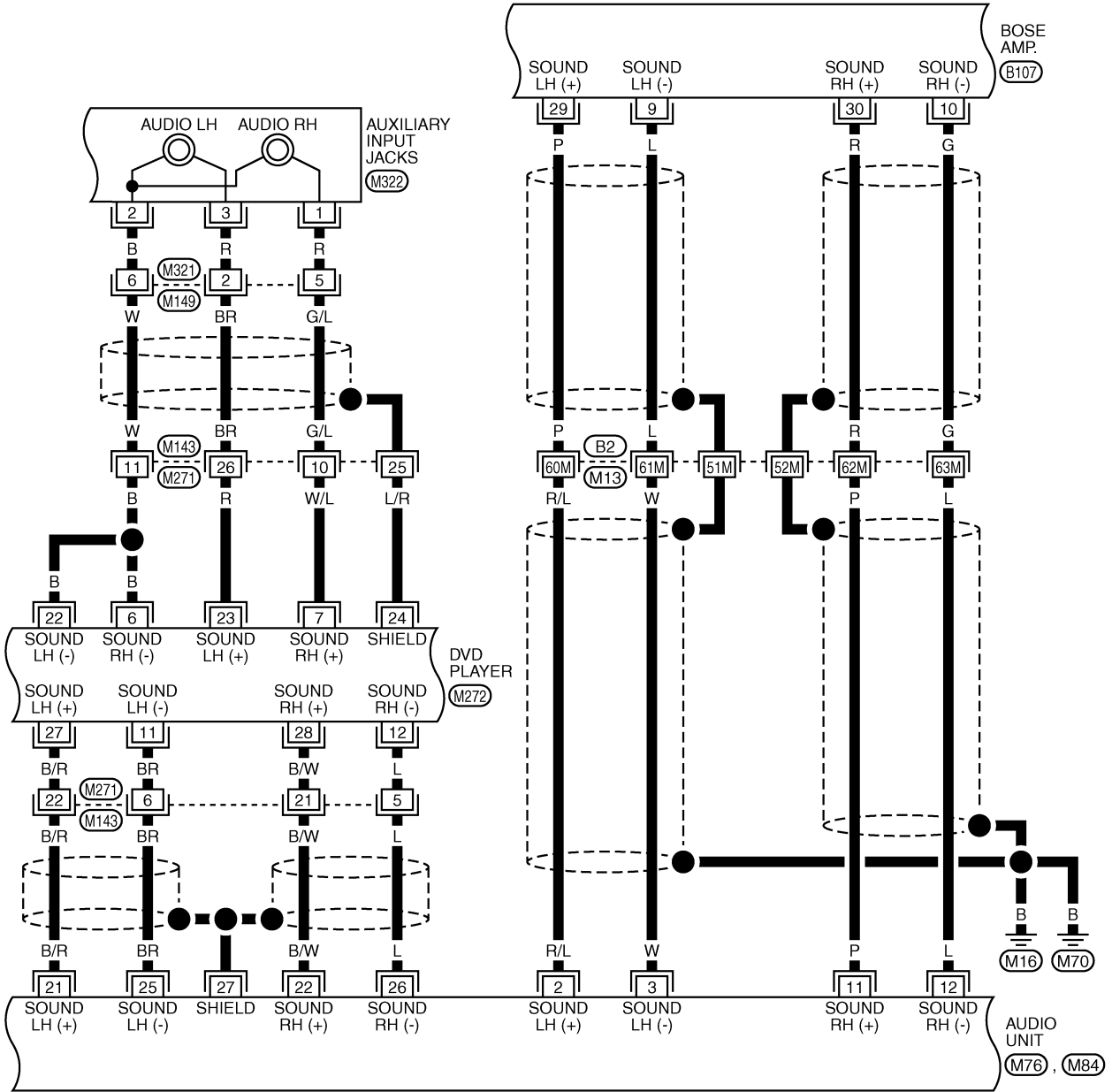
REFER TO THE FOLLOWING.

- (B1) -SUPER MULTIPLE JUNCTION (SMJ)
- (M4) -FUSE BLOCK-JUNCTION BOX (J/B)

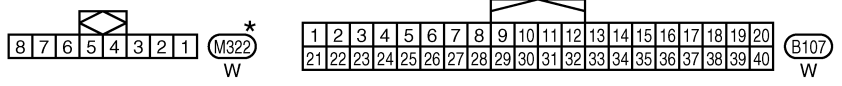
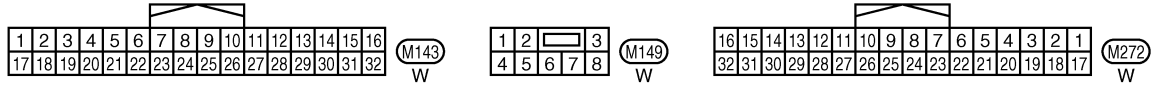
TKWT5153E

SYSTEM DESCRIPTION [WITH MOBILE ENTERTAINMENT SYSTEM]

AV-AV-78



REFER TO THE FOLLOWING.
(B2) -SUPER MULTIPLE JUNCTION (SMJ)

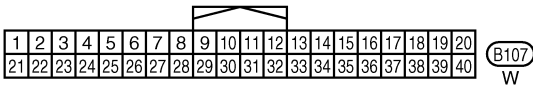
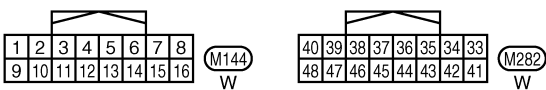
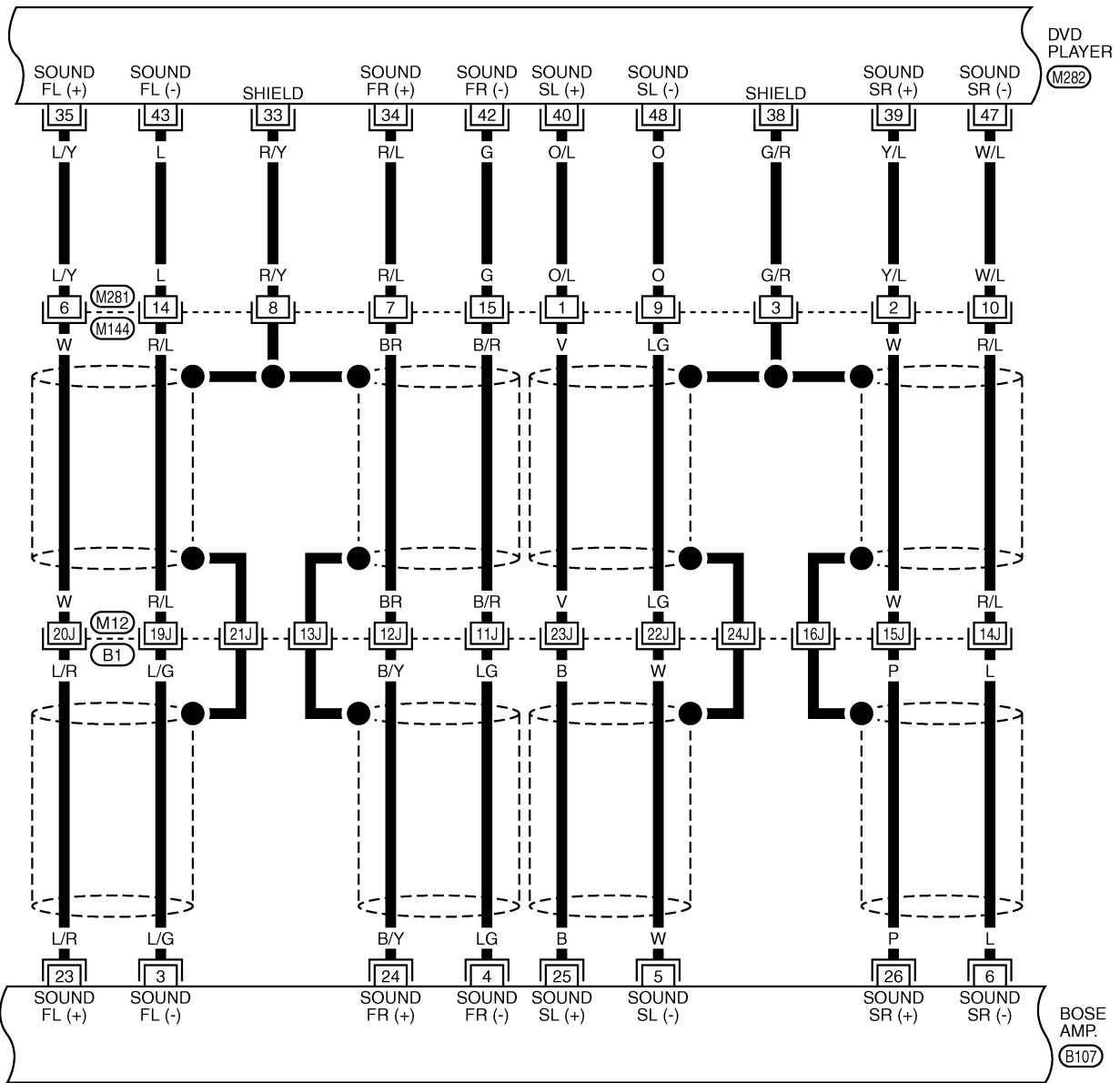


*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

SYSTEM DESCRIPTION [WITH MOBILE ENTERTAINMENT SYSTEM]

AV-AV-79

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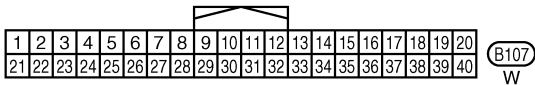
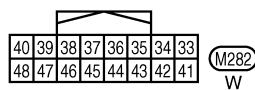
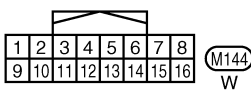
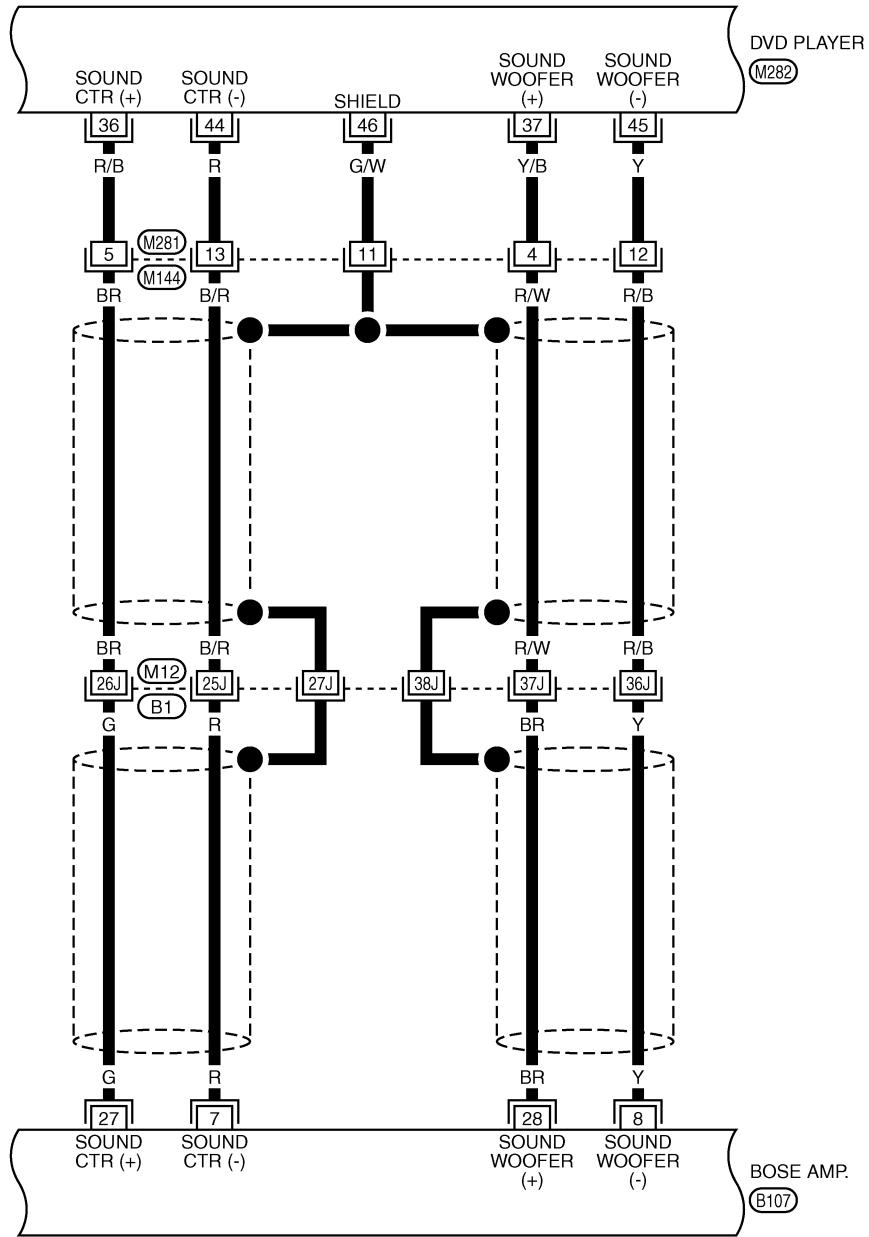


REFER TO THE FOLLOWING.
(B1) -SUPER MULTIPLE JUNCTION (SMJ)

TKWT5155E

SYSTEM DESCRIPTION [WITH MOBILE ENTERTAINMENT SYSTEM]

AV-AV-80



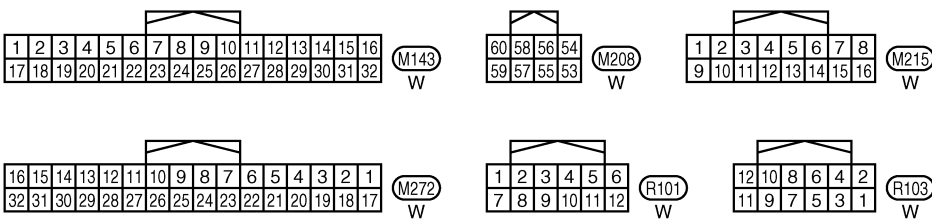
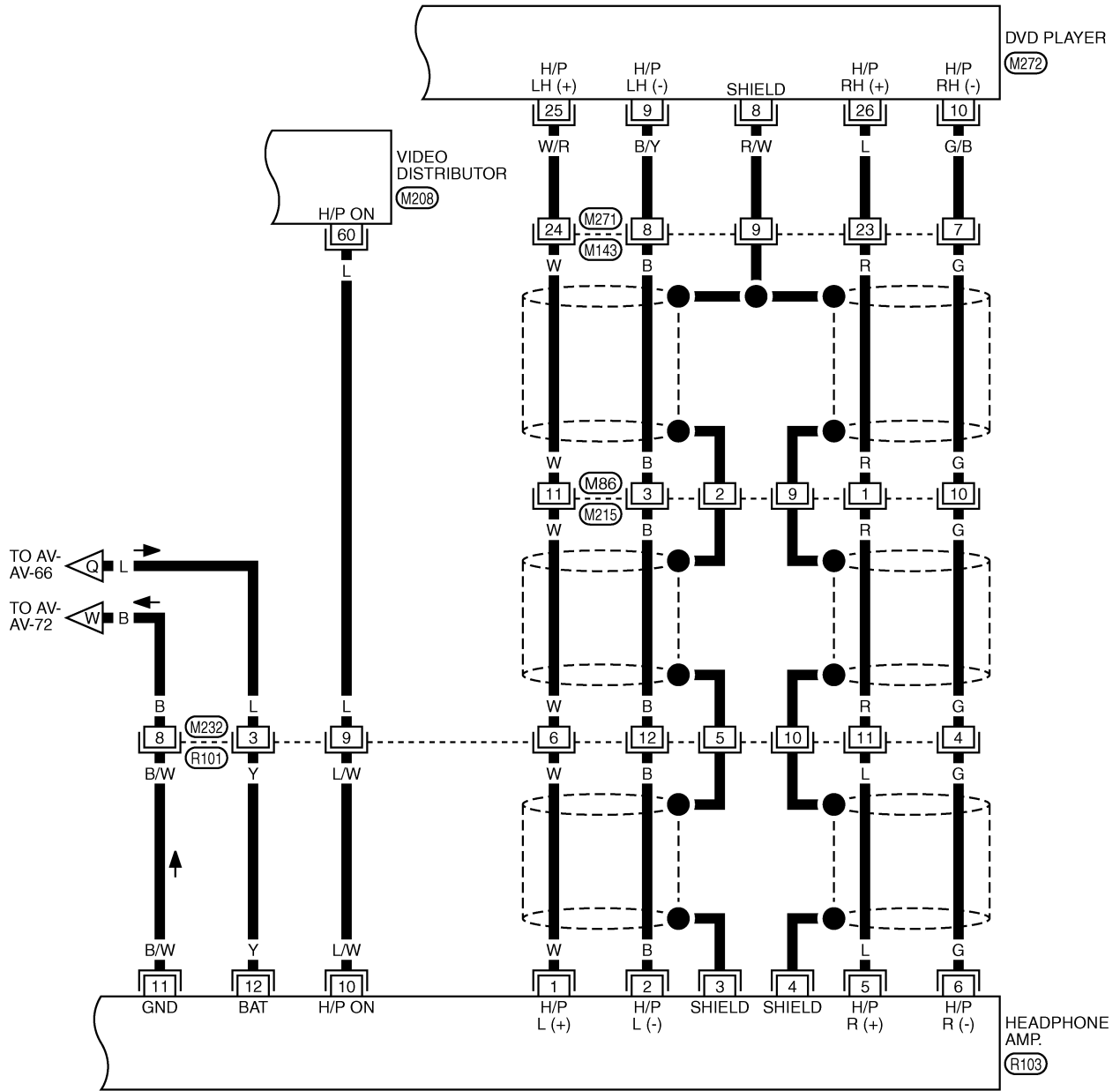
REFER TO THE FOLLOWING.

(B1) -SUPER MULTIPLE JUNCTION (SMJ)

TKWT5156E

SYSTEM DESCRIPTION [WITH MOBILE ENTERTAINMENT SYSTEM]

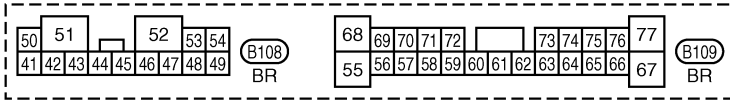
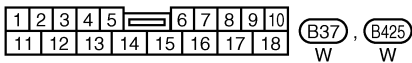
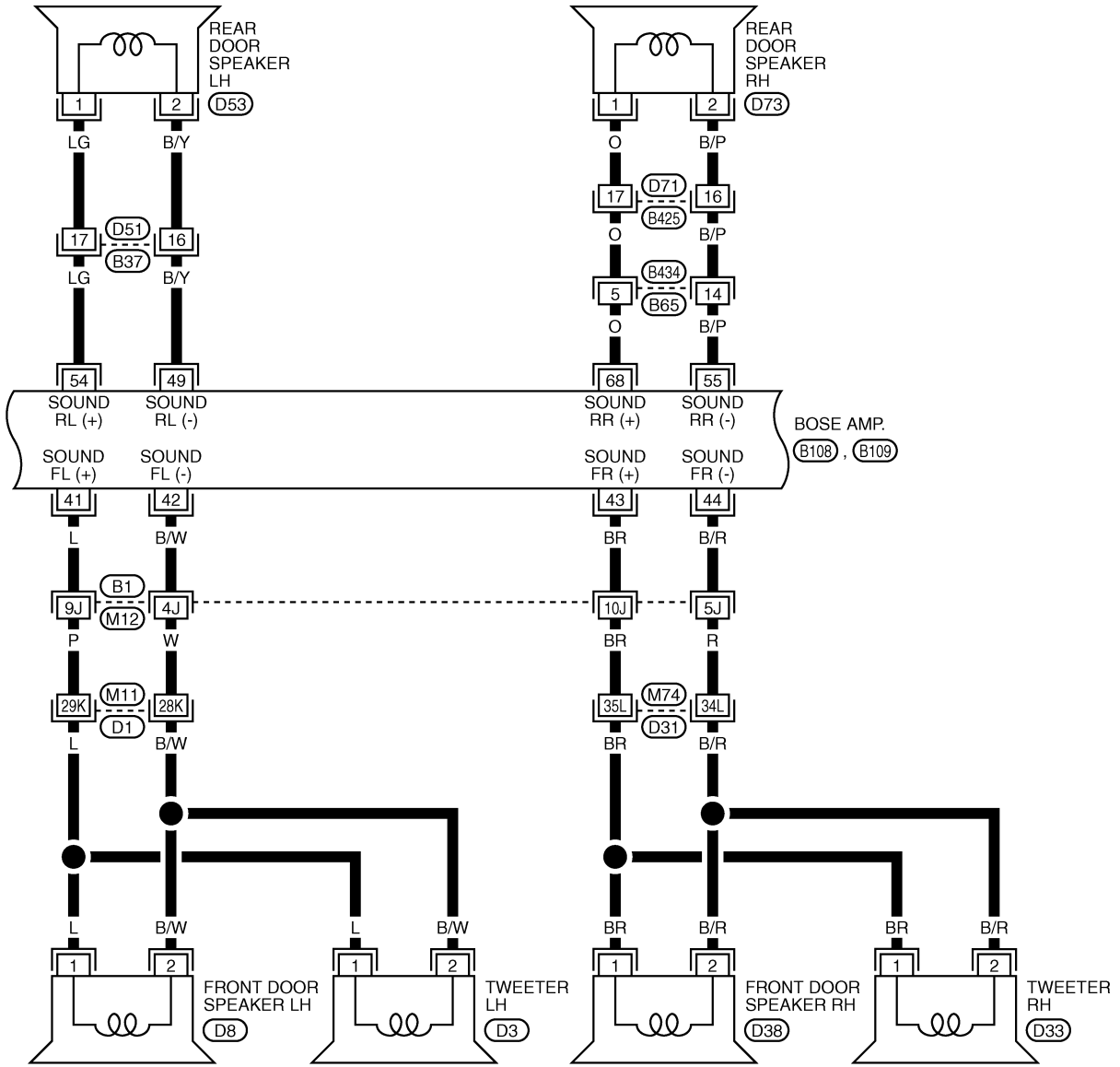
AV-AV-81



TKWT5157E

SYSTEM DESCRIPTION [WITH MOBILE ENTERTAINMENT SYSTEM]

AV-AV-82

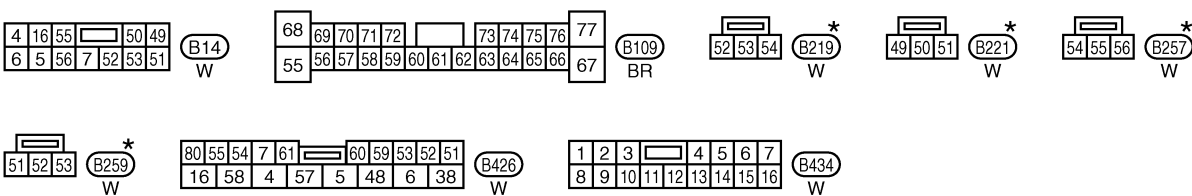
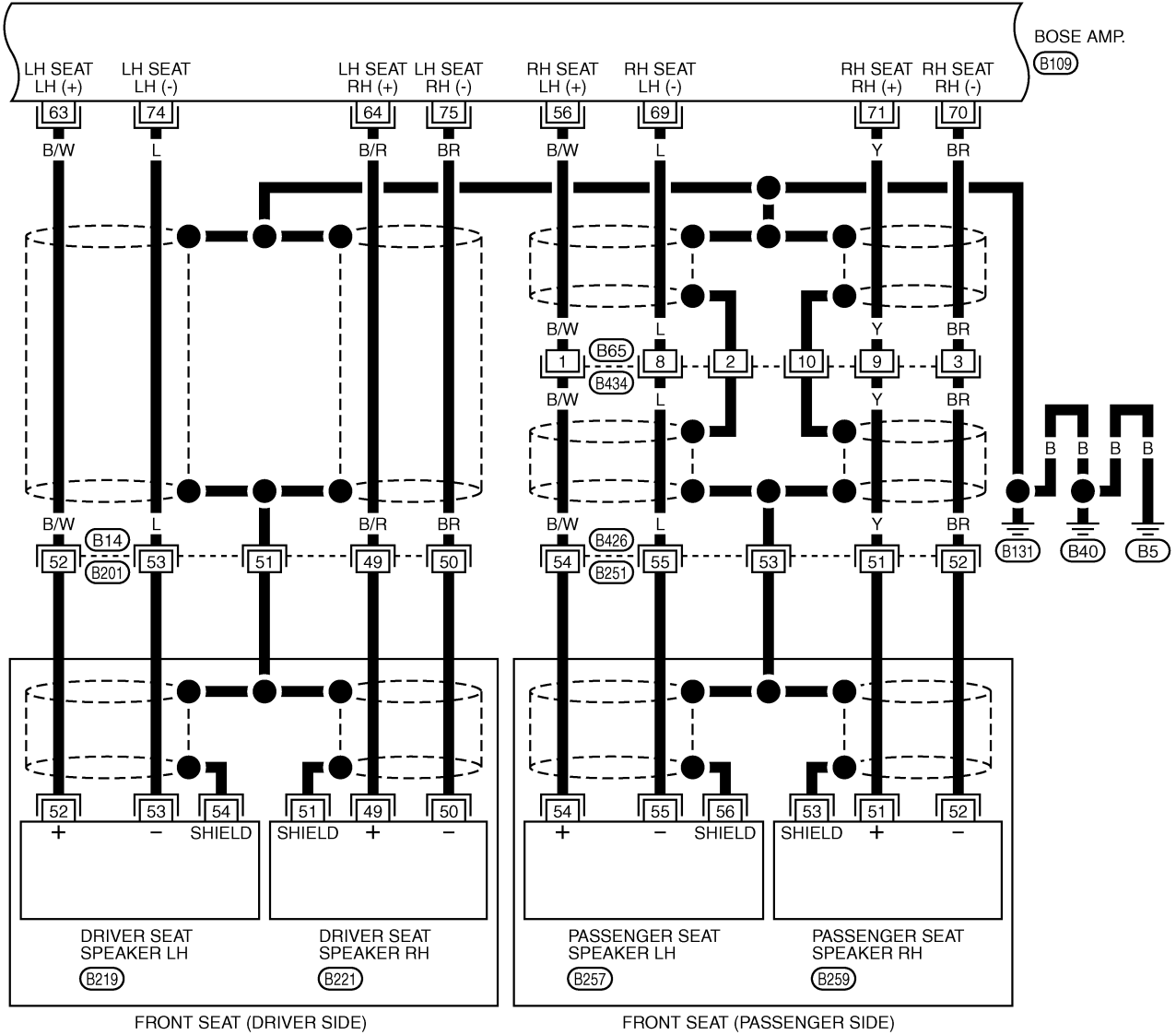


REFER TO THE FOLLOWING.
(B1), (D1), (D31) -SUPER
MULTIPLE JUNCTION (SMJ)

TKWT5331E

SYSTEM DESCRIPTION [WITH MOBILE ENTERTAINMENT SYSTEM]

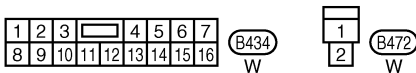
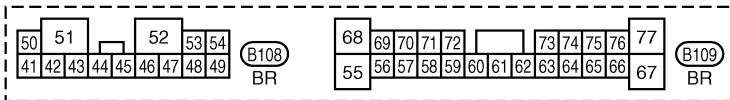
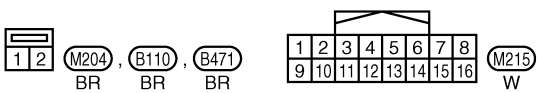
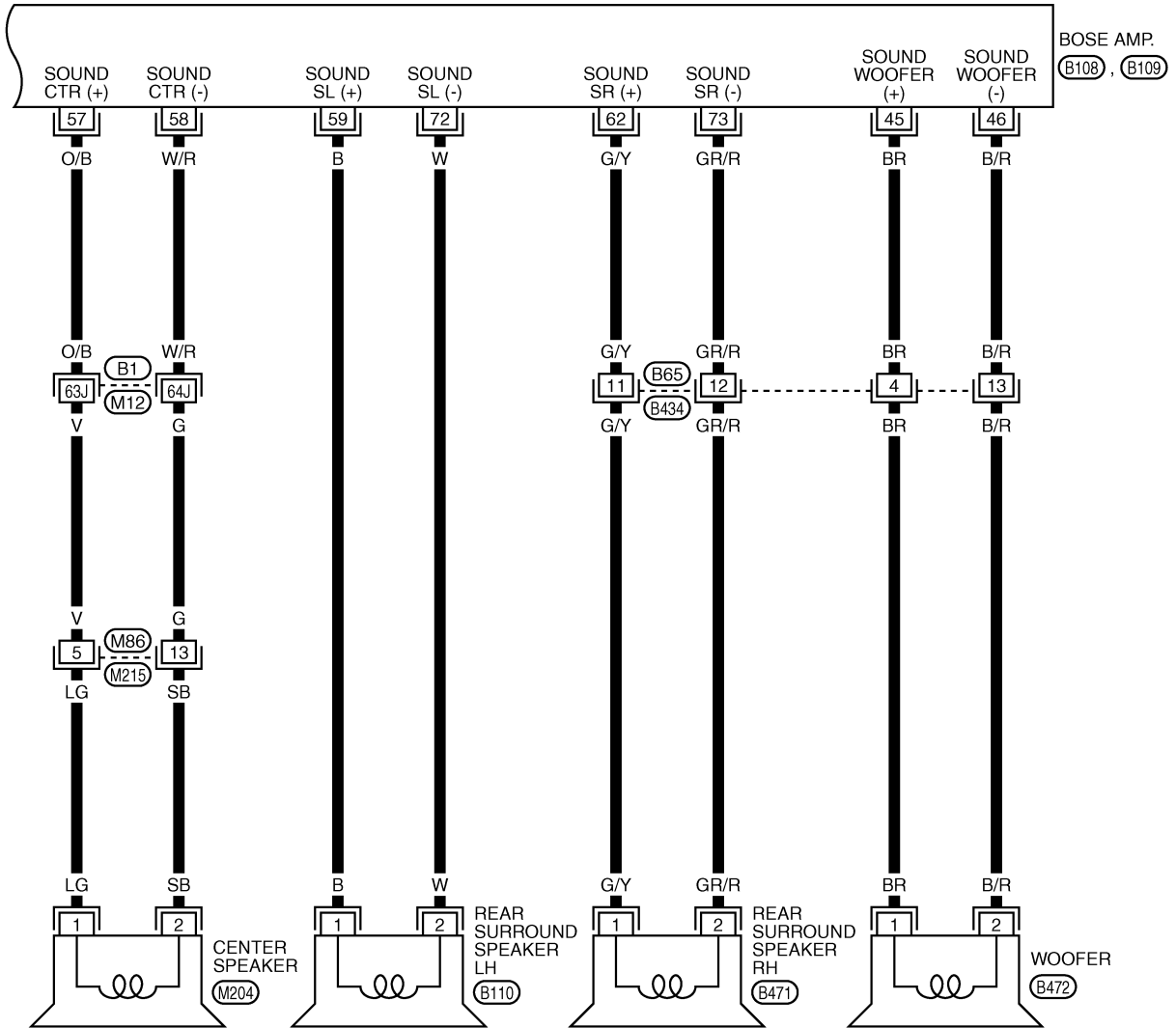
AV-AV-83



*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

SYSTEM DESCRIPTION [WITH MOBILE ENTERTAINMENT SYSTEM]

AV-AV-84



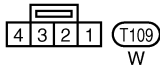
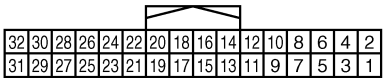
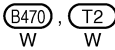
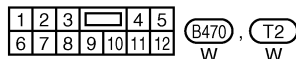
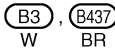
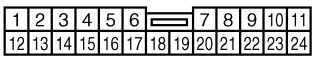
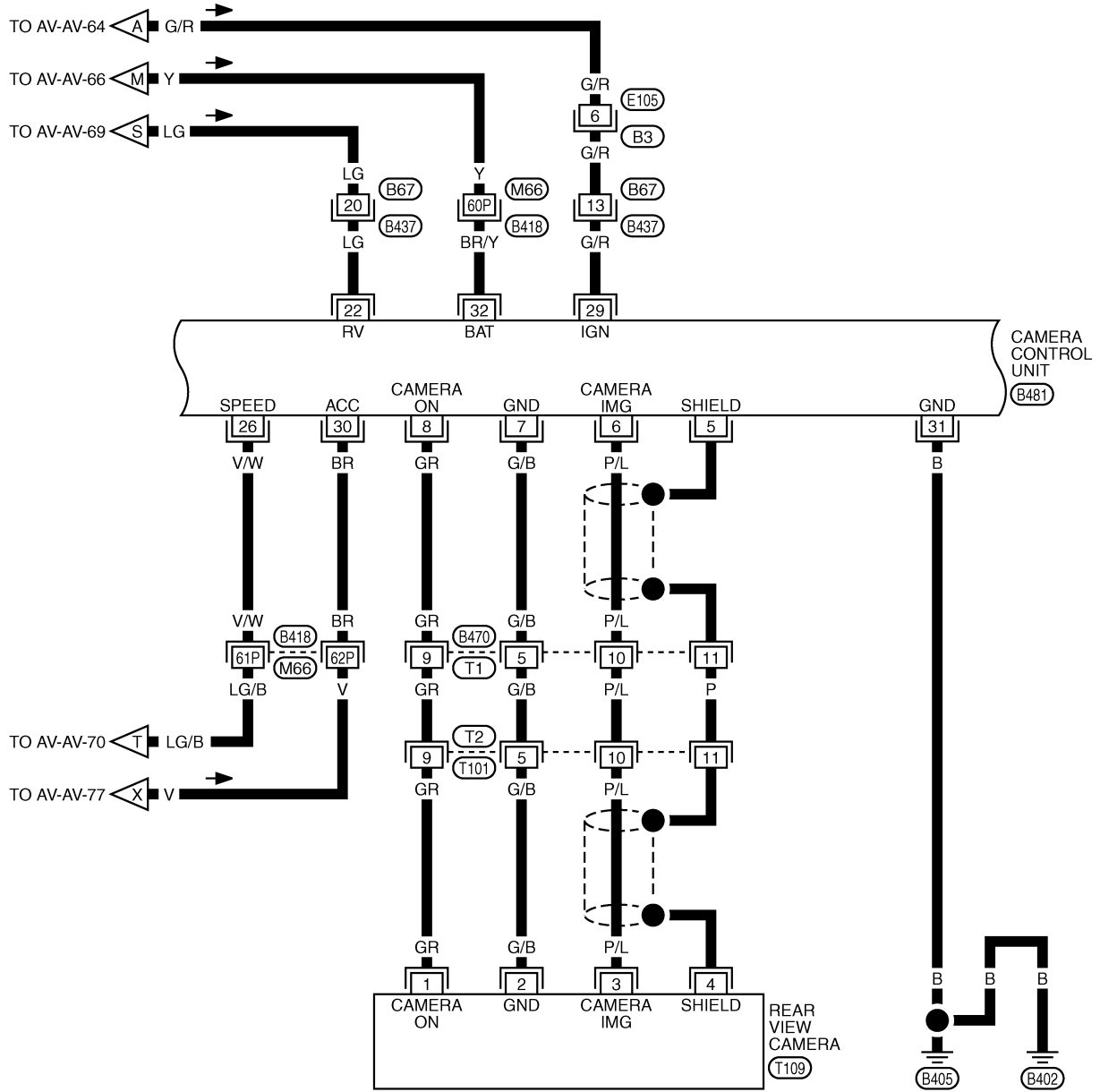
REFER TO THE FOLLOWING.
 (B1) -SUPER MULTIPLE JUNCTION (SMJ)

TKWT5333E

SYSTEM DESCRIPTION [WITH MOBILE ENTERTAINMENT SYSTEM]

AV-AV-85

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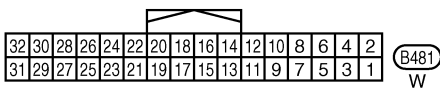
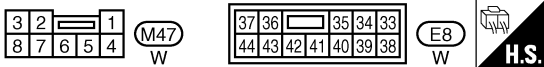
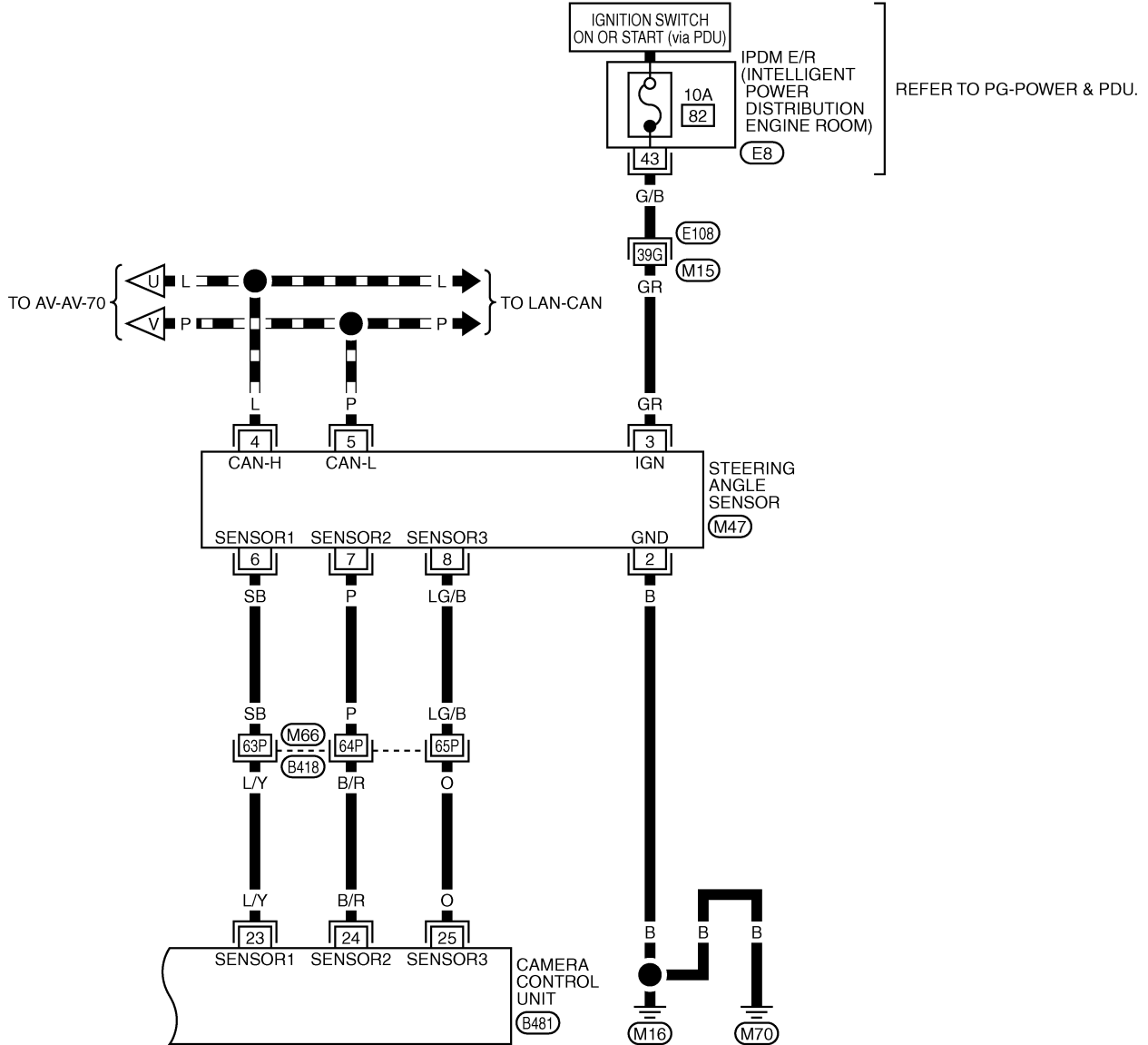
REFER TO THE FOLLOWING.
(B418) -SUPER MULTIPLE JUNCTION (SMJ)

TKWT5158E

SYSTEM DESCRIPTION [WITH MOBILE ENTERTAINMENT SYSTEM]

AV-AV-86

▬ : DATA LINE



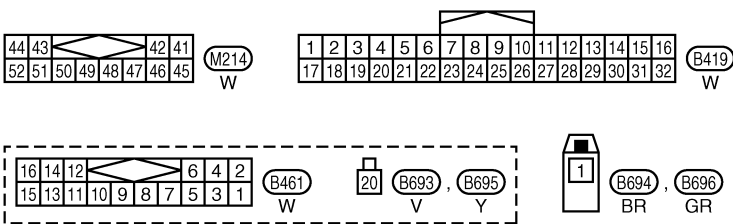
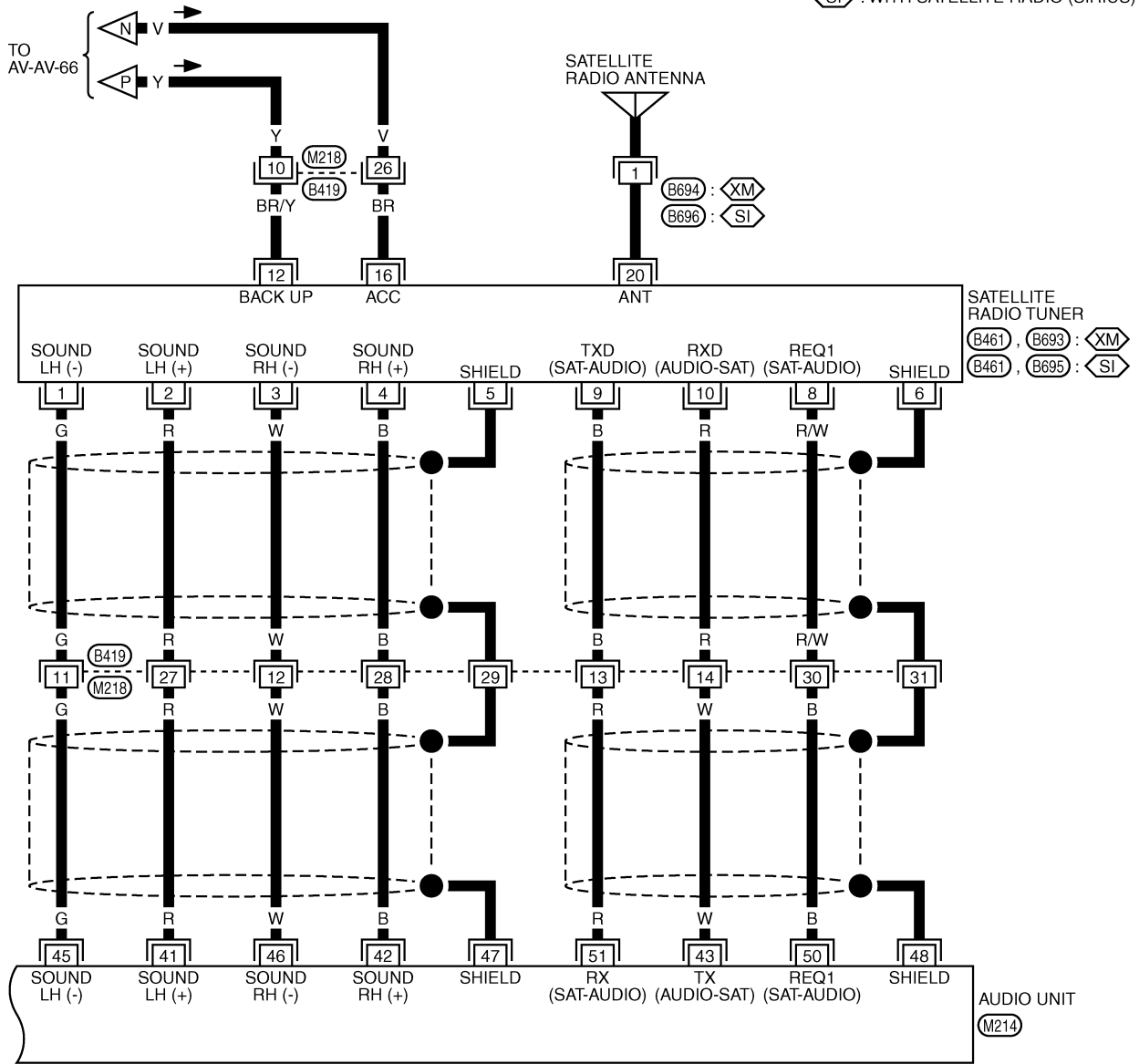
REFER TO THE FOLLOWING.
 (E108), (B418) -SUPER MULTIPLE
 JUNCTION (SMJ)

TKWT5334E

SYSTEM DESCRIPTION [WITH MOBILE ENTERTAINMENT SYSTEM]

AV-AV-87

XM : WITH SATELLITE RADIO (XM)
SI : WITH SATELLITE RADIO (SIRIUS)

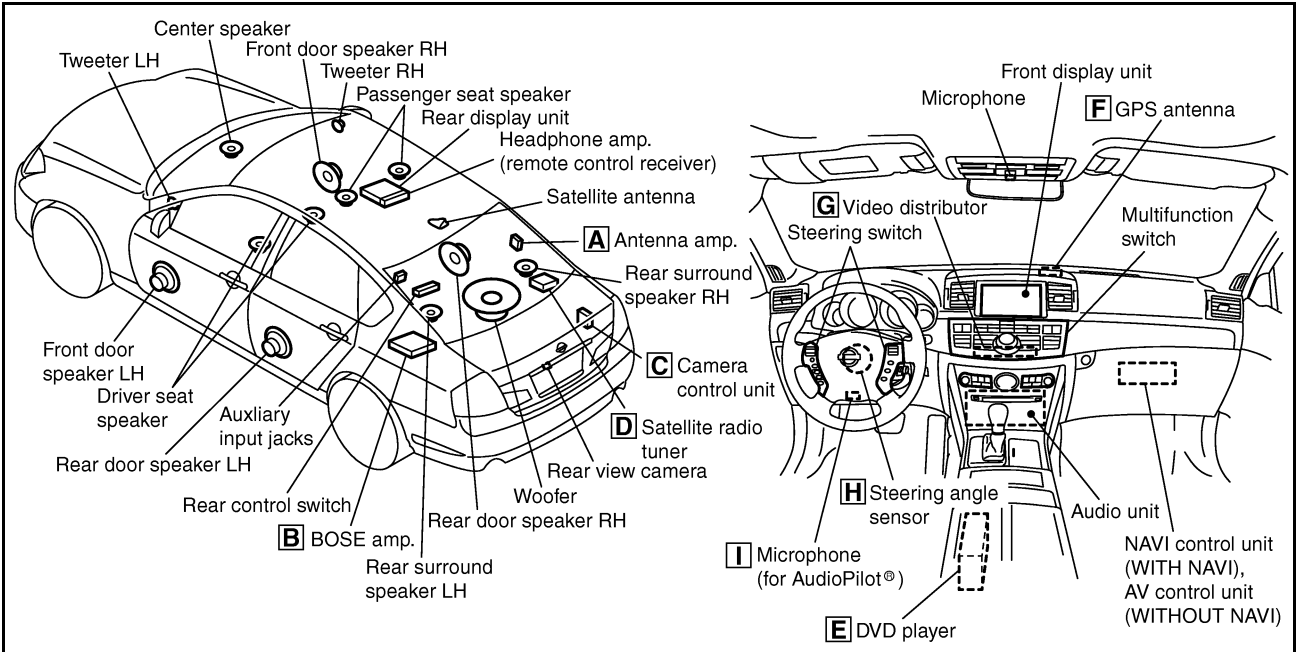


TKWT5159E

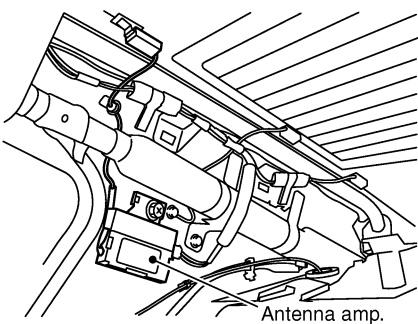
SYSTEM DESCRIPTION [WITH MOBILE ENTERTAINMENT SYSTEM]

Component Parts Location

NKS004AJ

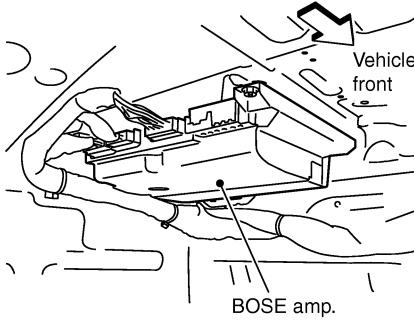


A Inside rear pillar RH



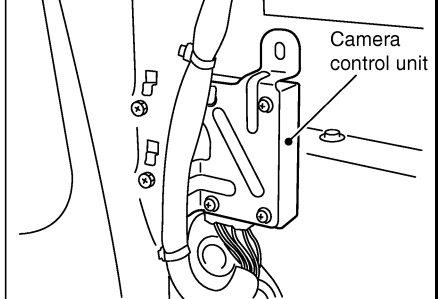
Antenna amp.

B Under rear parcel LH side



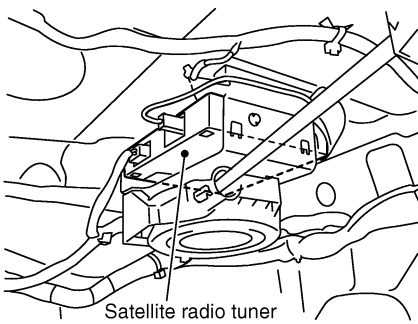
BOSE amp.

C RH side view with trunk side finisher (right) removed



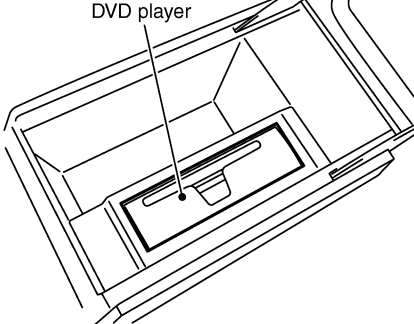
Camera control unit

D Under rear parcel RH side



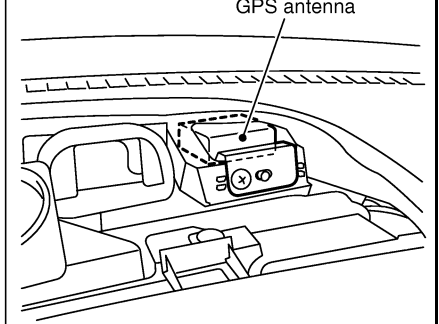
Satellite radio tuner

E DVD player



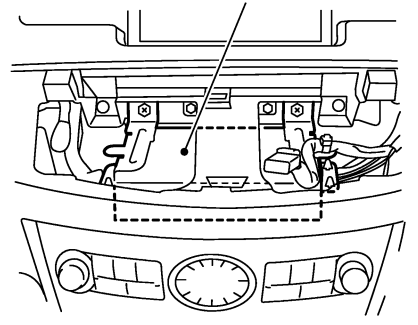
DVD player

F GPS antenna



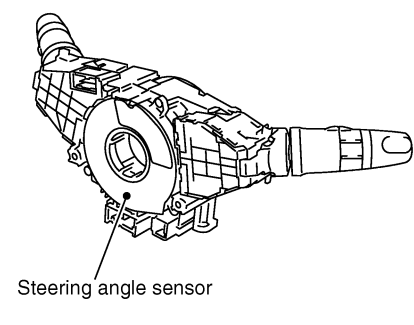
GPS antenna

G Video distributor



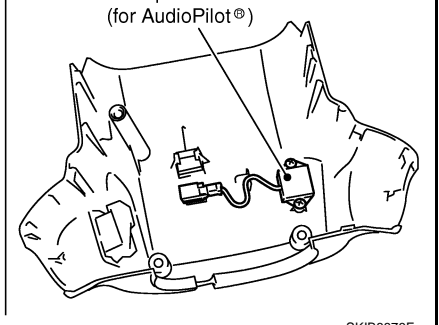
Video distributor

H Steering angle sensor



Steering angle sensor

I Microphone (for AudioPilot®)



Microphone (for AudioPilot®)

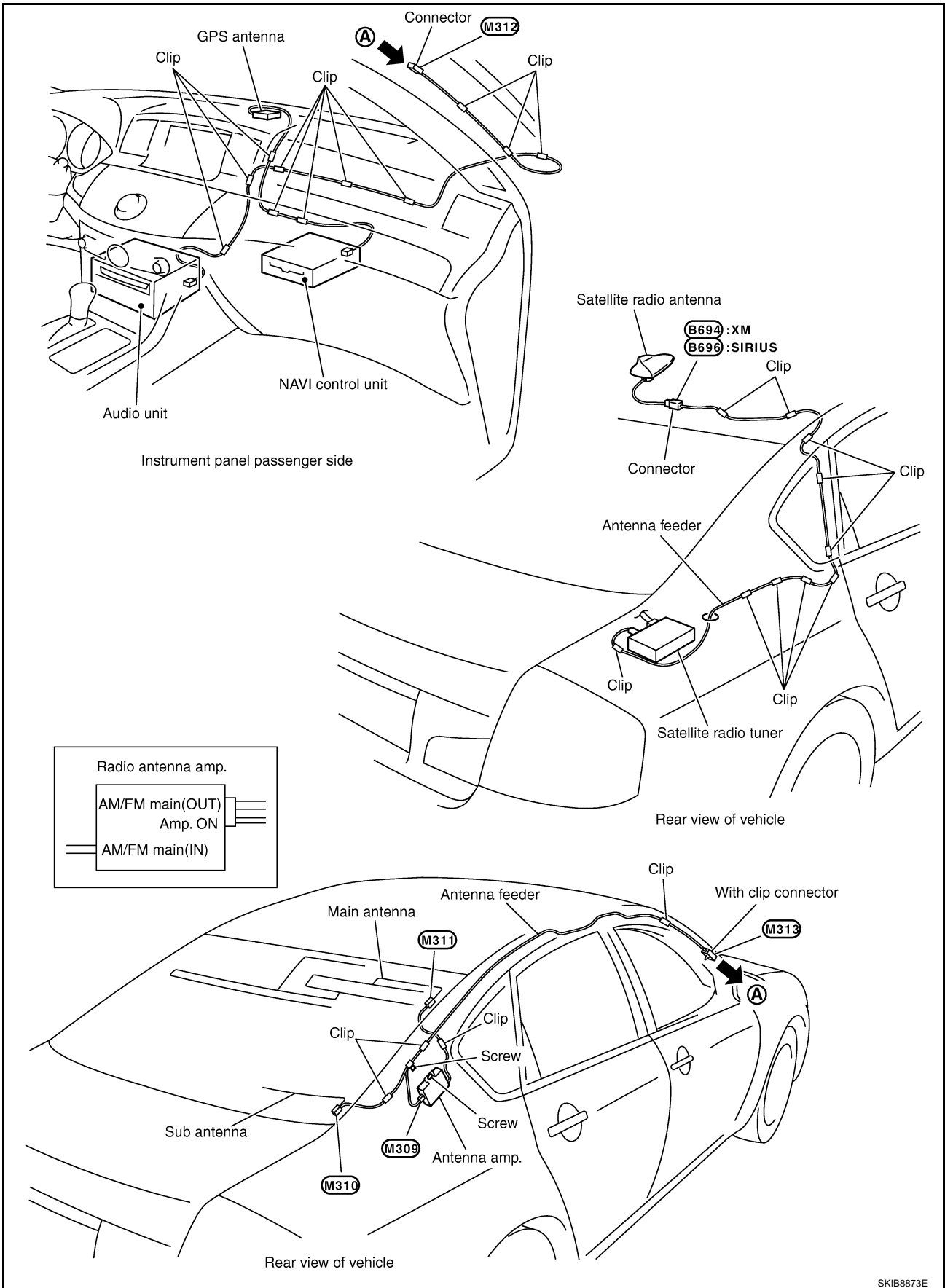
SKIB8876E

SYSTEM DESCRIPTION [WITH MOBILE ENTERTAINMENT SYSTEM]

Location of Antenna

NKS004AK

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SKIB8873E

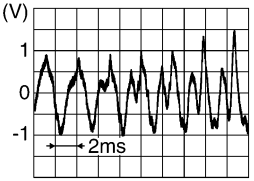
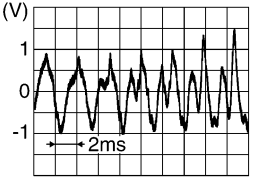
TERMINALS AND REFERENCE VALUE FOR CONTROL UNIT [WITH MOBILE ENTERTAINMENT SYSTEM]

TERMINALS AND REFERENCE VALUE FOR CONTROL UNIT

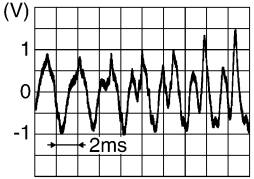
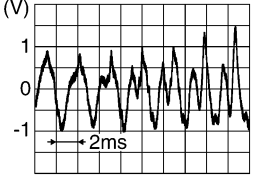
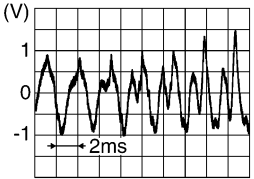
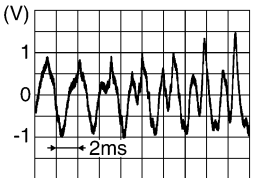
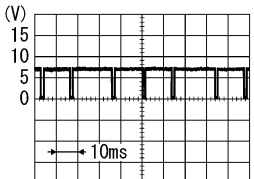
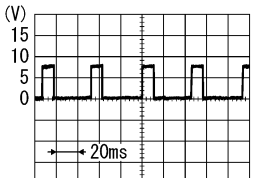
PFP:00000

Audio Unit

NKS004AL

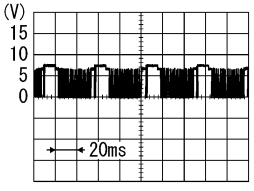
| Terminal (Wire color) | | Item | Signal input/ output | Condition | | Reference value |
|--------------------------|-----------|-------------------------------|----------------------------|--------------------|--|---|
| + | - | | | Ignition switch | Operation | |
| 2 (R/L) | 3 (W) | Audio signal LH | Output | ON | Receive audio signal. |  <p style="text-align: right; font-size: small;">SKIB3609E</p> |
| 6 (BR) | 15 (G) | Steering switch signal A | Input | ON | Keep pushing SOURCE switch. | Approx. 0 V |
| | | | | | Keep pushing MENU UP switch. | Approx. 1.2 V |
| | | | | | Keep pushing MENU DOWN switch. | Approx. 2.5 V |
| | | | | | Keep pushing ENTER switch. | Approx. 3.7 V |
| | | | | | Except for above. | Approx. 5 V |
| 7 (V) | Ground | ACC power supply | Input | ACC | - | Battery voltage |
| 8 (B/W) | Ground | Illumination control signal | Input | OFF | Illumination control switch is operated by lighting switch in ON position. | Change between approx. 0 V and approx. 12 V |
| 9 (R) | Ground | Illumination signal | Input | OFF | Lighting switch is OFF. | Approx. 0 V |
| | | | | | Lighting switch is ON. | Approx. 12 V |
| 11 (P) | 12 (L) | Audio signal RH | Output | ON | Receive audio signal. |  <p style="text-align: right; font-size: small;">SKIB3609E</p> |
| 15 (G) | Ground | Steering switch signal ground | - | ON | - | Approx. 0 V |
| 16 (O) | 15 (G) | Steering switch signal B | Input | ON | Keep pushing VOL DOWN switch. | Approx. 0 V |
| | | | | | Keep pushing VOL UP switch. | Approx. 1.2 V |
| | | | | | Keep pushing TEL, PTT switch. | Approx. 2.5 V |
| | | | | | Keep pushing BACK switch. | Approx. 3.7 V |
| | | | | | Except for above. | Approx. 5 V |
| 19 (Y) | Ground | Battery power supply | Input | OFF | - | Battery voltage |
| 20 (B) | Ground | Ground | - | ON | - | Approx. 0 V |

TERMINALS AND REFERENCE VALUE FOR CONTROL UNIT [WITH MOBILE ENTERTAINMENT SYSTEM]

| Terminal (Wire color) | | Item | Signal input/ output | Condition | | Reference value |
|--------------------------|-------------|-------------------------------------|----------------------------|--------------------|-------------------------------------|---|
| + | - | | | Ignition switch | Operation | |
| 21 (B/R) | 25 (BR) | Sound signal LH | Input | ON | When playing DVD |  |
| 22 (B/W) | 26 (L) | Sound signal RH | | | | |
| 23 (Y) | - | Communication signal (H) | Input/ Output | - | - | - |
| 24 (O) | - | Communication signal (L) | Input/ Output | - | - | - |
| 27 | - | Shield | - | - | - | - |
| 30 (BR) | 31 (B/R) | TEL voice signal | Input | ON | When inputting TEL voice signal. |  |
| 37 | - | Shield | - | - | - | - |
| 41 (R) | 45 (G) | Audio signal LH | Input | ON | Satellite radio mode is ON. |  |
| 42 (B) | 46 (W) | Audio signal RH | Input | ON | Satellite radio mode is ON. |  |
| 43 (W) | Ground | Communication signal (AUDIO-SAT) | Output | ON | Satellite radio mode is ON. |  |
| 47 | - | Shield | - | - | - | - |
| 48 | - | Shield | - | - | - | - |
| 50 (B) | Ground | REQ1 (SAT-AUDIO) | Input | ON | Satellite radio mode is ON. |  |

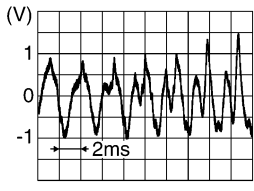
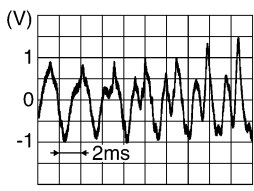
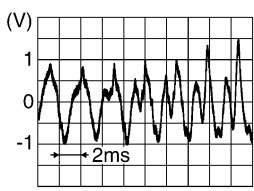
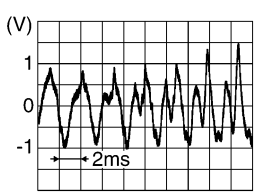
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TERMINALS AND REFERENCE VALUE FOR CONTROL UNIT [WITH MOBILE ENTERTAINMENT SYSTEM]

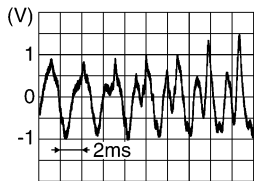
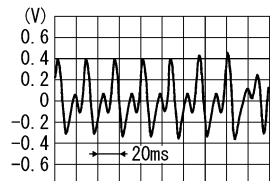
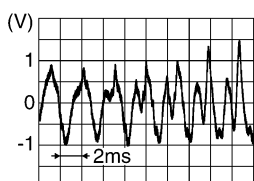
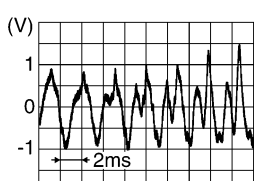
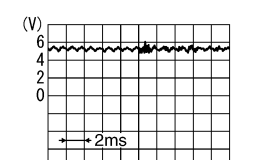
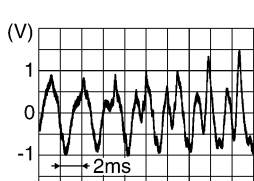
| Terminal (Wire color) | | Item | Signal input/ output | Condition | | Reference value |
|--------------------------|--------|-------------------------------------|----------------------------|--------------------|-----------------------------|---|
| + | - | | | Ignition switch | Operation | |
| 51 (R) | Ground | Communication signal (SAT-AUDIO) | Input | ON | Satellite radio mode is ON. |  |
| 53 | Ground | Antenna amp ON signal | Output | ON | - | Approx. 12 V |
| 54 | - | AM-FM main | Input | - | - | - |
| 55 | - | FM sub | Input | - | - | - |

BOSE Amp

NKS004AM

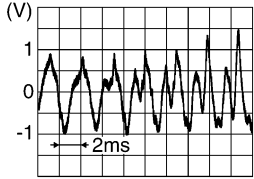
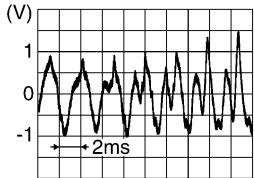
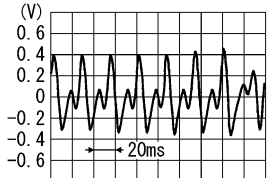
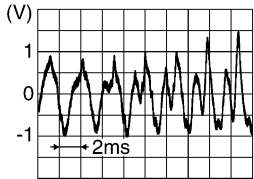
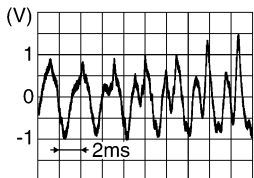
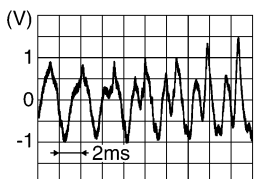
| Terminal (Wire color) | | Item | Signal input/ output | Condition | | Reference value |
|--------------------------|-------------|------------------------------|----------------------------|--------------------|-------------------------------------|---|
| + | - | | | Ignition switch | Operation | |
| 14 (G) | - | Communication signal (L) | - | - | - | - |
| 15 (G) | - | Communication signal (L) | - | - | - | - |
| 16 (BR) | Ground | ACC power supply | Input | ACC | - | Battery voltage |
| 23* (L/R) | 3* (L/G) | DVD sound signal front LH | Input | ON | When playing DVD ^{CAUTION} |  |
| 24* (B/Y) | 4* (LG) | DVD sound signal front RH | Input | ON | When playing DVD ^{CAUTION} |  |
| 25* (B) | 5* (W) | DVD sound signal rear LH | Input | ON | When playing DVD ^{CAUTION} |  |
| 26* (P) | 6* (L) | DVD sound signal rear RH | Input | ON | When playing DVD ^{CAUTION} |  |

TERMINALS AND REFERENCE VALUE FOR CONTROL UNIT [WITH MOBILE ENTERTAINMENT SYSTEM]

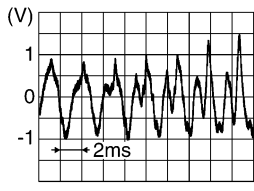
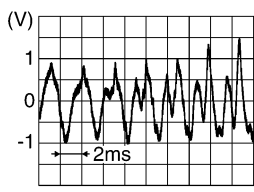
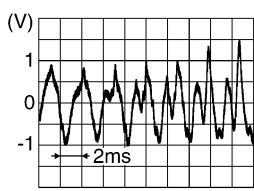
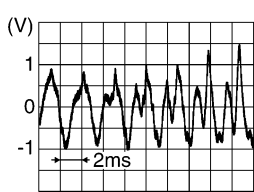
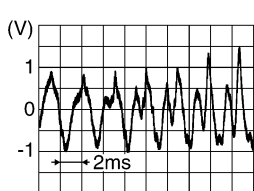
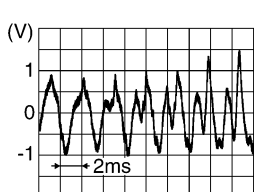
| Terminal (Wire color) | | Item | Signal input/ output | Condition | | Reference value |
|--------------------------|-------------|-----------------------------|----------------------------|--------------------|-------------------------------------|--|
| + | - | | | Ignition switch | Operation | |
| 27* (G) | 7* (R) | DVD sound signal center | Input | ON | When playing DVD ^{CAUTION} |  <p style="text-align: right; font-size: small;">SKIB3609E</p> |
| 28* (BR) | 8* (Y) | DVD sound signal woofer | Input | ON | When playing DVD ^{CAUTION} |  <p style="text-align: right; font-size: small;">PKIB6116J</p> |
| 29 (P) | 9 (L) | Audio signal LH | Input | ON | Receive audio signal. |  <p style="text-align: right; font-size: small;">SKIB3609E</p> |
| 30 (R) | 10 (G) | Audio signal RH | Input | ON | Receive audio signal. |  <p style="text-align: right; font-size: small;">SKIB3609E</p> |
| 31 (L) | 11 (B/W) | MIC. signal | Input | ON | When inputting noise. |  <p style="text-align: center;">(reference value)</p> <p style="text-align: right; font-size: small;">PKIA2104E</p> |
| 32 (B/W) | 12 (L) | Voice guidance signal | Input | ON | When inputting voice guid- ance. |  <p style="text-align: right; font-size: small;">SKIB3609E</p> |
| 33 | - | Shield | - | - | - | - |
| 34 (R) | - | Communication signal (H) | - | - | - | - |
| 35 (R) | - | Communication signal (H) | - | - | - | - |
| 36 | - | Shield | - | - | - | - |

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TERMINALS AND REFERENCE VALUE FOR CONTROL UNIT [WITH MOBILE ENTERTAINMENT SYSTEM]

| Terminal (Wire color) | | Item | Signal input/ output | Condition | | Reference value |
|--------------------------|-------------|-----------------------------------|----------------------------|--------------------|-----------------------|---|
| + | - | | | Ignition switch | Operation | |
| 41 (L) | 42 (B/W) | Audio signal front LH | Output | ON | Receive audio signal. |  <p style="text-align: right; font-size: small;">SKIB3609E</p> |
| 43 (BR) | 44 (B/R) | Audio signal front RH | Output | ON | Receive audio signal. |  <p style="text-align: right; font-size: small;">SKIB3609E</p> |
| 45 (BR) | 46 (B/R) | Audio signal woofer | Output | ON | Receive audio signal. |  <p style="text-align: right; font-size: small;">PKIB6116J</p> |
| 47 (B/W) | Ground | Ground | - | ON | - | Approx. 0 V |
| 50 (Y) | Ground | Battery power supply | Input | OFF | - | Battery voltage |
| 51 (R) | Ground | Battery power supply | Input | OFF | - | Battery voltage |
| 52 (B/W) | Ground | Ground | - | ON | - | Approx. 0 V |
| 54 (LG) | 49 (B/Y) | Audio signal rear LH | Output | ON | Receive audio signal. |  <p style="text-align: right; font-size: small;">SKIB3609E</p> |
| 56* (B/W) | 69* (L) | Audio signal passenger seat LH | Output | ON | Receive audio signal. |  <p style="text-align: right; font-size: small;">SKIB3609E</p> |
| 57 (O/B) | 58 (W/R) | Audio signal center | Output | ON | Receive audio signal. |  <p style="text-align: right; font-size: small;">SKIB3609E</p> |

TERMINALS AND REFERENCE VALUE FOR CONTROL UNIT [WITH MOBILE ENTERTAINMENT SYSTEM]

| Terminal (Wire color) | | Item | Signal input/ output | Condition | | Reference value |
|--------------------------|---------------|------------------------------------|----------------------------|--------------------|-----------------------|--|
| + | - | | | Ignition switch | Operation | |
| 59* (B) | 72* (W) | Audio signal rear sur- round LH | Output | ON | Receive audio signal. |  SKIB3609E |
| 62* (G/Y) | 73* (GR/R) | Audio signal rear sur- round RH | Output | ON | Receive audio signal. |  SKIB3609E |
| 63* (B/W) | 74* (L) | Audio signal driver seat LH | Output | ON | Receive audio signal. |  SKIB3609E |
| 64* (B/R) | 75* (BR) | Audio signal driver seat RH | Output | ON | Receive audio signal. |  SKIB3609E |
| 68 (O) | 55 (B/P) | Audio signal rear RH | Output | ON | Receive audio signal. |  SKIB3609E |
| 71* (Y) | 70* (BR) | Audio signal passenger seat RH | Output | ON | Receive audio signal. |  SKIB3609E |

*: BOSE surround 5.1ch system

CAUTION:

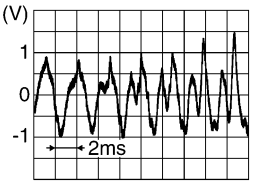
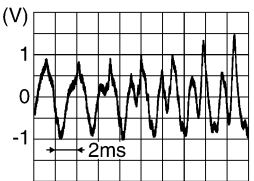
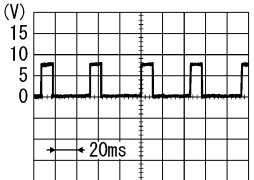
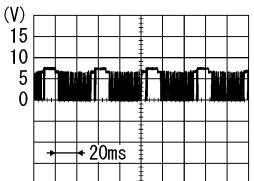
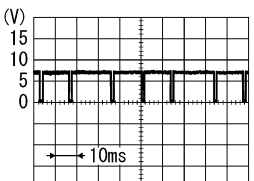
When the stereo sound is played, only front RH and LH are input. When the monaural sound is played, only center is input. All surround sounds are input only when the 5.1 channel surround sound is played.

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TERMINALS AND REFERENCE VALUE FOR CONTROL UNIT [WITH MOBILE ENTERTAINMENT SYSTEM]

Satellite Radio Tuner

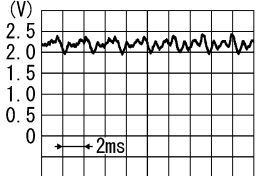
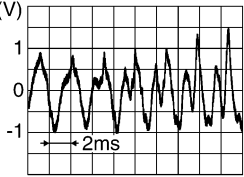
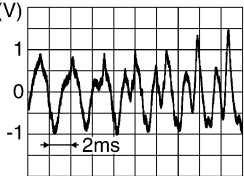
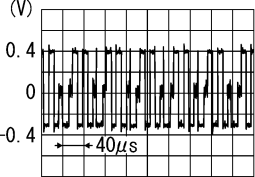
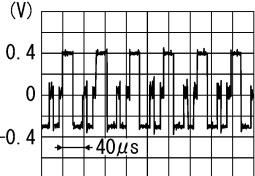
NKS004AN

| Terminal (Wire color) | | Item | Signal input/ output | Condition | | Reference value |
|--------------------------|----------|-------------------------------------|----------------------------|--------------------|---------------------------------|---|
| + | - | | | Ignition switch | Operation | |
| 2 (R) | 1 (G) | Audio signal LH | Output | ON | Receive audio signal. |  <p style="text-align: right; font-size: small;">SKIB3609E</p> |
| 4 (B) | 3 (W) | Audio signal RH | Output | ON | Receive audio signal. |  <p style="text-align: right; font-size: small;">SKIB3609E</p> |
| 5 | - | Shield | - | - | - | - |
| 6 | - | Shield | - | - | - | - |
| 8 (R/W) | Ground | REQ1 (SAT-AUDIO) | Output | ON | Set to the satellite radio mode |  <p style="text-align: right; font-size: small;">SKIB3825E</p> |
| 9 (B) | Ground | Communication signal (SAT-AUDIO) | Output | ON | Set to the satellite radio mode |  <p style="text-align: right; font-size: small;">SKIB3824E</p> |
| 10 (R) | Ground | Communication signal (AUDIO-SAT) | Input | ON | Set to the satellite radio mode |  <p style="text-align: right; font-size: small;">SKIB3826E</p> |
| 12 (BR/Y) | Ground | Battery power supply | Input | OFF | - | Battery voltage |
| 16 (BR) | Ground | ACC power supply | Input | ACC | - | Battery voltage |
| 20 | - | Satellite antenna signal | Input | - | - | - |

TERMINALS AND REFERENCE VALUE FOR CONTROL UNIT [WITH MOBILE ENTERTAINMENT SYSTEM]

AV (NAVI) Control Unit

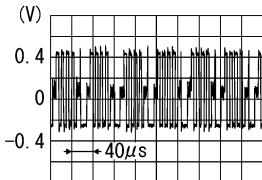
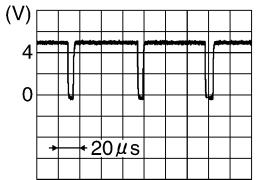
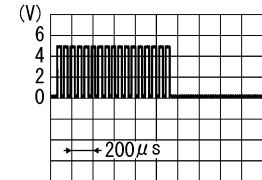
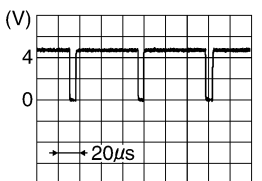
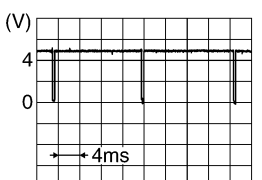
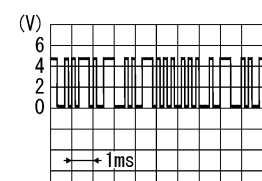
NKS004A0

| Terminal (Wire color) | | Item | Signal Input/ output | Condition | | Reference value |
|--------------------------|-------------|-----------------------|----------------------------|--------------------|---|---|
| + | - | | | Ignition switch | Operation | |
| 1 (B) | Ground | Ground | - | ON | - | Approx. 0 V |
| 2 (Y) | Ground | Battery power supply | Input | OFF | - | Battery voltage |
| 5 (V) | Ground | ACC power supply | Input | ACC | - | Battery voltage |
| 6 (O/L) | 7 | MIC. VCC | Output | ON | - | Approx. 5 V |
| 7 | Ground | MIC. ground | - | ON | - | Approx. 0 V |
| 8 (W/L) | 7 | MIC. signal | Input | ON | Give a voice. |  <p style="text-align: right; font-size: small;">PKIB5037J</p> |
| 9 | - | Shield | - | - | - | - |
| 10 (BR) | 11 (B/R) | TEL voice signal | Output | ON | When inputting TEL voice. |  <p style="text-align: right; font-size: small;">SKIB3609E</p> |
| 12 (L/G) | 14 (L/Y) | Voice guidance signal | Output | ON | When inputting voice guidance. |  <p style="text-align: right; font-size: small;">SKIB3609E</p> |
| 13 | - | Shield | - | - | - | - |
| 44 (L/G) | 47 (W/L) | RGB signal (R: red) | Output | ON | Start confirmation/adjustment mode, and then display color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen. |  <p style="text-align: right; font-size: small;">SKIB2238J</p> |
| 45 (O/L) | 47 (W/L) | RGB signal (G: green) | Output | ON | Start confirmation/adjustment mode, and then display color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen. |  <p style="text-align: right; font-size: small;">SKIB2236J</p> |

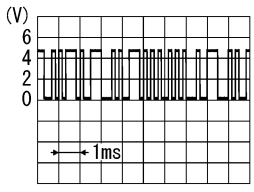
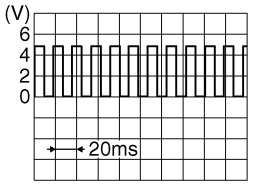
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TERMINALS AND REFERENCE VALUE FOR CONTROL UNIT [WITH MOBILE ENTERTAINMENT SYSTEM]

| Terminal (Wire color) | | Item | Signal Input/ output | Condition | | Reference value |
|--------------------------|-------------|--------------------------------------|----------------------------|--------------------|---|---|
| + | - | | | Ignition switch | Operation | |
| 46 (L/Y) | 47 (W/L) | RGB signal (B: blue) | Output | ON | Start confirmation/adjustment mode, and then display color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen. |  <small>SKIB2237J</small> |
| 47 (W/L) | Ground | RGB ground | - | ON | - | Approx. 0 V |
| 48 (B) | Ground | RGB synchronizing signal | Output | ON | - |  <small>SKIB3603E</small> |
| 49 | - | Shield | - | - | - | - |
| 50 (G) | Ground | RGB area (YS) signal | Output | ON | When inputting RGB image. | Approx. 5 V |
| | | | | | Set the selector lever in R position, and then display the rear view image. |  <small>PKIB4948J</small> |
| 51 (W) | Ground | Horizontal synchronizing (HP) signal | Input | ON | - |  <small>SKIB3601E</small> |
| 52 (R) | Ground | Vertical synchronizing (VP) signal | Input | ON | - |  <small>SKIB3598E</small> |
| 53 (O/L) | Ground | Communication signal (CONT-DISP) | Input | ON | When adjusting display brightness. |  <small>PKIB5039J</small> |

TERMINALS AND REFERENCE VALUE FOR CONTROL UNIT [WITH MOBILE ENTERTAINMENT SYSTEM]

| Terminal (Wire color) | | Item | Signal Input/ output | Condition | | Reference value |
|--------------------------|--------|---|----------------------------|--------------------|---|--|
| + | - | | | Ignition switch | Operation | |
| 54 (W/L) | Ground | Communication signal (DISP-CONT) | Input | ON | When adjusting display brightness. |  <small>PKIB5039J</small> |
| 55 | - | Shield | - | - | - | - |
| 61 (LG) | Ground | Illumination signal | Input | OFF | Lighting switch is OFF. | Approx. 0 V |
| | | | | | Lighting switch is ON. | Approx. 12 V |
| 63 (Y/G) | Ground | Ignition signal | Input | ON | - | Battery voltage |
| 64 (P) | Ground | Parking brake signal | Input | ON | Parking brake ON. | Approx. 0 V |
| | | | | | Parking brake OFF. | Approx. 12 V |
| 65 (O) | Ground | Reverse signal | Input | ON | Select lever in R position. | Approx. 12 V |
| | | | | | Other than selector lever in R position. | Approx. 0 V |
| 66 (G) | Ground | Vehicle speed signal (8-pulse) | Input | ON | When vehicle speed is approx. 40 km/h (25 MPH). |  <small>SKIA6649J</small> |
| 67 (V) | Ground | Camera-connection rec- ognition signal | Input | ON | Connected to rear view camera control unit connec- tor. | Approx. 0 V |
| | | | | | Not connected to rear view camera control unit connec- tor. | Approx. 5 V |
| 69 (W) | - | Communication signal (H) | Input/ Output | - | - | - |
| 70 (R) | - | Communication signal (L) | Input/ Output | - | - | - |
| 71 (LG) | - | CAN-H | Input/ Output | - | - | - |
| 72 (P) | - | CAN-L | Input/ Output | - | - | - |
| 107* | Ground | GPS signal | Input | ON | Connector is not connected. | Approx. 5 V |

*: With navigation system

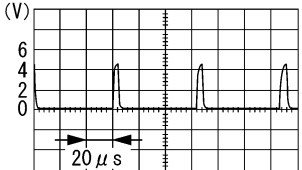
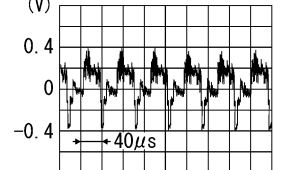
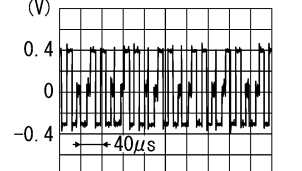
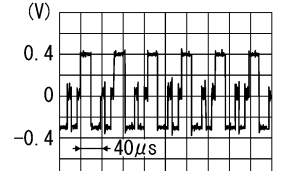
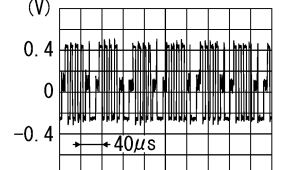
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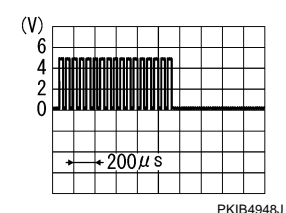
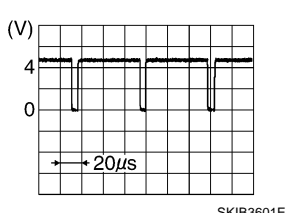
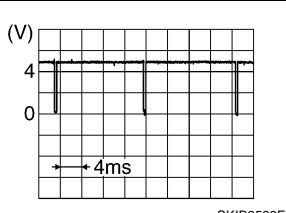
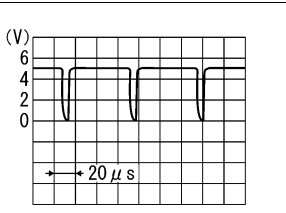
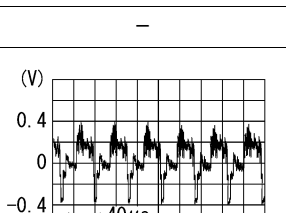
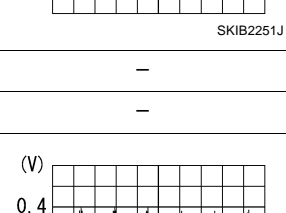
TERMINALS AND REFERENCE VALUE FOR CONTROL UNIT [WITH MOBILE ENTERTAINMENT SYSTEM]

Video Distributor

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| Terminal (Wire color) | | Item | Signal input/ output | Condition | | Reference value |
|--------------------------|-----------|---|----------------------------|--------------------|--|---|
| + | - | | | Ignition Switch | Operation | |
| 1 (W) | - | Communication signal (H) | Input/ Output | - | - | - |
| 2 (R) | - | Communication signal (L) | Input/ Output | - | - | - |
| 3 (W) | - | Communication signal (H) | Input/ Output | - | - | - |
| 4 (O) | - | Communication signal (L) | Input/ Output | - | - | - |
| 6 | - | Shield | - | - | - | - |
| 7 (B/R) | Ground | Composite synchroniz- ing signal (front) | Output | ON | Front display DVD image |  <p style="text-align: right; font-size: small;">SKIA0187E</p> |
| 8 (BR) | Ground | Composite image signal (front) | Output | ON | Front display DVD image |  <p style="text-align: right; font-size: small;">SKIB2251J</p> |
| 10 (B) | 12 (G) | RGB signal (R: red) (front) | Output | ON | Start confirmation/adjust- ment mode, and then dis- play color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen. |  <p style="text-align: right; font-size: small;">SKIB2238J</p> |
| 11 (W) | 12 (G) | RGB signal (G: green) (front) | Output | ON | Start confirmation/adjust- ment mode, and then dis- play color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen. |  <p style="text-align: right; font-size: small;">SKIB2236J</p> |
| 12 (G) | - | RGB ground | - | ON | - | Approx. 0 V |
| 13 (R) | 12 (G) | RGB signal (B: blue) (front) | Output | ON | Start confirmation/adjust- ment mode, and then dis- play color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen. |  <p style="text-align: right; font-size: small;">SKIB2237J</p> |

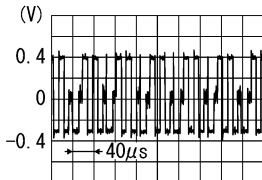
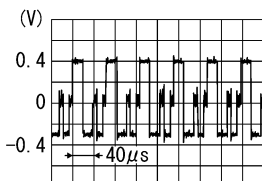
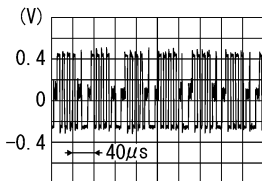
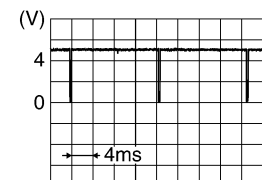
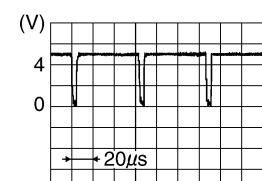
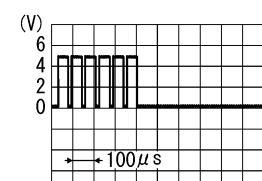
TERMINALS AND REFERENCE VALUE FOR CONTROL UNIT [WITH MOBILE ENTERTAINMENT SYSTEM]

| Terminal (Wire color) | | Item | Signal input/ output | Condition | | Reference value |
|--------------------------|--------|---|----------------------------|--------------------|---|---|
| + | - | | | Ignition Switch | Operation | |
| 14 (L/G) | Ground | RGB area (YS) signal (front) | Output | ON | When inputting RGB image. | Approx. 5 V  PKIB4948J |
| | | | | | Set the selector lever in R position, and then display the rear view image. | |
| 15 (W/L) | Ground | Horizontal synchronizing (HP) signal (front) | Input | ON | - |  SKIB3601E |
| 16 (O/L) | Ground | Vertical synchronizing (VP) signal (front) | Input | ON | - |  SKIB3598E |
| 17 (L/Y) | Ground | RGB synchronizing signal (front) | Output | ON | - |  SKIA3222J |
| 18 | - | Shield | - | - | - | - |
| 19 (R) | Ground | AUX image signal | Input | ON | AUX image |  SKIB2251J |
| 21 | - | Shield | - | - | - | - |
| 22 | - | Shield | - | - | - | - |
| 23 (L) | Ground | DVD image signal | Input | ON | DVD image |  SKIB2251J |

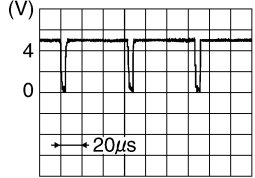
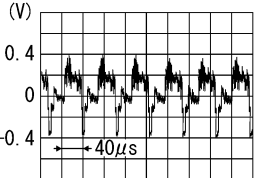
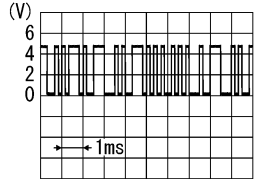
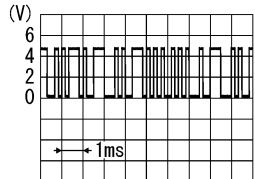
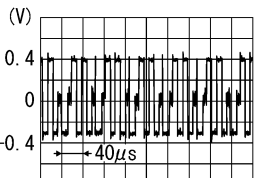
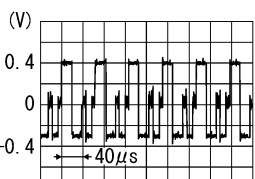
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TERMINALS AND REFERENCE VALUE FOR CONTROL UNIT [WITH MOBILE ENTERTAINMENT SYSTEM]

| Terminal (Wire color) | | Item | Signal input/ output | Condition | | Reference value |
|--------------------------|-----------|---|----------------------------|--------------------|---|---|
| + | - | | | Ignition Switch | Operation | |
| 25 (B) | 27 (G) | RGB signal (R: red) (rear) | Output | ON | Start confirmation/adjustment mode, and then display color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen. |  <small>SKIB2238J</small> |
| 26 (W) | 27 (G) | RGB signal (G: green) (rear) | Output | ON | Start confirmation/adjustment mode, and then display color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen. |  <small>SKIB2236J</small> |
| 27 (G) | Ground | RGB ground | - | ON | - | Approx. 0 V |
| 28 (R) | 27 (G) | RGB signal (B: blue) (rear) | Output | ON | Start confirmation/adjustment mode, and then display color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen. |  <small>SKIB2237J</small> |
| 29 (W/R) | Ground | Vertical synchronizing (VP) signal (rear) | Input | ON | - |  <small>SKIB0823E</small> |
| 30 (W) | Ground | Horizontal synchronizing (HP) signal (rear) | Input | ON | - |  <small>SKIB0825E</small> |
| 31 | - | Shield | - | - | - | - |
| 32 (R/L) | Ground | RGB area (YS) signal (rear) | Output | ON | When inputting RGB image. Rear display DVD image |  <small>PKIB4949J</small> |

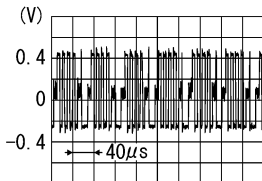
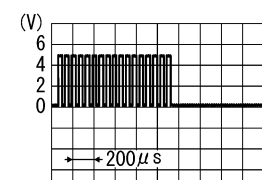
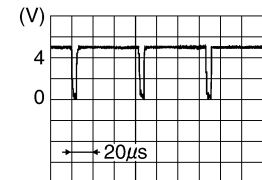
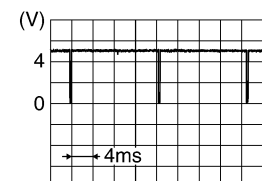
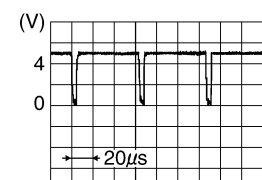
TERMINALS AND REFERENCE VALUE FOR CONTROL UNIT [WITH MOBILE ENTERTAINMENT SYSTEM]

| Terminal (Wire color) | | Item | Signal input/ output | Condition | | Reference value |
|--------------------------|-------------|-----------------------------------|----------------------------|--------------------|---|---|
| + | - | | | Ignition Switch | Operation | |
| 33 (R) | Ground | Image synchronizing signal (rear) | Output | ON | Rear display RGB image |  <small>SKIB0825E</small> |
| 34 (G) | Ground | Composite image signal (rear) | Output | ON | Rear display DVD image |  <small>SKIB2251J</small> |
| 35 | - | Shield | - | - | - | - |
| 36 (O) | Ground | Ignition signal (rear display) | Output | ON ACC | - - | Approx. 0 V Approx. 5 V |
| 38 | - | Shield | - | - | - | - |
| 39 (W) | Ground | Communication signal (DISP-DIST) | Input | ON | Image quality adjustment |  <small>PKIB5039J</small> |
| 40 (O) | Ground | Communication signal (DIST-DISP) | Output | ON | Image quality adjustment |  <small>PKIB5039J</small> |
| 44 (L/G) | 47 (W/L) | RGB signal (R: red) | Input | ON | Start confirmation/adjustment mode, and then display color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen. |  <small>SKIB2238J</small> |
| 45 (O/L) | 47 (W/L) | RGB signal (G: green) | Input | ON | Start confirmation/adjustment mode, and then display color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen. |  <small>SKIB2236J</small> |

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TERMINALS AND REFERENCE VALUE FOR CONTROL UNIT [WITH MOBILE ENTERTAINMENT SYSTEM]

| Terminal (Wire color) | | Item | Signal input/ output | Condition | | Reference value |
|--------------------------|-------------|--------------------------------------|----------------------------|--------------------|---|---|
| + | - | | | Ignition Switch | Operation | |
| 46 (L/Y) | 47 (W/L) | RGB signal (B: blue) | Input | ON | Start confirmation/adjustment mode, and then display color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen. |  <small>SKIB2237J</small> |
| 47 (W/L) | Ground | RGB ground | - | ON | - | Approx. 0 V |
| 48 (G) | Ground | RGB area (YS) signal | Input | ON | When inputting RGB image. | Approx. 5 V |
| | | | | | Set the selector lever in R position, and then display the rear view image. |  <small>PKIB4948J</small> |
| 49 (W) | Ground | Horizontal synchronizing (HP) signal | Output | ON | - |  <small>SKIB0825E</small> |
| 50 (R) | Ground | Vertical synchronizing (VP) signal | Output | ON | - |  <small>SKIB0823E</small> |
| 51 (B) | Ground | RGB synchronizing signal | Input | ON | - |  <small>SKIB0825E</small> |
| 52 | - | Shield | - | - | - | - |
| 53 (B) | Ground | Ground | - | ON | - | Approx. 0 V |
| 54 (L) | Ground | Battery power supply | Input | OFF | - | Battery voltage |
| 55 (V) | Ground | ACC power supply | Input | ACC | - | Battery voltage |
| 56 (G) | Ground | Ignition signal | Input | ON | - | Battery voltage |
| 57 (W) | Ground | Remote control receiver VCC | Output | ON | - | Approx. 5 V |

TERMINALS AND REFERENCE VALUE FOR CONTROL UNIT [WITH MOBILE ENTERTAINMENT SYSTEM]

| Terminal (Wire color) | | Item | Signal input/ output | Condition | | Reference value |
|--------------------------|--------|-------------------------|----------------------------|--------------------|---------------------------------------|-----------------|
| + | - | | | Ignition Switch | Operation | |
| 58 (B) | Ground | Remote control signal | Output | ON | Rear seat remote controller operation | |
| 59 | - | Shield | - | - | - | - |
| 60 (L) | Ground | Headphone amp ON signal | Input | ON | Headphone mode is ON. | Approx. 4 V |
| | | | | | Headphone mode is OFF. | Approx. 0 V |

Front Display Unit

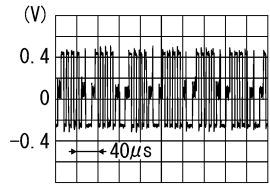
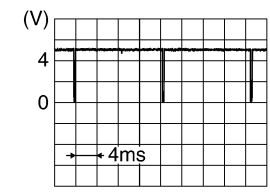
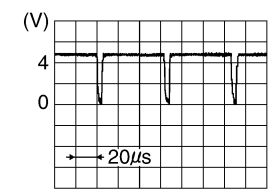
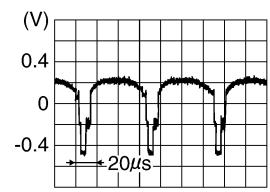
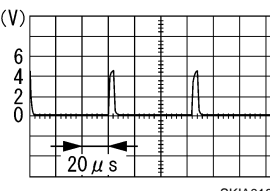
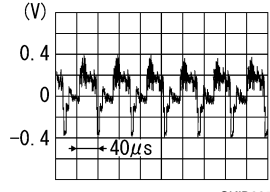
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| Terminal (Wire color) | | Item | Signal input/ output | Condition | | Reference value |
|--------------------------|----------|--------------------------------------|----------------------------|--------------------|---|-----------------|
| + | - | | | Ignition switch | Operation | |
| 1 (B) | 8 (G) | RGB signal (R: red) | Input | ON | Start confirmation/adjustment mode, and then display color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen. | |
| 2 (L/G) | Ground | RGB area (YS) signal | Input | ON | When inputting RGB image. | Approx. 5 V |
| | | | | | Set the selector lever in R position, and then display the rear view image. | |
| 3 (W) | 8 (G) | RGB signal (G: green) | Input | ON | Start confirmation/adjustment mode, and then display color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen. | |
| 4 (W/L) | Ground | Horizontal synchronizing (HP) signal | Output | ON | - | |

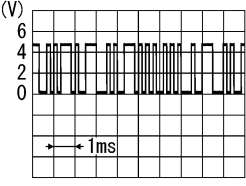
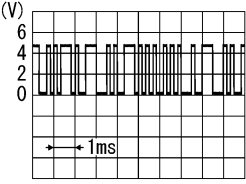
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TERMINALS AND REFERENCE VALUE FOR CONTROL UNIT [WITH MOBILE ENTERTAINMENT SYSTEM]

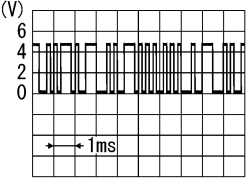
| Terminal (Wire color) | | Item | Signal input/ output | Condition | | Reference value |
|--------------------------|----------|------------------------------------|----------------------------|--------------------|---|---|
| + | - | | | Ignition switch | Operation | |
| 5 (R) | 8 (G) | RGB signal (B: blue) | Input | ON | Start confirmation/adjustment mode, and then display color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen. |  <small>SKIB2237J</small> |
| 6 (O/L) | Ground | Vertical synchronizing (VP) signal | Output | ON | - |  <small>SKIB0823E</small> |
| 7 (L/Y) | Ground | RGB synchronizing signal | Output | ON | - |  <small>SKIB0826E</small> |
| 8 (G) | Ground | RGB ground | - | ON | - | Approx. 0 V |
| 10 | - | Shield | - | - | - | - |
| 11 (Y) | Ground | Camera image signal | Input | ON | Set the selector in R position, and then display the rear view image. |  <small>SKIB0827E</small> |
| 12 | - | Shield | - | - | - | - |
| 13 (B/R) | Ground | Composite synchronizing signal | Input | ON | - |  <small>SKIA0187E</small> |
| 14 | - | Shield | - | - | - | - |
| 15 (BR) | Ground | Composite image signal | Input | ON | DVD image |  <small>SKIB2251J</small> |

TERMINALS AND REFERENCE VALUE FOR CONTROL UNIT [WITH MOBILE ENTERTAINMENT SYSTEM]

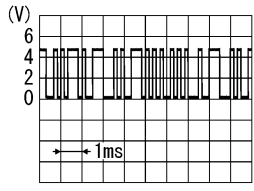
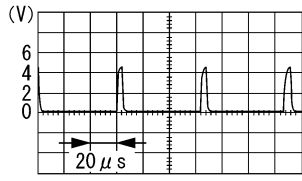
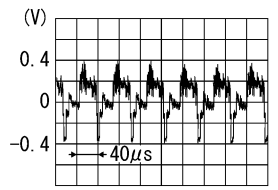
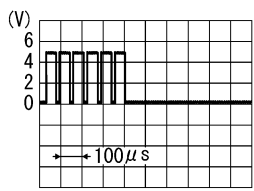
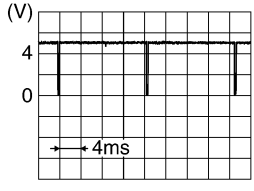
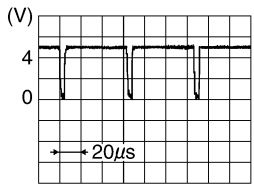
| Terminal (Wire color) | | Item | Signal input/ output | Condition | | Reference value |
|--------------------------|--------|-------------------------------------|----------------------------|--------------------|---------------------------------------|---|
| + | - | | | Ignition switch | Operation | |
| 17 (W/L) | Ground | Communication signal (DISP-CONT) | Output | ON | When adjusting display brightness. |  <small>PKIB5039J</small> |
| 18 | - | Shield | - | - | - | - |
| 19 (O/L) | Ground | Communication signal (CONT-DISP) | Input | ON | When adjusting display brightness. |  <small>PKIB5039J</small> |
| 20 (V) | Ground | ACC power supply | Input | ACC | - | Battery voltage |
| 21 (L) | Ground | Battery power supply | Input | OFF | - | Battery voltage |
| 23 (B) | Ground | Ground | - | ON | - | Approx. 0 V |

Rear Display Unit

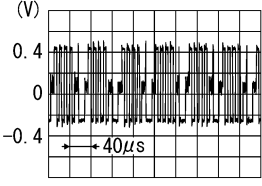
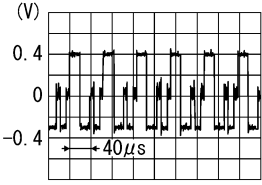
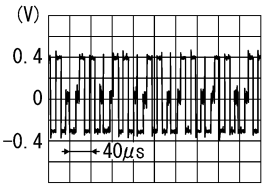
NKS004AR

| Terminal (Wire color) | | Item | Signal input/ output | Condition | | Reference value |
|--------------------------|--------|-------------------------------------|----------------------------|--------------------|---------------------------------------|---|
| + | - | | | Ignition switch | Operation | |
| 1 (B/Y) | Ground | Ground | - | ON | - | Approx. 0 V |
| 2 (B/Y) | Ground | Ground | - | ON | - | Approx. 0 V |
| 3 (L/O) | Ground | Battery power supply | Input | OFF | - | Battery voltage |
| 4 (L/Y) | Ground | Battery power supply | Input | OFF | - | Battery voltage |
| 6 (W/L) | Ground | ACC power supply | Input | ACC | - | Battery voltage |
| 8 | - | Shield | - | - | - | - |
| 9 (L) | Ground | Communication signal (DISP-DIST) | Output | ON | When adjusting display brightness. |  <small>PKIB5039J</small> |

TERMINALS AND REFERENCE VALUE FOR CONTROL UNIT [WITH MOBILE ENTERTAINMENT SYSTEM]

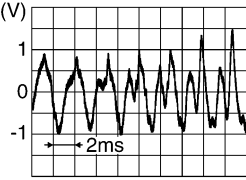
| Terminal (Wire color) | | Item | Signal input/ output | Condition | | Reference value |
|--------------------------|--------|---|----------------------------|--------------------|--|---|
| + | - | | | Ignition switch | Operation | |
| 10 (B/W) | Ground | Communication signal (DIST-DISP) | Input | ON | When adjusting display brightness. |  <p style="text-align: right;">PKIB5039J</p> |
| 12 (L/W) | Ground | Ignition signal | Input | ON | - | Approx. 0 V |
| 14 | - | | | ACC | - | Approx. 5 V |
| 15 (LG) | Ground | Image synchronizing sig- nal | Input | ON | Rear display DVD image |  <p style="text-align: right;">SKIA0187E</p> |
| 16 (V) | Ground | Composite image signal | Input | ON | Rear display DVD image |  <p style="text-align: right;">SKIB2251J</p> |
| 17 (W/L) | Ground | RGB area (YS) signal | Input | ON | When inputting RGB image. Rear display DVD image |  <p style="text-align: right;">PKIB4949J</p> |
| 18 | - | Shield | - | - | - | - |
| 19 (L/O) | Ground | Vertical synchronizing (VP) signal | Output | ON | - |  <p style="text-align: right;">SKIB0823E</p> |
| 20 (L/Y) | Ground | Horizontal synchronizing (HP) signal | Output | ON | - |  <p style="text-align: right;">SKIB0825E</p> |
| 21 (B) | Ground | RGB ground | - | ON | - | Approx. 0 V |

TERMINALS AND REFERENCE VALUE FOR CONTROL UNIT [WITH MOBILE ENTERTAINMENT SYSTEM]

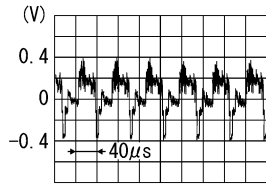
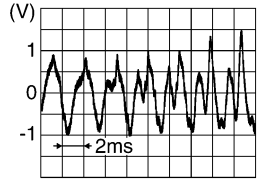
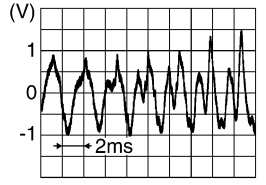
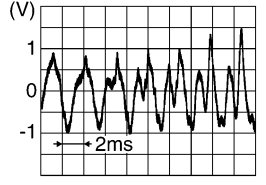
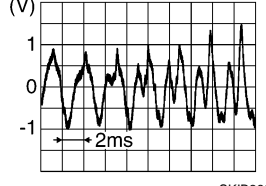
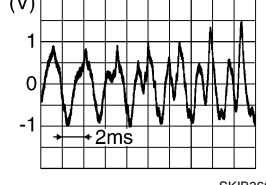
| Terminal (Wire color) | | Item | Signal input/ output | Condition | | Reference value |
|--------------------------|-----------|-----------------------|----------------------------|--------------------|---|---|
| + | - | | | Ignition switch | Operation | |
| 22 (G) | 21 (B) | RGB signal (B: blue) | Input | ON | Start confirmation/adjustment mode, and then display color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen. |  <small>SKIB2237J</small> |
| 23 (R) | 21 (B) | RGB signal (G: green) | Input | ON | Start confirmation/adjustment mode, and then display color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen. |  <small>SKIB2236J</small> |
| 24 (W) | 21 (B) | RGB signal (R: red) | Input | ON | Start confirmation/adjustment mode, and then display color bar by selecting "Color Spectrum Bar" on DISPLAY DIAGNOSIS screen. |  <small>SKIB2238J</small> |

DVD Player

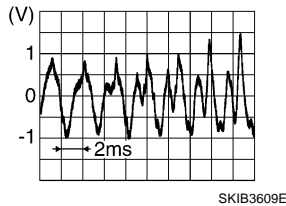
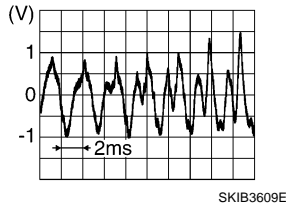
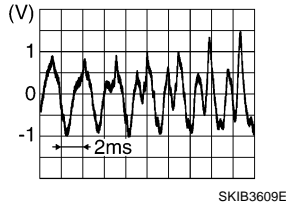
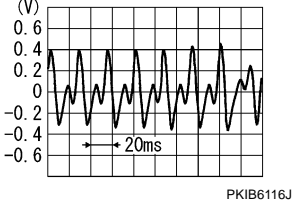
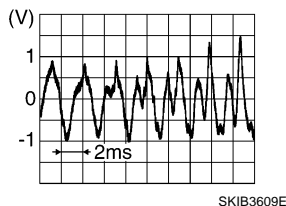
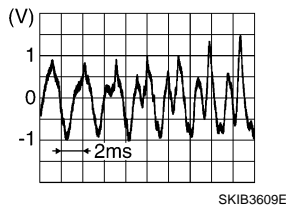
NKS004AS

| Terminal | | Item | Signal input/ output | Condition | | Reference value |
|-------------|----------|--------------------------|----------------------------|--------------------|-------------------------|---|
| + | - | | | Ignition switch | Operation | |
| 1 (Y/R) | Ground | Battery power supply | Input | OFF | - | Battery voltage |
| 2 (V) | Ground | ACC power supply | Input | ACC | - | Battery voltage |
| 7 (W/L) | 6 (B) | AUX sound signal RH | Input | ON | AUX sound input |  <small>SKIB3609E</small> |
| 8 (R/W) | - | Shield | - | - | - | - |
| 14 (L/W) | - | Shield | - | - | - | - |
| 15 (Y) | - | Communication signal (H) | Input/Output | - | - | - |
| 16 (W) | - | Communication signal (H) | Input/Output | - | - | - |
| 17 (B/P) | Ground | Ground | - | ON | - | Approx. 0 V |
| 18 (R/L) | Ground | Illumination signal | Input | OFF | Lighting switch is OFF. | Approx. 0 V |
| | | | | | Lighting switch is ON. | Approx. 12 V |

TERMINALS AND REFERENCE VALUE FOR CONTROL UNIT [WITH MOBILE ENTERTAINMENT SYSTEM]

| Terminal | | Item | Signal input/output | Condition | | Reference value |
|-------------|-------------|--------------------------|---------------------|-----------------|-----------------|---|
| + | - | | | Ignition switch | Operation | |
| 19 (G/Y) | - | Shield | - | - | - | - |
| 20 (G) | Ground | DVD image signal | Output | ON | DVD image |  <small>SKIB2251J</small> |
| 23 (R) | 22 (B) | AUX sound signal LH | Input | ON | AUX sound input |  <small>SKIB3609E</small> |
| 24 (L/R) | - | Shield | - | - | - | - |
| 25 (W/R) | 9 (B/Y) | Headphone signal LH | Output | ON | Sound output |  <small>SKIB3609E</small> |
| 26 (L) | 10 (G/B) | Headphone signal RH | Output | ON | Sound output |  <small>SKIB3609E</small> |
| 27 (B/R) | 11 (BR) | Sound signal LH | Output | ON | Sound output |  <small>SKIB3609E</small> |
| 28 (B/W) | 12 (L) | Sound signal RH | Output | ON | Sound output |  <small>SKIB3609E</small> |
| 30 (G/R) | - | Shield | - | - | - | - |
| 31 (O) | - | Communication signal (L) | Input/Output | - | - | - |
| 32 (R) | - | Communication signal (L) | Input/Output | - | - | - |

TERMINALS AND REFERENCE VALUE FOR CONTROL UNIT [WITH MOBILE ENTERTAINMENT SYSTEM]

| Terminal | | Item | Signal input/output | Condition | | Reference value |
|--------------|--------------|---------------------------|---------------------|-----------------|-------------------------------------|---|
| + | - | | | Ignition switch | Operation | |
| 33* (R/Y) | - | Shield | - | - | - | - |
| 34* (R/L) | 42* (G) | DVD sound signal front RH | Output | ON | When playing DVD ^{CAUTION} |  |
| 35* (L/Y) | 43* (L) | DVD sound signal front LH | Output | ON | When playing DVD ^{CAUTION} |  |
| 36* (R/B) | 44* (R) | DVD sound signal center | Output | ON | When playing DVD ^{CAUTION} |  |
| 37* (Y/B) | 45* (Y) | DVD sound signal woofer | Output | ON | When playing DVD ^{CAUTION} |  |
| 38* (G/R) | - | Shield | - | - | - | - |
| 39* (Y/L) | 47* (W/L) | DVD sound signal rear RH | Output | ON | When playing DVD ^{CAUTION} |  |
| 40* (O/L) | 48* (O) | DVD sound signal rear LH | Output | ON | When playing DVD ^{CAUTION} |  |
| 46* (G/W) | - | Shield | - | - | - | - |
| 49 (B) | Ground | Ground | - | ON | - | Approx. 0V |

*: BOSE surround 5.1ch system

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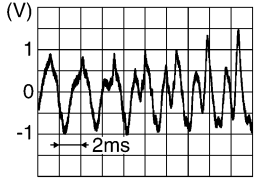
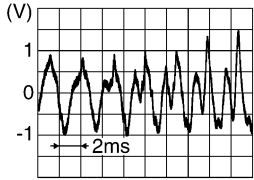
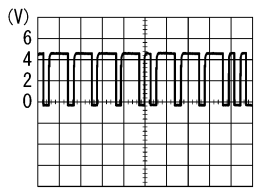
TERMINALS AND REFERENCE VALUE FOR CONTROL UNIT [WITH MOBILE ENTERTAINMENT SYSTEM]

CAUTION:

When the stereo sound is played, only front RH and LH are output. When the monaural sound is played, only center is output. All surround sounds are input only when the 5.1 channel surround sound is played.

Headphone Amp

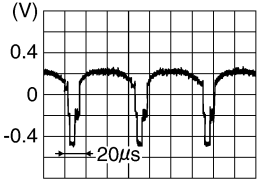
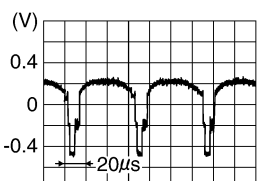
NKS004AT

| Terminal (Wire color) | | Item | Signal input/ output | Condition | | Reference value |
|--------------------------|----------|--------------------------------|----------------------------|--------------------|---|---|
| + | - | | | Ignition switch | Operation | |
| 1 (W) | 2 (B) | Headphone signal LH | Input | ON | When playing DVD |  <p style="text-align: right; font-size: small;">SKIB3609E</p> |
| 3 | - | Shield | - | - | - | - |
| 4 | - | Shield | - | - | - | - |
| 5 (L) | 6 (G) | Headphone signal RH | Input | ON | When playing DVD |  <p style="text-align: right; font-size: small;">SKIB3609E</p> |
| 10 (L/W) | Ground | Headphone ON signal | Input | ON | Headphone mode is ON. Headphone mode is OFF. | Approx. 4 V Approx. 0 V |
| 11 (B/W) | Ground | Ground | - | ON | - | Approx. 0 V |
| 12 (Y) | Ground | Battery power supply | Input | OFF | - | Approx. 12 V |
| 14 (W/L) | Ground | Remote control receiver VCC | Input | ON | - | Approx. 5 V |
| 15 (L/O) | Ground | Remote control signal | Output | ON | Rear seat remote controller operation |  <p style="text-align: right; font-size: small;">PKIB6988J</p> |
| 16 | - | Shield | - | - | - | - |

TERMINALS AND REFERENCE VALUE FOR CONTROL UNIT [WITH MOBILE ENTERTAINMENT SYSTEM]

Camera Control Unit

NKS004AU

| Terminal (wire color) | | Item | Signal input/ output | Condition | | Reference value |
|--------------------------|--------|--------------------------------------|----------------------------|--------------------|---|--|
| + | - | | | Ignition switch | Operation | |
| 5 | - | Shield | - | - | - | - |
| 6 (P/L) | Ground | Camera image signal | Input | ON | Set selector lever in R position, and then display the rear view image. |  <p style="text-align: right; font-size: small;">SKIB0827E</p> |
| 7 (G/B) | Ground | Camera ground | - | ON | - | Approx. 0 V |
| 8 (GR) | Ground | Camera ON signal | Output | ON | Set selector lever in R position, and then display the rear view image. | Approx. 6 V |
| 11 | - | Shield | - | - | - | - |
| 12 (Y) | Ground | Camera image signal | Output | ON | Set selector lever in R position, and then display the rear view image. |  <p style="text-align: right; font-size: small;">SKIB0827E</p> |
| 14 (V) | Ground | Camera-connection recognition signal | Output | ON | - | Approx. 0 V |
| 17 (G) | - | Communication signal (L) | Input/ Output | - | - | - |
| 18 (R) | - | Communication signal (H) | Input/ Output | - | - | - |
| 19 (R) | - | Communication signal (L) | Input/ Output | - | - | - |
| 20 (W) | - | Communication signal (H) | Input/ Output | - | - | - |
| 22 (LG) | Ground | Reverse signal | Input/ Output | ON | Select lever in R position. | Approx. 12 V |
| | | | | | Other than selector lever in R position. | Approx. 0 V |

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TERMINALS AND REFERENCE VALUE FOR CONTROL UNIT [WITH MOBILE ENTERTAINMENT SYSTEM]

| Terminal (wire color) | | Item | Signal input/ output | Condition | | Reference value |
|--------------------------|--------|-----------------|----------------------------|--------------------|---|--|
| + | - | | | Ignition switch | Operation | |
| 23 (L/Y) | Ground | Sensor signal 1 | Input | ON | Turn the steering to the right | <p style="text-align: right;">SKIB3827E</p> <p>A: Sensor signal 1 B: Sensor signal 2</p> |
| | | | | | Turn the steering to the left | <p style="text-align: right;">SKIB3828E</p> <p>A: Sensor signal 1 B: Sensor signal 2</p> |
| 24 (B/R) | Ground | Sensor signal 2 | Input | ON | Turn the steering to the right | <p style="text-align: right;">SKIB3827E</p> <p>A: Sensor signal 1 B: Sensor signal 2</p> |
| | | | | | Turn the steering to the left | <p style="text-align: right;">SKIB3828E</p> <p>A: Sensor signal 1 B: Sensor signal 2</p> |
| 25 (O) | Ground | Sensor signal 3 | Input | ON | Turn the steering around the neutral position | <p style="text-align: right;">SKIB3829E</p> <p>A: Sensor signal 3 B: Sensor signal 1</p> |

TERMINALS AND REFERENCE VALUE FOR CONTROL UNIT [WITH MOBILE ENTERTAINMENT SYSTEM]

| Terminal (wire color) | | Item | Signal input/ output | Condition | | Reference value |
|--------------------------|--------|-----------------------------------|----------------------------|--------------------|--|-----------------|
| + | - | | | Ignition switch | Operation | |
| 26 (V/W) | Ground | Vehicle speed signal (8-pulse) | Input | ON | When vehicle speed is approx. 40 km/h (25 MPH). | |
| 29 (G/R) | Ground | Ignition signal | Input | ON | - | Battery voltage |
| 30 (BR) | Ground | ACC power supply | Input | ACC | - | Battery voltage |
| 31 (B) | Ground | Ground | - | ON | - | Approx. 0 V |
| 32 (BR/Y) | Ground | Battery power supply | Input | OFF | - | Battery voltage |

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DIAGNOSIS SYSTEM

[WITH MOBILE ENTERTAINMENT SYSTEM]

DIAGNOSIS SYSTEM


PFP:00000

Multifunction Switch Self-Diagnosis Function

NKS004AV

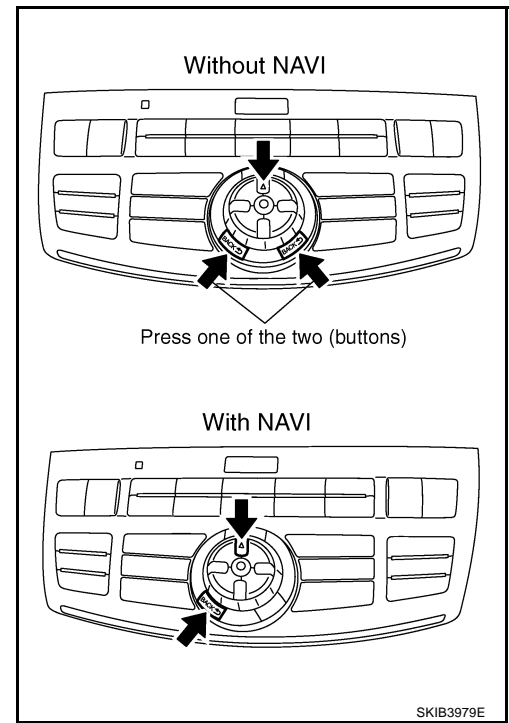
It can check each switch ON/OFF (continuity) operation of multifunction switch.

SELF-DIAGNOSIS MODE

- Turn the ignition switch from OFF position to ACC position. Within 10 seconds, press and hold BACK switch and  switch for 3 seconds or more. Then, when these switches are released, the buzzer sounds, all indicators of multifunction switch turned on, and self-diagnosis mode is started.
- When each switch is pressed, the switch continuity can be checked by sounding the buzzer.

CAUTION:

The hazard switch cannot be checked.



FINISHING SELF-DIAGNOSIS MODE

- When the ignition switch is turned ON, self-diagnosis mode is canceled.

Multi AV System Diagnosis Functions

NKS004AW

- There are 2 diagnosis functions (On board diagnosis and Diagnosis using CONSULT-II). It is necessary to use them properly according to the condition. If the on board diagnosis starts, perform diagnosis with on board diagnosis. If the on board diagnosis does not start (because the display is not displayed, the multifunction switch operation is not activated, etc.), perform diagnosis using CONSULT-II.
- At on board diagnosis, the AV (NAVI) control unit diagnosis function starts when multifunction switch operation and the AV (NAVI) control unit performs the diagnosis for each unit of system. Then, it displays the results on the display.
- At diagnosis using CONSULT-II, the AV (NAVI) control unit diagnosis function starts when the CAN communication and the AV (NAVI) control unit performs the diagnosis for each unit of system.

On Board Diagnosis

DESCRIPTION

NKS004AX

- It has Self-Diagnosis mode for conducting trouble diagnosis automatically and a Confirmation/Adjustment mode for operating manually.
- Self-diagnosis mode diagnoses AV (NAVI) control unit and communication of each unit composing system, and displays self-diagnosis results. NAVI control unit diagnoses communication with GPS antenna simultaneously.
- Confirmation/Adjustment mode is used to monitor the vehicle signals requiring operation and judgement by a technician (malfunctions that cannot be automatically judged by the system), the confirmation/change/adjustment of setting value, the error history of system, and the communication condition of system.

DIAGNOSIS SYSTEM [WITH MOBILE ENTERTAINMENT SYSTEM]

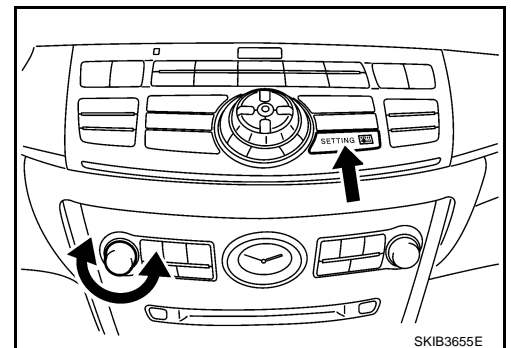
On Board Diagnosis Item

| Mode | Description | | |
|-----------------------------|--|---|---|
| Self Diagnosis | <ul style="list-style-type: none"> ● AV (NAVI) control unit diagnosis and connection diagnosis between AV (NAVI) control unit and each unit ● The DVD-ROM drive diagnosis of NAVI control unit and the connection diagnosis between NAVI control unit and GPS antenna can be performed (DVD-ROM drive will not be diagnosed when no map DVD-ROM is in it.) | | |
| Confirmation/ Adjustment | Display Diagnosis | The tint can be confirmed by the color spectrum bar display. The shading of color can be confirmed by the gradation bar display. | |
| | Vehicle Signals | Diagnosis of signals can be performed for vehicle speed, parking brake, lights, ignition switch, and reverse. | |
| | Speaker Test | The connection of a speaker can be confirmed by test tone. | |
| | Climate Control | Start auto air conditioner system self-diagnosis. | |
| | Navigation* | Steering Angle Adjustment | When there is a difference between the actual turning angle and the vehicle mark turning angle, it can be adjusted. |
| | | Speed Calibration | When there is a difference between the current location mark and the actual location, it can be adjusted. |
| | Error History | The system malfunction and the frequency when occurred in the past are displayed. When the malfunctioning item is selected, the time and place that the selected malfunction last occurred are displayed. | |
| | Synchronizer FES clock | - | |
| | Vehicle CAN Diagnosis | The transmitting/receiving of CAN communication can be monitored. | |
| | AV COMM Diagnosis | The communication condition of each unit of Multi AV system can be monitored. | |
| | Handsfree Phone | The received volume adjustment of hands-free phone, microphone speaker check, and erase memory can be performed. | |
| | Rear Display | Tilt angle adjustment range and automatic retraction ON/OFF when ignition switch is turned OFF can be selected | |
| | Camera Cont. | The signal connected to camera control unit can be checked and the guiding line position that overlaps rear view camera image can be adjusted. | |
| | Bluetooth | The passkey and the name of device can be checked and changed | |
| Delete Unit Connection Log | Erase the connection history of unit and error history | | |

*: With navigation system

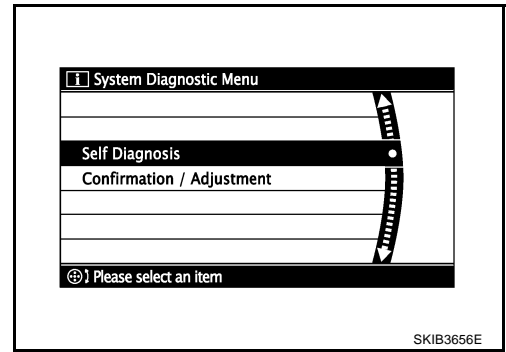
STARTING PROCEDURE

1. Start the engine.
2. Turn the audio system OFF.
3. While pushing the "SETTING" button, turn the volume control dial clockwise or counterclockwise for 40 clicks or more. (When the self-diagnosis mode is started, a short beep will be heard.)
 - Shifting from current screen to previous screen is performed by pushing "BACK" button.



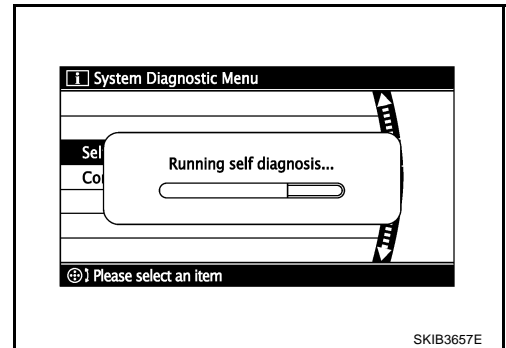
DIAGNOSIS SYSTEM [WITH MOBILE ENTERTAINMENT SYSTEM]

4. The trouble diagnosis initial screen is displayed, and then the items of “Self Diagnosis” and “Confirmation/Adjustment” can be selected.



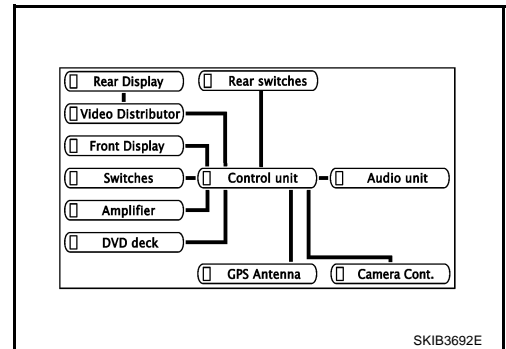
Self Diagnosis

- Start the diagnosis function, and then select “Self Diagnosis”.
 - Self-diagnosis subdivision screen will be shown and the operation will enter the self-diagnosis mode.
 - The bar graph visible on self-diagnosis screen displays progress of the diagnosis.



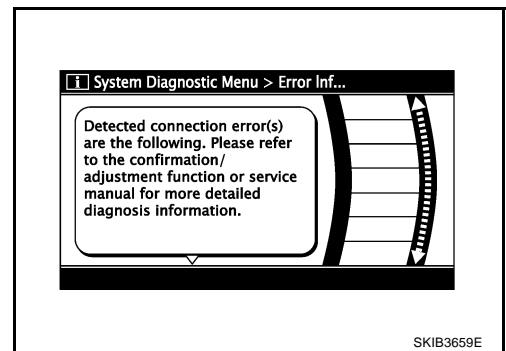
- Diagnostic results are displayed when the self-diagnosis is complete. Each unit name and connection lines between each unit will be colored according to the diagnostic results, as follows.

| Diagnosis results | Unit | Connection line |
|--|--------|-----------------|
| Normal | Green | Green |
| Connection malfunction | Gray | Yellow |
| DVD-ROM drive undiagnosed | Gray | Green |
| DVD-ROM, DVD-ROM drive malfunction | Yellow | Green |
| Unit returned an error ^{Note} | Red | Green |



Note: Only control unit (AV control unit, NAVI control unit) is displayed in red.

- If multiple errors occur at the same time for a single unit, the screen switch colors are determined according to the following order of priority: red > yellow > gray.
- Select a switch on the “Diagnosis results” screen and comments for the trouble diagnosis results will be shown.



DIAGNOSIS SYSTEM

[WITH MOBILE ENTERTAINMENT SYSTEM]

DIAGNOSIS RESULTS

Check the applicable display in the following table, and then repair the malfunctioning parts.

Control Unit Is Red, Gray, or Yellow

| Switch color | Description | Possible malfunction/Action to take |
|-----------------------|---|---|
| Red | AV (NAVI) control unit malfunction is detected | Replace AV (NAVI) control unit Refer to AV-282, "AV (NAVI) Control Unit" |
| Yellow (With NAVI) | <ul style="list-style-type: none"> ● Malfunction is detected on DVD-ROM drive pickup lens in NAVI control unit ● There is dirt and damage on the map disc | <ul style="list-style-type: none"> ● Map disc ● NAVI control unit |
| Gray (With NAVI) | DVD-ROM not inserted is detected | Insert map disc |

Connection Line Between Units Is Yellow (Only 1 Line)

| Applicable parts | Description | Probable malfunction location |
|-----------------------------------|---|--|
| Control unit to Camera Cont. | Camera-connection recognition signal malfunction is detected | <ul style="list-style-type: none"> ● Camera control unit power supply and ground circuit ● Camera-connection recognition signal circuit ● AV (NAVI) Control unit ● Camera control unit |
| Control unit to GPS Antenna | GPS antenna connection malfunction is detected | <ul style="list-style-type: none"> ● GPS antenna feeder ● GPS antenna ● NAVI control unit |
| Control unit to DVD deck | <ul style="list-style-type: none"> ● DVD player power supply and ground circuit malfunction is detected ● Malfunction is detected on communication signal between DVD player and AV (NAVI) control unit | <ul style="list-style-type: none"> ● DVD player power supply and ground circuit ● DVD player ● AV (NAVI) control unit |
| Control unit to Amplifier | <ul style="list-style-type: none"> ● BOSE amp power supply and ground circuit malfunction is detected ● Malfunction is detected on communication signal between BOSE amp and AV (NAVI) control unit | <ul style="list-style-type: none"> ● BOSE amp power supply and ground circuit ● BOSE amp ● AV (NAVI) control unit |
| Control unit to Video Distributor | <ul style="list-style-type: none"> ● Video distributor power supply and ground circuit malfunction is detected ● Malfunction is detected on communication signal between video distributor and AV (NAVI) control unit | <ul style="list-style-type: none"> ● Video distributor power supply and ground circuit ● Video distributor ● AV (NAVI) control unit |
| Control unit to Front Display | <ul style="list-style-type: none"> ● Front display unit power supply and ground circuit malfunction is detected (The diagnosis screen can be checked at rear display) ● Malfunction is detected on communication circuit between front display unit and AV (NAVI) control unit ● Malfunction is detected on communication signal between front display unit and AV (NAVI) control unit | <ul style="list-style-type: none"> ● Front display unit power supply and ground circuit ● Front display unit ● AV (NAVI) control unit |
| Control unit to Rear Switches | <ul style="list-style-type: none"> ● Rear control switch power supply and ground circuit malfunction is detected ● Malfunction is detected on communication signal between rear control switch and AV (NAVI) control unit | <ul style="list-style-type: none"> ● Rear control switch power supply and ground circuit ● Rear control switch ● AV (NAVI) control unit |

DIAGNOSIS SYSTEM

[WITH MOBILE ENTERTAINMENT SYSTEM]

| Applicable parts | Description | Probable malfunction location |
|-----------------------------------|---|--|
| Control unit to Audio unit | <ul style="list-style-type: none"> ● Audio unit power supply and ground circuit malfunction is detected ● Malfunction is detected on communication circuit between audio unit and rear control switch (Models with rear control switch) ● Malfunction is detected on communication circuit between audio unit and BOSE amp (Models without rear control switch) ● Malfunction is detected on communication signal between audio unit and AV (NAVI) control unit | <ul style="list-style-type: none"> ● Audio unit power supply and ground circuit ● Communication circuit between rear control switch and audio unit ● Audio unit ● Rear control switch (with rear control switch) ● BOSE amp (without rear control switch) ● AV (NAVI) Control unit |
| Video distributor to Rear Display | <ul style="list-style-type: none"> ● Rear display unit power supply and ground circuit malfunction is detected ● Malfunction is detected on communication circuit between video distributor and rear display unit ● Malfunction is detected on communication signal between video distributor and rear display unit | <ul style="list-style-type: none"> ● Rear display unit power supply and ground circuit ● Rear display unit ● Video distributor ● Communication circuit between video distributor and rear display unit |

Connection Line Between Units Is Yellow (2 or More Lines)

When 2 or more connection lines between control unit (AV control unit, NAVI control) and each unit are displayed in yellow, these communication system lines may be open or shorted. The malfunctioning parts can be detected by the combination of the connection lines displayed in yellow.

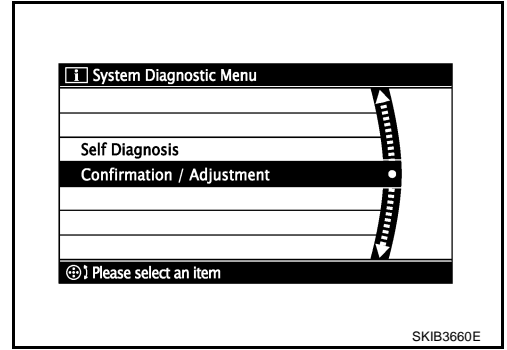
| Applicable parts | Description | Probable malfunction location |
|--|--|---|
| Control unit to <ul style="list-style-type: none"> ● Amplifier ● Rear Switches ● Audio unit | <ul style="list-style-type: none"> ● Malfunction is detected on communication circuit between multifunction switch and camera control unit ● Malfunction is detected on communication circuit between camera control unit and BOSE amp | <ul style="list-style-type: none"> ● Communication circuit between multifunction switch and camera control unit ● Communication circuit between camera control unit and BOSE amp ● Multifunction switch ● Camera control unit ● BOSE amp |
| Control unit to <ul style="list-style-type: none"> ● Amplifier ● Audio unit | <ul style="list-style-type: none"> ● Malfunction is detected on communication circuit between multifunction switch and camera control unit ● Malfunction is detected on communication circuit between camera control unit and BOSE amp | <ul style="list-style-type: none"> ● Communication circuit between multifunction switch and camera control unit ● Communication circuit between camera control unit and BOSE amp ● Multifunction switch ● Camera control unit ● BOSE amp |
| Control unit to <ul style="list-style-type: none"> ● Rear Switches ● Audio unit | Malfunction is detected on communication circuit between BOSE amp and rear control switch | <ul style="list-style-type: none"> ● Communication circuit between BOSE amp and rear control switch ● BOSE amp ● Rear control switch |

DIAGNOSIS SYSTEM [WITH MOBILE ENTERTAINMENT SYSTEM]

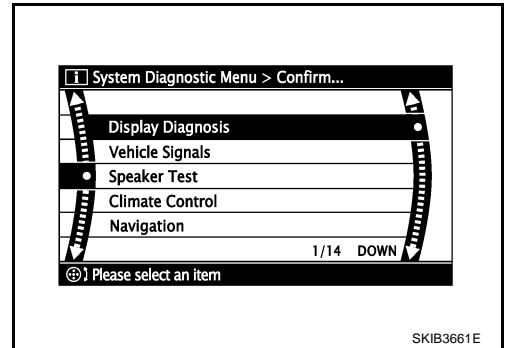
Confirmation/Adjustment Mode

NKS004AZ

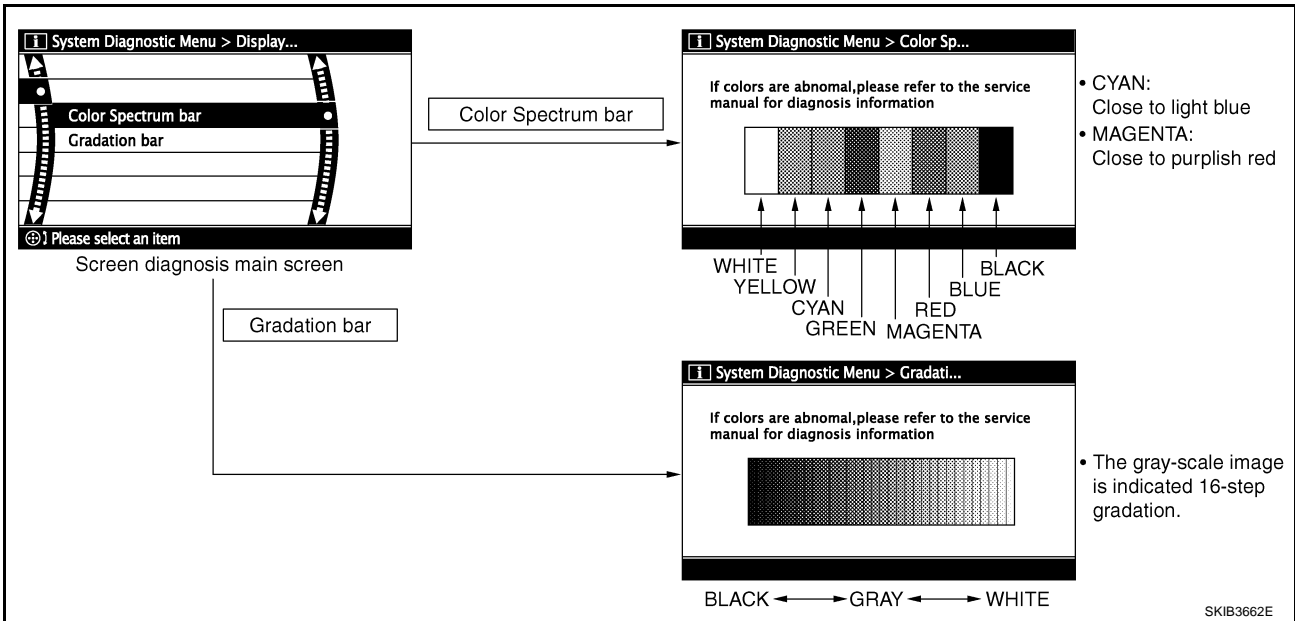
- Confirmation/Adjustment mode can be selected by starting the diagnosis function and selecting "Confirmation/Adjustment". The confirmation/adjustment of each item can be performed.



- Select each screen switch of Confirmation/Adjustment screen to display the relevant diagnosis screen. Press the "BACK" switch to return to the initial screen of Confirmation/Adjustment.



DISPLAY DIAGNOSIS



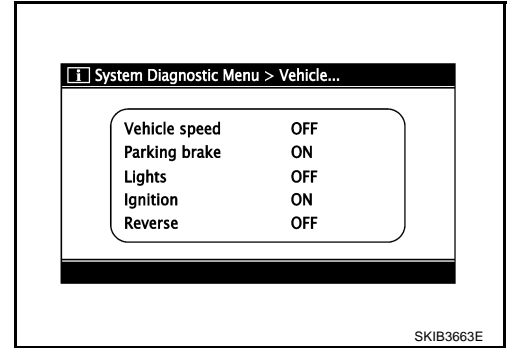
If RGB signal is malfunctioning, the tint of the color bar display is as follows.

- R (red) signal error** : Light blue (Cyan) tint
- G (green) signal error** : Purple (Magenta) tint
- B (blue) signal error** : Yellow tint

DIAGNOSIS SYSTEM [WITH MOBILE ENTERTAINMENT SYSTEM]

VEHICLE SIGNALS

A comparison check can be made of each actual vehicle signal and the signals recognized by the system.



| Diagnosis item | Display | Vehicle status | Remarks |
|----------------|---------|---|--|
| Vehicle speed | ON | Vehicle speed > 0 km/h (0 MPH) | Changes in indication may be delayed by approximately 1.5 seconds. This is normal. |
| | OFF | Vehicle speed = 0 km/h (0 MPH) | |
| | - | Ignition switch in ACC position | |
| Parking brake | ON | Parking brake is applied. | |
| | OFF | Parking brake is released. | |
| Lights | ON | Light switch ON | - |
| | OFF | Light switch OFF | |
| Ignition | ON | Ignition switch ON | - |
| | OFF | Ignition switch in ACC position | |
| Reverse | ON | Selector lever in R position | Changes in indication may be delayed by approximately 1.5 seconds. This is normal. |
| | OFF | Selector lever in any position other than R | |
| | - | Ignition switch in ACC position | |

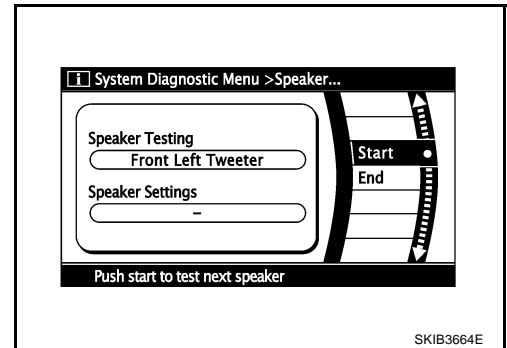
SPEAKER TEST

When selecting "Speaker Test", speaker diagnosis screen is displayed. When pressing "Start", test tone emits from the speaker. At that time, when pressing "Start", test tone emits from next speaker. Then, when pressing the "End", test tone stops.

NOTE:

The frequency of test tone emitted from each speaker is as follows.

- Tweeter** : 3 kHz
- Front door speaker** : 300 Hz
- Rear door speaker** : 1 kHz
- Rear surround speaker** : 1 kHz
- Center speaker** : 1 kHz
- Woofers** : 100 Hz
- Seat speaker** : 1 kHz



CLIMATE CONTROL

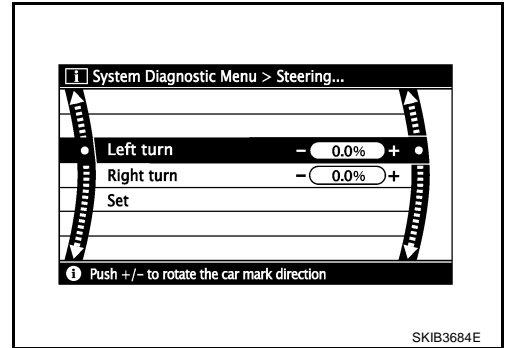
For details, refer to [ATC-56, "Self-diagnosis Function"](#).

DIAGNOSIS SYSTEM [WITH MOBILE ENTERTAINMENT SYSTEM]

NAVIGATION

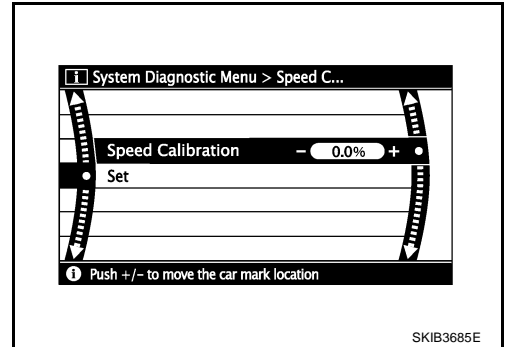
Steering Angle Adjustment

The steering angle output value detected with the gyroscope can be adjusted.



Speed Calibration

Usually the automatic distance correction function adjusts the malfunction in distance caused by the tires wearing down or the tire pressure change. If prompt adjustment is necessary when the tire chains are installed etc., perform this procedure.



ERROR HISTORY

The diagnostic results of “Self-diagnosis” determine if any malfunction occurred between selecting “Self-diagnosis” and displaying “Self-diagnostic Results”.

If an error occurred before the ignition switch was turned ON and does not occur again until “Self-diagnosis” is completed, the trouble diagnosis result will be judged normal. Therefore, errors in the past which cannot be found by “Self-diagnosis”, must be found by checking the “Error record”.

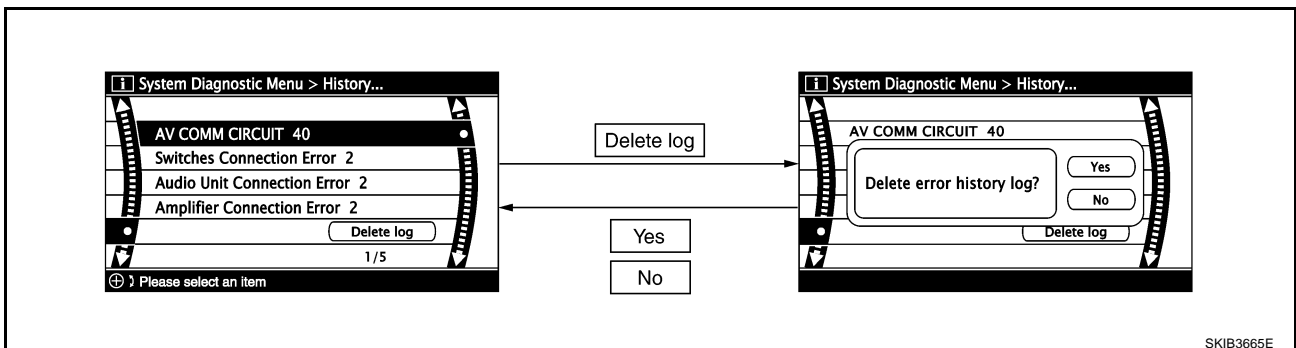
The error history shows the error occurrence frequency in past. The frequency of occurrence is displayed by 2 types: the count down type and the count up type. Select either type according to the error item.

In “Error History” of models with NAVI, time and place that the selected error last occurred are displayed. Be careful about the following.

- If there is a malfunction with the GPS antenna circuit board in the NAVI control unit, the correct date of occurrence may not be able to be displayed.
- Place of the error occurrence is represented by the position of the current location mark at the time an error occurred. If current location mark has deviated from the correct position, then the place of the error occurrence cannot be located correctly.

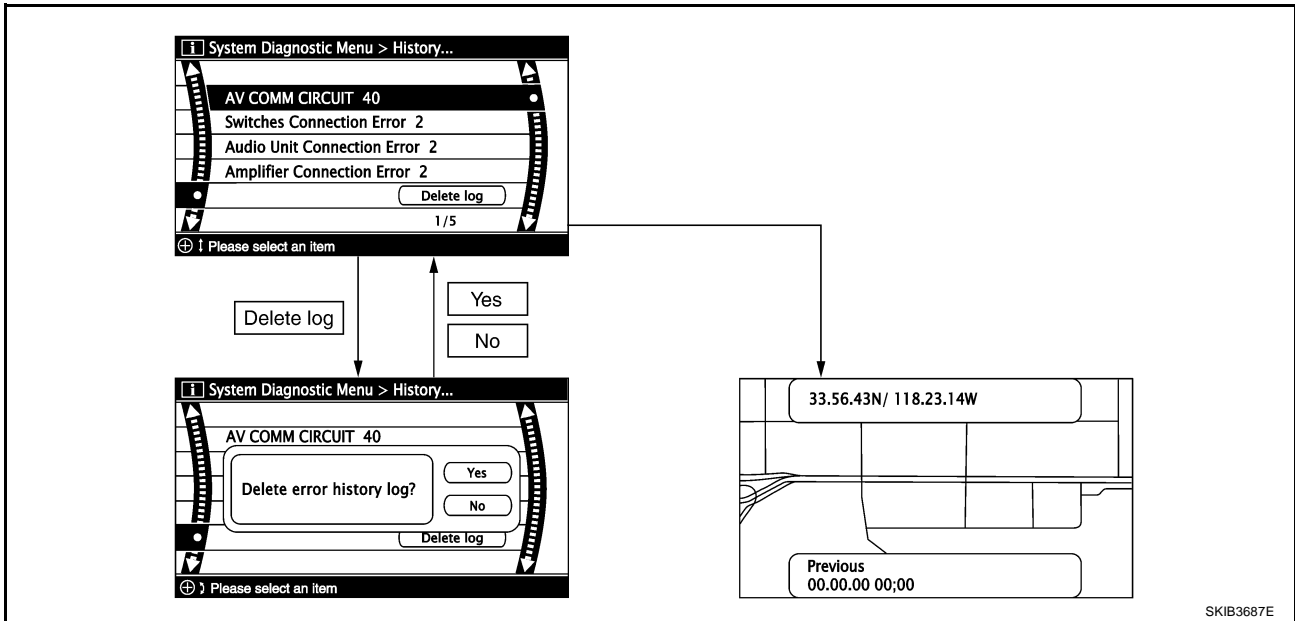
Transition Screen

Without NAVI



DIAGNOSIS SYSTEM [WITH MOBILE ENTERTAINMENT SYSTEM]

With NAVI



Count Down Type

- When the error is detected, set the counter to 40. If the system is normal when turning the ignition switch ON, the counter decreases by 1.
- The lower limit of the counter is 1. It can be reset to 0 by “Delete log” switch or CONSULT-II.

Count Up Type

- When the ignition switch is turned ON if the error is detected, the counter increases 1. Even if it is normal when the ignition switch is turned ON the next time, the counter does not decrease.
- The upper limit of the counter is 50. 51 or more is displayed as 50. It can be reset to 0 by “Delete log” switch or CONSULT-II.

| Display type of occurrence frequency | Error history display item |
|--------------------------------------|--|
| Count down type | CAN_COMM_CIRCUIT, CONTROL UNIT (CAN), AV COMM CIRCUIT, CONTROL UNIT (AV) |
| Count up type | Other than the above |

Error Item

Some error items may be displayed simultaneously according to the cause. If some error items are displayed simultaneously, the detection of the cause can be performed by the combination of display items

| Error item | Description | Possible cause/Action to take |
|--|---|---|
| CAN_COMM_CIRCUIT | CAN communication malfunction is detected | Perform the diagnosis using CONSULT-II, and then repair the malfunctioning parts based on diagnostic results. Refer to AV-243. "SELF-DIAG RESULTS" |
| CONTROL UNIT (CAN) | CAN initial diagnosis malfunction is detected | Replace AV (NAVI) control unit Refer to AV-282. "AV (NAVI) Control Unit" |
| CONTROL UNIT (AV) | AV communication circuit initial diagnosis malfunction is detected | Replace AV (NAVI) control unit Refer to AV-282. "AV (NAVI) Control Unit" |
| <ul style="list-style-type: none"> ● AV COMM CIRCUIT ● Switches Connection Error ● Video Distributor Connection Error ● DVD Deck Connection Error ● Audio Unit Connection Error ● Amplifier Connection Error ● Rearview Camera Connection Error | Malfunction is detected on communication circuit between AV (NAVI) control unit and video distributor | <ul style="list-style-type: none"> ● Communication circuit between AV (NAVI) control unit and video distributor ● AV (NAVI) control unit ● Video distributor |

DIAGNOSIS SYSTEM

[WITH MOBILE ENTERTAINMENT SYSTEM]

| Error item | Description | Possible cause/Action to take |
|--|---|---|
| <ul style="list-style-type: none"> ● AV COMM CIRCUIT ● Switches Connection Error ● DVD Deck Connection Error ● Audio Unit Connection Error ● Amplifier Connection Error ● Rearview Camera Connection Error | <p>Malfunction is detected on communication circuit between video distributor and DVD player</p> | <ul style="list-style-type: none"> ● Communication circuit between video distributor and DVD player ● Video distributor ● DVD player |
| <ul style="list-style-type: none"> ● AV COMM CIRCUIT ● Switches Connection Error ● Audio Unit Connection Error ● Amplifier Connection Error ● Rearview Camera Connection Error | <p>Malfunction is detected on communication circuit between DVD player and multifunction switch</p> | <ul style="list-style-type: none"> ● Communication circuit between DVD player and multifunction switch ● DVD player ● Multifunction switch |
| <ul style="list-style-type: none"> ● AV COMM CIRCUIT ● Audio Unit Connection Error ● Amplifier Connection Error ● Rearview Camera Connection Error | <p>Malfunction is detected on communication circuit between multifunction switch and camera control unit</p> | <ul style="list-style-type: none"> ● Communication circuit between multifunction switch and camera control unit ● Multifunction switch ● Camera control unit |
| <ul style="list-style-type: none"> ● AV COMM CIRCUIT ● Audio Unit Connection Error ● Amplifier Connection Error | <p>Malfunction is detected on communication circuit between camera control unit and BOSE amp</p> | <ul style="list-style-type: none"> ● Communication circuit between camera control unit and BOSE amp ● Camera control unit ● BOSE amp |
| <ul style="list-style-type: none"> ● AV COMM CIRCUIT ● Audio Unit Connection Error | <p>With rear control switch</p> <ul style="list-style-type: none"> ● Audio unit power supply and ground circuit malfunction is detected ● Malfunction is detected on communication circuit between BOSE amp and rear control switch ● Malfunction is detected on communication circuit between rear control switch and audio unit ● Malfunction is detected on communication signal between audio unit and AV (NAVI) control unit | <ul style="list-style-type: none"> ● Communication circuit between BOSE amp and rear control switch ● Communication circuit between rear control switch and audio unit ● BOSE amp ● Rear control switch ● Audio unit ● AV (NAVI) control unit |
| | <p>Without rear control switch</p> <ul style="list-style-type: none"> ● Audio unit power supply and ground circuit malfunction is detected ● Malfunction is detected on communication circuit between BOSE amp and audio unit ● Malfunction is detected on communication signal between audio unit and AV (NAVI) control unit | <ul style="list-style-type: none"> ● Audio unit power supply and ground circuit ● Communication circuit between BOSE amp and audio unit ● Audio unit ● AV (NAVI) control unit ● BOSE amp |
| <ul style="list-style-type: none"> ● AV COMM CIRCUIT ● Video Distributor Connection Error | <ul style="list-style-type: none"> ● Video distributor power supply and ground circuit malfunction is detected ● Malfunction is detected on communication signal between video distributor and AV (NAVI) control unit | <ul style="list-style-type: none"> ● Video distributor power supply and ground circuit ● Video distributor ● AV (NAVI) control unit |
| <ul style="list-style-type: none"> ● AV COMM CIRCUIT ● Rearview Camera Connection Error | <ul style="list-style-type: none"> ● Camera control unit power supply and ground circuit malfunction is detected ● Malfunction is detected on communication signal between camera control unit and AV (NAVI) control unit | <ul style="list-style-type: none"> ● Camera control unit power supply and ground circuit ● Camera control unit ● AV (NAVI) control unit |

A
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L
M

AV

DIAGNOSIS SYSTEM

[WITH MOBILE ENTERTAINMENT SYSTEM]

| Error item | Description | Possible cause/Action to take |
|---|---|---|
| <ul style="list-style-type: none"> ● AV COMM CIRCUIT ● Switches Connection Error | <ul style="list-style-type: none"> ● Multifunction switch power supply and ground circuit malfunction is detected ● Malfunction is detected on communication signal between multifunction switch and AV (NAVI) control unit | <ul style="list-style-type: none"> ● Multifunction switch power supply and ground circuit ● Multifunction switch ● AV (NAVI) control unit |
| <ul style="list-style-type: none"> ● AV COMM CIRCUIT ● DVD Deck Connection Error | <ul style="list-style-type: none"> ● DVD player power supply and ground circuit malfunction is detected ● Malfunction is detected on communication signal between DVD player and AV (NAVI) control unit | <ul style="list-style-type: none"> ● DVD player power supply and ground circuit ● DVD player ● AV (NAVI) control unit |
| <ul style="list-style-type: none"> ● AV COMM CIRCUIT ● Amplifier Connection Error | <ul style="list-style-type: none"> ● BOSE amp power supply and ground circuit malfunction is detected ● Malfunction is detected on communication signal between BOSE amp and AV (NAVI) control unit | <ul style="list-style-type: none"> ● BOSE amp power supply and ground circuit ● BOSE amp ● AV (NAVI) control unit |
| Front Display Connection Error | <ul style="list-style-type: none"> ● Front display unit power supply and ground circuit malfunction is detected ● Malfunction is detected on communication circuit between front display unit and AV (NAVI) control unit ● Malfunction is detected on communication signal between front display unit and AV (NAVI) control unit | <ul style="list-style-type: none"> ● Front display unit power supply and ground circuit ● Communication circuit between front display unit and AV (NAVI) control unit ● Front display unit ● AV (NAVI) control unit |
| Rear Display Connection Error | <ul style="list-style-type: none"> ● Rear display unit power supply and ground circuit malfunction is detected ● Malfunction is detected on communication circuit between rear display unit and video distributor ● Malfunction is detected on communication signal between rear display unit and video distributor | <ul style="list-style-type: none"> ● Rear display unit power supply and ground circuit ● Rear display unit ● Video distributor ● Communication circuit between rear display unit and video distributor |
| GPS Antenna Error | GPS antenna connection malfunction is detected | <ul style="list-style-type: none"> ● GPS antenna feeder ● GPS antenna ● NAVI control unit |
| Camera Control Unit Connection Error | Camera and connection recognition signal circuit malfunction is detected | <ul style="list-style-type: none"> ● Camera-connection recognition signal circuit ● Camera control unit ● AV (NAVI) control unit |
| FLASH-ROM Error Of Control Unit | AV (NAVI) control unit malfunction is detected | Replace AV (NAVI) control unit Refer to AV-282, "AV (NAVI) Control Unit" |
| Connection Of Gyro | NAVI control unit malfunction is detected | Replace NAVI control unit Refer to AV-282, "AV (NAVI) Control Unit" |
| GPS Communication Error | GPS malfunction is detected | If the symptoms such as the GPS receipt malfunction occur, intermittent malfunction caused by strong radio interference may be detected. If the malfunction always occurs, replace NAVI control unit. |
| GPS ROM Error | | |
| GPS RAM Error | | |
| GPS RTC Error | | |

DIAGNOSIS SYSTEM [WITH MOBILE ENTERTAINMENT SYSTEM]

| Error item | Description | Possible cause/Action to take |
|-----------------------------------|---|---|
| DVD-ROM Communication Error | <ul style="list-style-type: none"> Malfunction is detected on DVD-ROM drive pickup lens in NAVI control unit There is dirt and damage on the map disc | <ul style="list-style-type: none"> Map disc NAVI control unit Refer to AV-282, "AV (NAVI) Control Unit" |
| DVD-ROM Read Error | | |
| DVD-ROM Disc Error | | |
| DVD-ROM Mechanism not Detected | | |
| DVD-ROM Mechanism Error | | |
| DVD-ROM Focus Error | | |
| DVD-ROM TOC Error | | |
| DVD-ROM Seek Error | | |
| DVD-ROM Error Correction Error | | |
| DVD-ROM Data Transfer Error | | |
| DVD-ROM Data Error | | |
| DVD-ROM Time-out | | |
| DVD-ROM Loading / Eject Error | | |
| CAN Controller Memory Error | AV (NAVI) control unit malfunction is detected | Replace AV (NAVI) control unit Refer to AV-282, "AV (NAVI) Control Unit" |
| Bluetooth Module Connection Error | | |

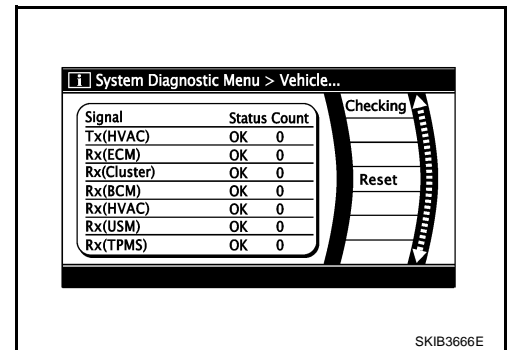
VEHICLE CAN DIAGNOSIS

- CAN communication status and error counter is displayed.
- Error counter displays 0 if any malfunction is not detected in the past. If the malfunction is detected, it displays 40. When turning the ignition switch ON, if it is normal, it displays 39. The lower limit of the counter is 1.
- If it is reset, the error counter is deleted.

| Items | Display (Current) | Error counter (Past) |
|--------------|-------------------|----------------------|
| Tx (HVAC) | OK /??? | 0 - 40 |
| Rx (ECM) | OK /??? | 0 - 40 |
| Rx (Cluster) | OK /??? | 0 - 40 |
| Rx (BCM) | OK /??? | 0 - 40 |
| Rx (HVAC) | OK /??? | 0 - 40 |
| Rx (USM) | OK /??? | 0 - 40 |
| Rx (TPMS) | OK /??? | 0 - 40 |

NOTE:

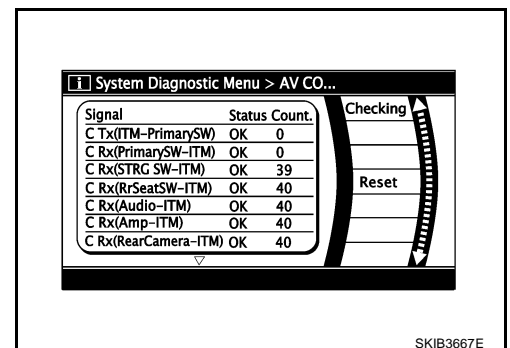
??? indicates "UNKWN".



AV COMM DIAGNOSIS

- Displays the communication condition between AV (NAVI) control unit (master unit) and each unit and between audio unit (sub-master unit) and each unit.
- Error counter displays 0 if any malfunction is not detected in the past. If the malfunction is detected, it displays 40. When turning the ignition switch ON, if it is normal, it displays 39. The lower limit of the counter is 1.
- If it is reset, the error counter is deleted.

| Items | Status (Current) | Counter (Past) |
|----------------------|------------------|----------------|
| C Tx (ITM-PrimarySW) | OK /??? | 0 - 40 |
| C Rx (PrimarySW-ITM) | OK /??? | 0 - 40 |
| C Rx (STRG SW-ITM) | OK /??? | 0 - 40 |



DIAGNOSIS SYSTEM

[WITH MOBILE ENTERTAINMENT SYSTEM]

| Items | Status (Current) | Counter (Past) |
|------------------------|------------------|----------------|
| C Rx (RrSeatSW-ITM) | OK /??? | 0 - 40 |
| C Rx (Audio-ITM) | OK /??? | 0 - 40 |
| C Rx (Amp-ITM) | OK /??? | 0 - 40 |
| C Rx (RearCamera-ITM) | OK /??? | 0 - 40 |
| C Rx (DVD-ITM) | OK /??? | 0 - 40 |
| C Rx (Video DIST-ITM) | OK /??? | 0 - 40 |
| C Rx (Remote Cont-ITM) | OK /??? | 0 - 40 |
| C Rx (Amp-Audio) | OK /??? | 0 - 40 |
| C Rx (DVD-Audio) | OK /??? | 0 - 40 |

ITM: AV (NAVI) control unit

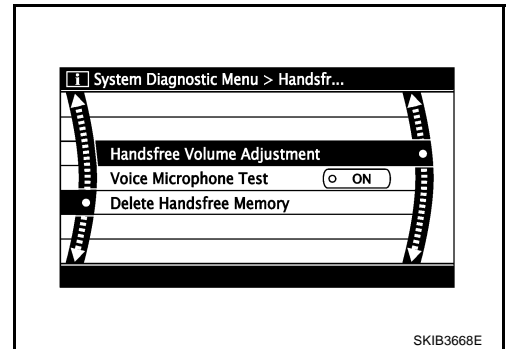
NOTE:

??? indicates "UNKWN".

HANDSFREE PHONE

Handsfree Volume Adjustment

The received volume adjustment of hands-free phone can be adjusted to Low, Medium, and High settings.



Voice Microphone Test

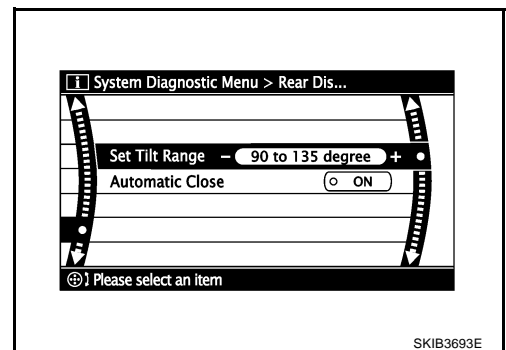
When this function is turned ON, the voice that is input to microphone is output to front speaker via TEL voice signal line. The microphone and TEL voice signal line can be checked.

Delete Handsfree Memory

Erase the memory related to the hands-free phone.

REAR DISPLAY

- Tilt angle (90 to 135 degrees, 105 to 135 degrees) of rear seat display can be set.
- The automatic retraction of rear seat display can be set.



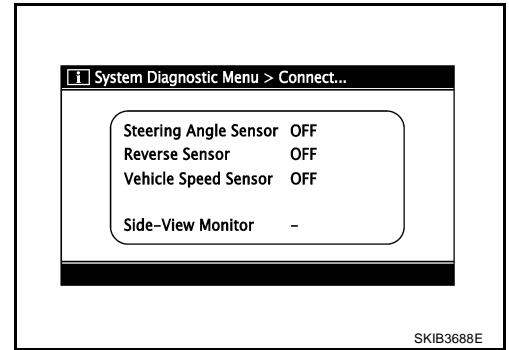
DIAGNOSIS SYSTEM [WITH MOBILE ENTERTAINMENT SYSTEM]

CAMERA CONT.

There are 2 functions: "Connection Confirmation", "Adjust offset of rear view camera".

Connection Confirmation

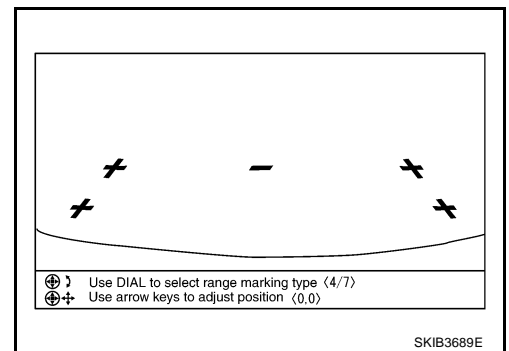
The input signals of steering angle sensor signal, reverse signal, and vehicle speed signal can be checked.



| Diagnosis item | Display | Vehicle status |
|-----------------------|---------|---|
| Steering Angle Sensor | ON | It turns ON when the steering is turning with the ignition switch ON (Once it turns ON, it does not change during Connection Confirmation mode) |
| | OFF | Turn ignition switch ACC It turns OFF when the steering is not turning with the ignition switch ON |
| | — | Rear view monitor connection confirmation signal malfunction |
| Reverse Sensor | ON | Selector lever in R position with ignition switch ON |
| | OFF | Turn ignition switch ACC Selector lever in any position other than R with ignition switch ON |
| | — | Rear view monitor connection confirmation signal malfunction |
| Vehicle Speed Sensor | ON | When vehicle speed is 0 km/h or more with ignition switch ON |
| | OFF | Turn ignition switch ACC When vehicle speed is 0 km/h with ignition switch ON |
| | — | Camera-connection recognition signal malfunction |

Adjust Offset of Rear View Camera

If the adjustment of rear view monitor guiding line display position is necessary when rear view camera is removed, use this mode to adjust it.

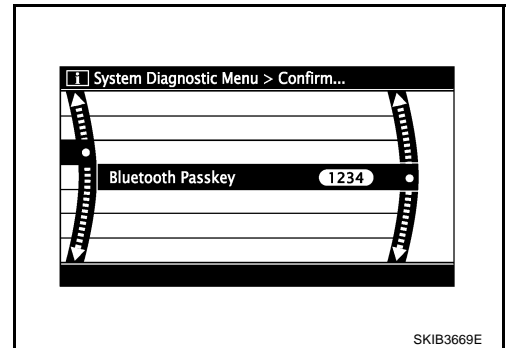


DIAGNOSIS SYSTEM [WITH MOBILE ENTERTAINMENT SYSTEM]

BLUETOOTH

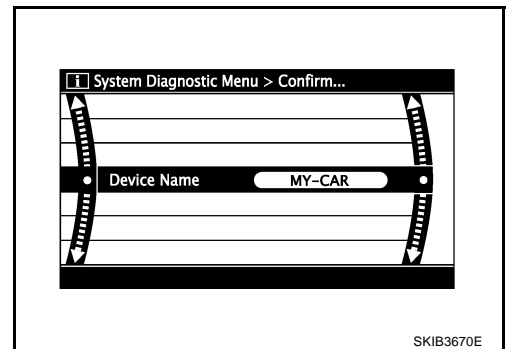
Confirm/Change Passkey

- The passkey of Bluetooth can be confirmed and changed.
- The passkey can be changed by four digits within 0 to 9.



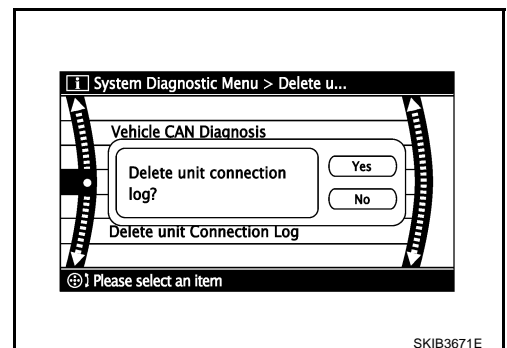
Confirm/Change Device Name

- The device name of Bluetooth can be confirmed and changed.
- The device name can be changed by sixteen digits within A to Z (small characters can be used) and - (hyphen).



DELETE UNIT CONNECTION LOG

Erase the connection history of unit and error history that is recorded in AV (NAVI) control unit (clear the connection history of the removed unit).

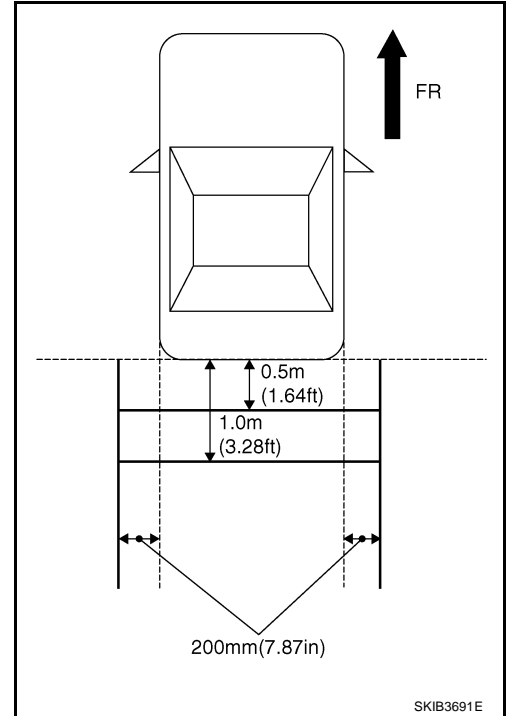


DIAGNOSIS SYSTEM [WITH MOBILE ENTERTAINMENT SYSTEM]

Rear View Monitor Guiding Line Adjustment

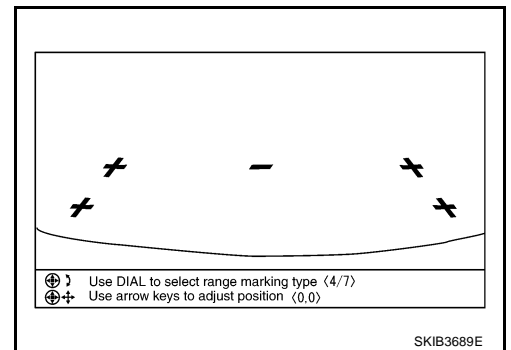
NKS004B0

1. Draw lines on rearward area of the vehicle passing through the following points: 20 cm (7.87 in) from both sides of the vehicle, and 0.5 m (1.64 ft), 1.0 m (3.28 ft) from the rear end of the bumper.
2. Set into "Adjust offset of rear view camera" mode of Confirmation/Adjustment mode.



3. Rotate the center dial, and then select the guiding line pattern so that its angle is aligned with the correction line of the rear of the vehicle.

Selected pattern : 7



4. Make fine adjustment to the correction line of the rear of the vehicle with up/down/left/right switches so that its position is aligned with the guiding line. Press "OK" switch and record the adjusted guiding line position to the camera control unit.

Up/Down adjustment range : -20 - 20

Left/Right adjustment range : -20 - 20

CAUTION:

Never operate other function such as pressing BACK while writing index data.

If Confirmation/Adjustment mode does not function in the above procedure, perform one of the following service to adjust the index again.

- Remove battery for five min. Then reconnect battery.
- Remove camera control unit connector for five min. Then reconnect camera control unit connector.

A
B
C
D
E
F
G
H
I
J
AV
L
M

DIAGNOSIS SYSTEM [WITH MOBILE ENTERTAINMENT SYSTEM]

NKS004B1

CONSULT-II Functions (Multi AV)

CONSULT-II can display each diagnostic item using the diagnostic test modes shown following.

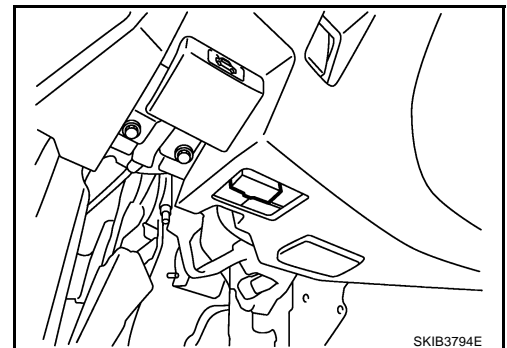
| Diagnosis mode | Description |
|-----------------------|--|
| SELF DIAG RESULTS | <ul style="list-style-type: none"> Performs the connection diagnosis of communication circuit between AV (NAVI) control unit and system and displays the current and past malfunctions collectively. The DVD-ROM drive diagnosis of NAVI control unit and the connection diagnosis between NAVI control unit and GPS antenna can be performed (DVD-ROM drive will not be diagnosed when no map DVD-ROM is in it) |
| DATA MONITOR | The diagnosis of vehicle signal that input to the AV (NAVI) control unit can be performed |
| CAN DIAG SUPPORT MNTR | The transmitting/receiving of CAN communication can be monitored. Refer to LAN-44. "CAN Diagnostic Support Monitor" . |
| AV COMM MONITOR | The transmitting/receiving of a system can be monitored |
| ECU PART NUMBER | The part number of AV (NAVI) control unit can be checked |

OPERATION PROCEDURE

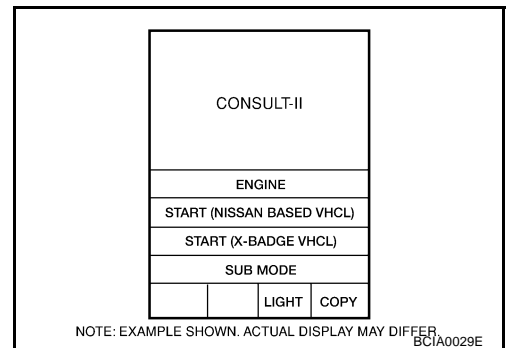
CAUTION:

If CONSULT-II is used with no connection of CONSULT-II CONVERTER, malfunctions might be detected in self-diagnosis depending on control unit which carry out CAN communication.

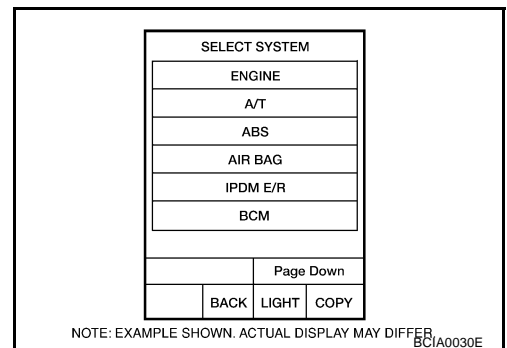
- Turn ignition switch OFF.
- Connect CONSULT-II and CONSULT-II CONVERTER to data link connector, and turn ignition switch ON.



- Touch "START (NISSAN BASED VHCL)".

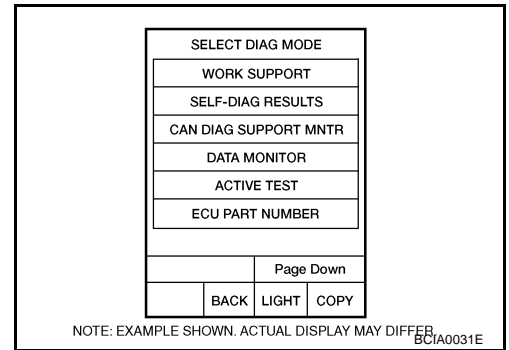


- Touch "MULTI AV"
If "MULTI AV" is not indicated, check the following item.
 - AV (NAVI) control unit power supply and ground circuit.
 - CONSULT-II data link connector (DLC) circuit
Refer to [LAN-42. "Precautions When Using CONSULT-II"](#) .



DIAGNOSIS SYSTEM [WITH MOBILE ENTERTAINMENT SYSTEM]

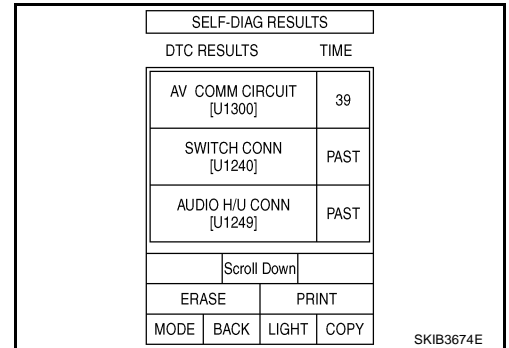
5. Select diagnosis item on "SELECT DIAG MODE" screen.



SELF-DIAG RESULTS

The self-diagnosis is started and self-diagnostic results are displayed by touching "START" after selecting "SELF-DIAG RESULTS".

- In CONSULT-II self-diagnosis, self-diagnostic results and error history are displayed collectively.
- The current malfunction indicates "CRNT". The past malfunction indicates "PAST".
- If DTC [U1000], [U1300] are detected, "0" is displayed at TIME. If it is normal the next time ignition switch is ON of next time, add 1 to the TIME.



Display Item of Self-Diagnostic Results

Self-diagnostic results may be displayed simultaneously according to the cause. If some error items are displayed simultaneously, the detection of the cause can be performed by the combination of display items

| Error item | Description | Possible cause/Action to take |
|--|---|---|
| CAN_COMM_CIRCUIT [U1000] | CAN communication malfunction is detected | Print out the self-diagnostic results and go to LAN-42, "Precautions When Using CONSULT-II" . |
| CONTROL UNIT (CAN) [U1010] | CAN initial diagnosis malfunction is detected | Replace AV (NAVI) control unit Refer to AV-282, "AV (NAVI) Control Unit" |
| CONTROL UNIT (AV) [U1310] | AV communication circuit initial diagnosis malfunction is detected | Replace AV (NAVI) control unit Refer to AV-282, "AV (NAVI) Control Unit" |
| <ul style="list-style-type: none"> ● AV COMM CIRCUIT [U1300] ● SWITCH CONN [U1240] ● VIDEO DIST CONN [U1246] ● DVD DECK CONN [U1248] ● AUDIO H/U CONN [U1249] ● AMP CONN [U124E] ● REAR CAMERA CONN [U1252] | Malfunction is detected on communication circuit between AV (NAVI) control unit and video distributor | <ul style="list-style-type: none"> ● Communication circuit between AV (NAVI) control unit and video distributor ● AV (NAVI) control unit ● Video distributor |
| <ul style="list-style-type: none"> ● AV COMM CIRCUIT [U1300] ● SWITCH CONN [U1240] ● DVD DECK CONN [U1248] ● AUDIO H/U CONN [U1249] ● AMP CONN [U124E] ● REAR CAMERA CONN [U1252] | Malfunction is detected on communication circuit between video distributor and DVD player | <ul style="list-style-type: none"> ● Communication circuit between video distributor and DVD player ● Video distributor ● DVD player |
| <ul style="list-style-type: none"> ● AV COMM CIRCUIT [U1300] ● SWITCH CONN [U1240] ● AUDIO H/U CONN [U1249] ● AMP CONN [U124E] ● REAR CAMERA CONN [U1252] | Malfunction is detected on communication circuit between DVD player and multifunction switch | <ul style="list-style-type: none"> ● Communication circuit between DVD player and multifunction switch ● DVD player ● Multifunction switch |

DIAGNOSIS SYSTEM [WITH MOBILE ENTERTAINMENT SYSTEM]

| Error item | Description | Possible cause/Action to take |
|---|---|---|
| <ul style="list-style-type: none"> ● AV COMM CIRCUIT [U1300] ● AUDIO H/U CONN [U1249] ● AMP CONN [U124E] ● REAR CAMERA CONN [U1252] | <p>Malfunction is detected on communication circuit between multifunction switch and camera control unit</p> | <ul style="list-style-type: none"> ● Communication circuit between multifunction switch and camera control unit ● Multifunction switch ● Camera control unit |
| <ul style="list-style-type: none"> ● AV COMM CIRCUIT [U1300] ● AUDIO H/U CONN [U1249] ● AMP CONN [U124E] | <ul style="list-style-type: none"> ● Malfunction is detected on communication circuit between camera control unit and BOSE amp | <ul style="list-style-type: none"> ● Communication circuit between camera control unit and BOSE amp ● Camera control unit ● BOSE amp |
| <ul style="list-style-type: none"> ● AV COMM CIRCUIT [U1300] ● AUDIO H/U CONN [U1249] | <p>With rear control switch</p> <ul style="list-style-type: none"> ● Audio unit power supply and ground circuit malfunction is detected ● Malfunction is detected on communication circuit between BOSE amp and rear control switch ● Malfunction is detected on communication circuit between rear control switch and audio unit ● Malfunction is detected on communication signal between audio unit and AV (NAVI) control unit | <ul style="list-style-type: none"> ● Communication circuit between BOSE amp and rear control switch ● Communication circuit between rear control switch and audio unit ● BOSE amp ● Rear control switch ● Audio unit ● AV (NAVI) control unit |
| | <p>Without rear control switch</p> <ul style="list-style-type: none"> ● Audio unit power supply and ground circuit malfunction is detected ● Malfunction is detected on communication circuit between BOSE amp and audio unit ● Malfunction is detected on communication signal between audio unit and AV (NAVI) control unit | <ul style="list-style-type: none"> ● Audio unit power supply and ground circuit ● Communication circuit between BOSE amp and audio unit ● Audio unit ● AV (NAVI) control unit ● BOSE amp |
| <ul style="list-style-type: none"> ● AV COMM CIRCUIT [U1300] ● VIDEO DIST CONN [U1246] | <ul style="list-style-type: none"> ● Video distributor power supply and ground circuit malfunction is detected ● Malfunction is detected on communication signal between video distributor and AV (NAVI) control unit | <ul style="list-style-type: none"> ● Video distributor power supply and ground circuit ● Video distributor ● AV (NAVI) control unit |
| <ul style="list-style-type: none"> ● AV COMM CIRCUIT [U1300] ● REAR CAMERA CONN [U1252] | <ul style="list-style-type: none"> ● Camera control unit power supply and ground circuit malfunction is detected ● Malfunction is detected on communication signal between camera control unit and AV (NAVI) control unit | <ul style="list-style-type: none"> ● Camera control unit power supply and ground circuit ● Camera control unit ● AV (NAVI) control unit |
| <ul style="list-style-type: none"> ● AV COMM CIRCUIT [U1300] ● SWITCH CONN [U1240] | <ul style="list-style-type: none"> ● Multifunction switch power supply and ground circuit malfunction is detected ● Malfunction is detected on communication signal between multifunction switch and AV (NAVI) control unit | <ul style="list-style-type: none"> ● Multifunction switch power supply and ground circuit ● Multifunction switch ● AV (NAVI) control unit |
| <ul style="list-style-type: none"> ● AV COMM CIRCUIT [U1300] ● DVD DECK CONN [U1248] | <ul style="list-style-type: none"> ● DVD player power supply and ground circuit malfunction is detected ● Malfunction is detected on communication signal between DVD player and AV (NAVI) control unit | <ul style="list-style-type: none"> ● DVD player power supply and ground circuit ● DVD player ● AV (NAVI) control unit |

DIAGNOSIS SYSTEM

[WITH MOBILE ENTERTAINMENT SYSTEM]

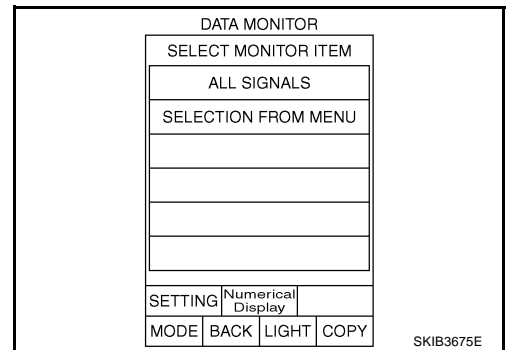
| Error item | Description | Possible cause/Action to take | |
|---|---|---|-------------|
| <ul style="list-style-type: none"> ● AV COMM CIRCUIT [U1300] ● AMP CONN [U124E] | <ul style="list-style-type: none"> ● BOSE amp power supply and ground circuit malfunction is detected ● Malfunction is detected on communication signal between BOSE amp and AV (NAVI) control unit | <ul style="list-style-type: none"> ● BOSE amp power supply and ground circuit ● BOSE amp ● AV (NAVI) control unit | A B |
| FRONT DISP CONN [U1243] | <ul style="list-style-type: none"> ● Front display unit power supply and ground circuit malfunction is detected ● Malfunction is detected on communication circuit between front display unit and AV (NAVI) control unit ● Malfunction is detected on communication signal between front display unit and AV (NAVI) control unit | <ul style="list-style-type: none"> ● Front display unit power supply and ground circuit ● Communication circuit between front display unit and AV (NAVI) control unit ● Front display unit ● AV (NAVI) control unit | C D E |
| REAR DISP CONN [U1247] | <ul style="list-style-type: none"> ● Rear display unit power supply and ground circuit malfunction is detected ● Malfunction is detected on communication circuit between rear display unit and video distributor ● Malfunction is detected on communication signal between rear display unit and video distributor | <ul style="list-style-type: none"> ● Rear display unit power supply and ground circuit ● Rear display unit ● Video distributor ● Communication circuit between rear display unit and video distributor | F G H |
| GPS ANTENNA CONN [U1244] | GPS antenna connection malfunction is detected | <ul style="list-style-type: none"> ● GPS antenna feeder ● GPS antenna ● NAVI control unit | I |
| CAMERA CONT CONN [U1250] | Camera and connection recognition signal circuit malfunction is detected | <ul style="list-style-type: none"> ● Camera-connection recognition signal circuit ● Camera control unit ● AV (NAVI) control unit | J |
| Count Unit FLASH-ROM [U1200] | AV (NAVI) control unit malfunction is detected | Replace AV (NAVI) control unit Refer to AV-282, "AV (NAVI) Control Unit" | AV |
| Gyro NO CONN [U1201] | NAVI control unit malfunction is detected | Replace NAVI control unit Refer to AV-282, "AV (NAVI) Control Unit" | L |
| GPS COMM [U1204] | GPS malfunction is detected | If the symptoms such as the GPS receipt malfunction occur, intermittent malfunction caused by strong radio interference may be detected. If the malfunction always occurs, replace NAVI control unit. | M |
| GPS ROM [U1205] | | | |
| GPS RAM [U1206] | | | |
| GPS RTC [U1207] | | | |

DIAGNOSIS SYSTEM [WITH MOBILE ENTERTAINMENT SYSTEM]

| Error item | Description | Possible cause/Action to take |
|--------------------------------|---|---|
| DVD-ROM COMM [U1208] | <ul style="list-style-type: none"> ● Malfunction is detected on DVD-ROM drive pickup lens in NAVI control unit ● There is dirt and damage on the map disc | <ul style="list-style-type: none"> ● Map disc ● NAVI control unit Refer to AV-282. "AV (NAVI) Control Unit" |
| DVD-ROM READ [U1209] | | |
| DVD-ROM DISC [U120A] | | |
| DVD-ROM MECHA DETECT [U120C] | | |
| DVD-ROM DRIVE MECHA [U120D] | | |
| DVD-ROM FOCUS [U120E] | | |
| DVD-ROM TOC [U120F] | | |
| DVD-ROM SEEK [U1210] | | |
| DVD-ROM ERR CORRECTION [U1211] | | |
| DVD-ROM DATA FORWARD [U1212] | | |
| DVD-ROM DATA [U1213] | | |
| DVD-ROM TIMEOUT [U1214] | | |
| DVD-ROM LOAD [U1215] | | |
| CAN CONT [U1216] | AV (NAVI) control unit malfunction is detected | Replace AV (NAVI) control unit Refer to AV-282. "AV (NAVI) Control Unit" |
| BLUETOOTH CONN [U1217] | | |

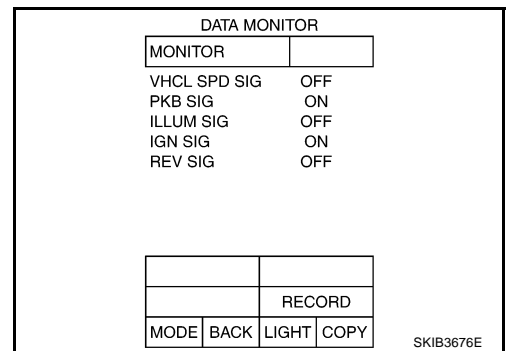
DATA MONITOR

When "DATA MONITOR" is selected, "ALL SIGNALS" and "SELECTION FROM MENU" are displayed.



ALL SIGNALS

- When "ALL SIGNALS" is selected and "START" is touched, the following vehicle signal condition that is input to AV (NAVI) control unit is displayed.
- For each signal, a comparison of actual operating status and the status recognized by the system can be checked.



DIAGNOSIS SYSTEM [WITH MOBILE ENTERTAINMENT SYSTEM]

Display Condition

| Display Item | Display | Vehicle status | Remarks |
|--------------|---------|---|---|
| VHCL SPD SIG | ON | Vehicle speed > 0 km/h (0 MPH) | Changes in indication may be delayed. This is normal. |
| | OFF | Vehicle speed = 0 km/h (0 MPH) | |
| PKB SIG | ON | Parking brake is applied. | |
| | OFF | Parking brake is released. | |
| ILLUM SIG | ON | Light switch ON | - |
| | OFF | Light switch OFF | |
| IGN SIG | ON | Ignition switch ON | - |
| | OFF | Ignition switch in ACC position | |
| REV SIG | ON | Selector lever in R position | Changes in indication may be delayed. This is normal. |
| | OFF | Other than selector lever in R position | |

SELECTION FROM MENU

When "SELECTION FROM MENU" is selected, the vehicle signal display can be selected. After that, the selected vehicle signal condition is displayed when "START" is touched.

| Item to be selected | Description |
|---------------------|------------------------------------|
| VHCL SPD SIG | As well as selecting "ALL SIGNALS" |
| PKB SIG | |
| ILLUM SIG | |
| IGN SIG | |
| REV SIG | |

AV COMM MONITOR

When "AV COMM MONITOR" is selected, "AV&NAVI C/U" and "AUDIO" are displayed.

AV&NAVI C/U

- When "AV&NAVI C/U" is selected, the communication condition from AV (NAVI) control unit to each unit and malfunction counter are displayed.
- Error counter displays OK if any malfunction is not detected in the past. If the malfunction is detected, it displays 0. When turning the ignition switch ON, if it is normal, it displays 1. The upper limit of the counter is 39.

| Items | Display (PRSNT) | Error counter (PAST) |
|---------------|-----------------|----------------------|
| TRANSMIT DIAG | OK / UNKWN | OK / 0 - 39 |
| PANEL SWITCH | OK / UNKWN | OK / 0 - 39 |
| SW SECONDARY | - | - |
| RR CONTROL SW | OK / UNKWN | OK / 0 - 39 |
| STEERING SW | OK / UNKWN | OK / 0 - 39 |
| AUDIO | OK / UNKWN | OK / 0 - 39 |
| SPEAKER AMP | OK / UNKWN | OK / 0 - 39 |
| SIDE CAMERA | - | - |
| REAR CAMERA | OK / UNKWN | OK / 0 - 39 |
| TV TUNER | - | - |
| DVD PLAYER | OK / UNKWN | OK / 0 - 39 |
| VIDEO DIST | OK / UNKWN | OK / 0 - 39 |
| ETC | - | - |

| AV COMM MONITOR | | |
|-----------------|-------|-------------|
| AV&NAVI C/U | | |
| | PRSNT | PAST |
| TRANSMIT DIAG | OK | OK |
| PANEL SWITCH | OK | OK |
| SW SECONDARY | - | - |
| RR CONTROL SW | OK | OK |
| STEERING SW | OK | OK |
| AUDIO | OK | OK |
| SPEAKER AMP | OK | OK |
| SIDE CAMERA | - | - |
| REAR CAMERA | OK | OK |
| PRINT | | Scroll Down |
| MODE | BACK | LIGHT COPY |

SKIB4054E

DIAGNOSIS SYSTEM

[WITH MOBILE ENTERTAINMENT SYSTEM]

| Items | Display (PRSNT) | Error counter (PAST) |
|-------------|-----------------|----------------------|
| FM MULTI | - | - |
| REMOTE CONT | OK / UNKWN | OK / 0 - 39 |

AUDIO

- When "AUDIO" is selected, the communication condition from audio unit to each unit and malfunction counter are displayed.
- Error counter displays OK if any malfunction is not detected in the past. If the malfunction is detected, it displays 0. When turning the ignition switch ON, if it is normal, it displays 1. The upper limit of the counter is 39.

| Items | Display (Current) | Error counter (Past) |
|-------------|-------------------|----------------------|
| TRANSMIT DG | OK / UNKWN | OK / 0 - 39 |
| SPEAKER AMP | OK / UNKWN | OK / 0 - 39 |
| TV TUNER | - | - |
| DVD PLAYER | OK / UNKWN | OK / 0 - 39 |
| MD DECK | - | - |
| CD CHANGER | - | - |
| MD CHANGER | - | - |

| AV COMM MONITOR | | | |
|-----------------|-------|-------|------|
| AUDIO | | | |
| | PRSNT | PAST | |
| TRANSMIT DG | OK | OK | |
| SPEAKER AMP | OK | OK | |
| TV TUNER | - | - | |
| DVD PLAYER | OK | OK | |
| MD DECK | - | - | |
| CD CHANGER | - | - | |
| MD CHANGER | - | - | |
| | | | |
| PRINT | | | |
| MODE | BACK | LIGHT | COPY |

SKIB4055E

ECU PART NUMBER

The part number of AV (NAVI) control unit is displayed.

| ECU PART NUMBER | | | |
|--------------------|------|-------|------|
| 25915-EH010 | | | |
| | | | |
| MODE | BACK | LIGHT | COPY |

SKIB3680E

TROUBLE DIAGNOSIS

[WITH MOBILE ENTERTAINMENT SYSTEM]

TROUBLE DIAGNOSIS

PPF:00004

Multifunction Switch Cannot Be Operated

NKS004B2

1. PERFORM CONSULT-II SELF-DIAGNOSIS

Perform CONSULT-II self-diagnosis and check the malfunction. Refer to [AV-103, "SELF-DIAG RESULTS"](#).

Is there a malfunction?

- YES >> Refer to [AV-103, "Display Item of SELF-DIAG RESULTS"](#).
NO >> Replace multifunction switch

RGB Image Is Not Displayed

NKS004B3

RGB IMAGE IS NOT DISPLAYED ON FRONT AND REAR DISPLAYS

1. DIAGNOSIS USING CONSULT-II

Start CONSULT-II, and make sure that "MULTI AV" is displayed on SELECT SYSTEM screen. Refer to [AV-102, "OPERATION PROCEDURE"](#).

OK or NG

- OK >> Refer to [AV-103, "SELF-DIAG RESULTS"](#).
NG >> Check AV (NAVI) control unit power supply and ground circuit.

ONLY FRONT DISPLAY

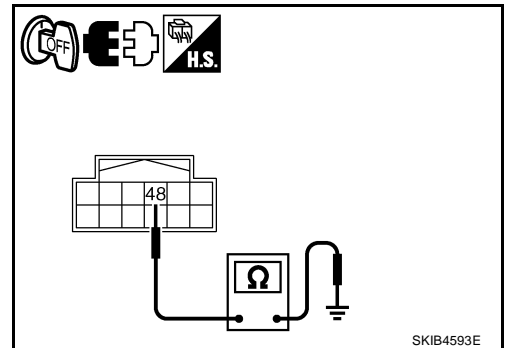
1. CHECK HARNESS BETWEEN AV (NAVI) CONTROL UNIT AND VIDEO DISTRIBUTOR

1. Disconnect AV (NAVI) control unit connector and video distributor connector.
2. Check continuity between video distributor harness connector M207 terminal 48 and ground.

48 – Ground : Continuity should not exist.

OK or NG

- OK >> GO TO 2.
NG >> Repair harness or connector.



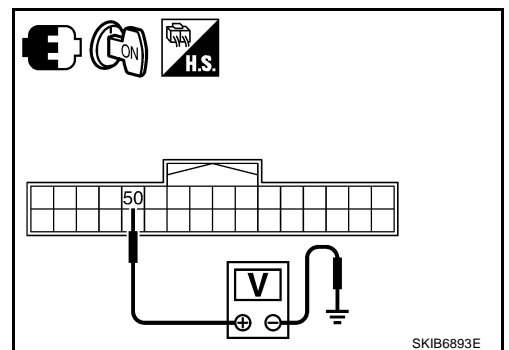
2. CHECK RGB AREA SIGNAL FOR AV (NAVI) CONTROL UNIT

1. Connect AV (NAVI) control unit connector.
2. Turn ignition switch ON.
3. Check voltage between AV (NAVI) control unit harness connector M210 terminal 50 and ground.

50 – Ground : Approx. 5 V

OK or NG

- OK >> GO TO 3.
NG >> Replace AV (NAVI) control unit.



TROUBLE DIAGNOSIS

[WITH MOBILE ENTERTAINMENT SYSTEM]

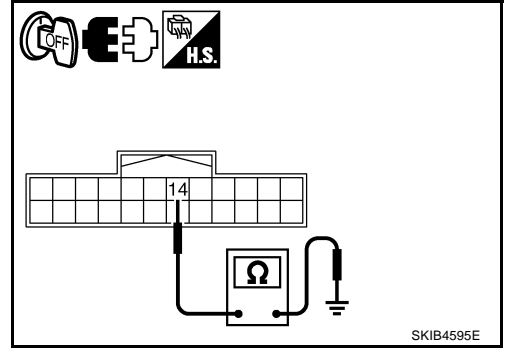
3. CHECK HARNESS BETWEEN VIDEO DISTRIBUTOR AND FRONT DISPLAY UNIT

1. Turn ignition switch OFF.
2. Disconnect front display unit connector.
3. Check continuity between video distributor harness connector M205 terminal 14 and ground.

14 – Ground : Continuity should not exist.

OK or NG

- OK >> GO TO 4.
NG >> Repair harness or connector.



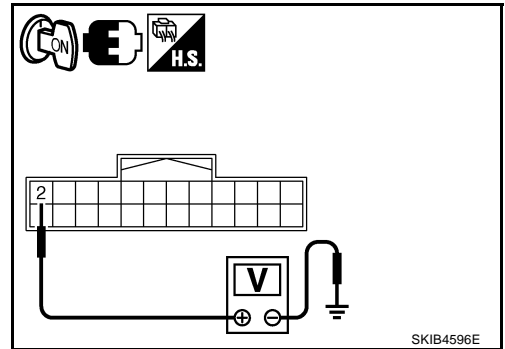
4. CHECK FRONT DISPLAY UNIT

1. Connect front display unit connector.
2. Turn ignition switch ON.
3. Check voltage between front display unit harness connector M203 terminal 2 and ground.

2 – Ground : Approx. 5 V

OK or NG

- OK >> Replace video distributor.
NG >> Replace front display unit.



ONLY REAR DISPLAY

1. CHECK HARNESS BETWEEN VIDEO DISTRIBUTOR AND REAR DISPLAY UNIT

1. Disconnect video distributor connector and rear display unit connector.
2. Check continuity between video distributor harness connector (A) M206 terminal 32 and rear display unit harness connector (B) R102 terminal 17.

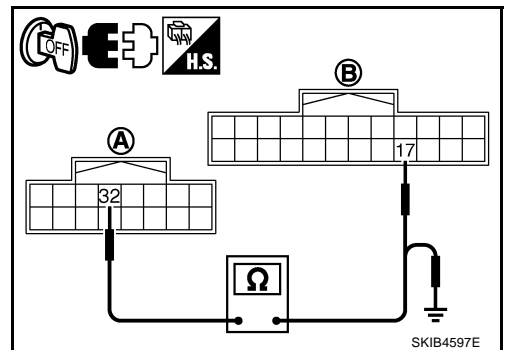
32 – 17 : Continuity should exist.

3. Check continuity between video distributor harness connector (A) M206 terminal 32 and ground.

32 – Ground : Continuity should not exist.

OK or NG

- OK >> GO TO 2.
NG >> Repair harness or connector.



TROUBLE DIAGNOSIS

[WITH MOBILE ENTERTAINMENT SYSTEM]

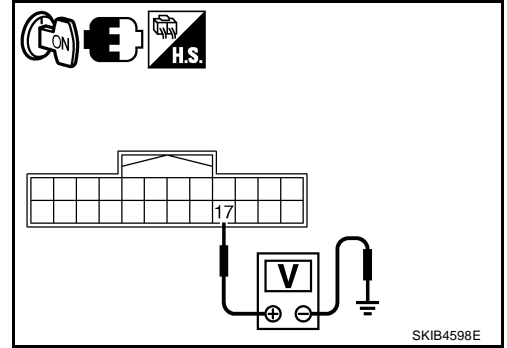
2. CHECK RGB AREA SIGNAL

1. Connect video distributor connector.
2. Turn ignition switch ON.
3. Check voltage between rear display unit harness connector R102 terminal 17 and ground.

17 – Ground : Approx. 5 V

OK or NG

- OK >> Replace rear display unit.
NG >> Replace video distributor.



RGB Screen Is Rolling. ONLY FRONT DISPLAY

1. CHECK REAR DISPLAY IMAGE

Make sure that the rear display image is purple (magenta) tint.

Is it purple (magenta) tint?

- YES >> GO TO 2.
NO >> GO TO 4.

2. CHECK HARNESS BETWEEN VIDEO DISTRIBUTOR AND AV (NAVI) CONTROL UNIT

1. Turn ignition switch OFF.
2. Disconnect video distributor connector and AV (NAVI) control unit connector.
3. Check continuity between video distributor harness connector (A) M207 terminal 45 and AV (NAVI) control unit harness connector (B) M210 terminal 45.

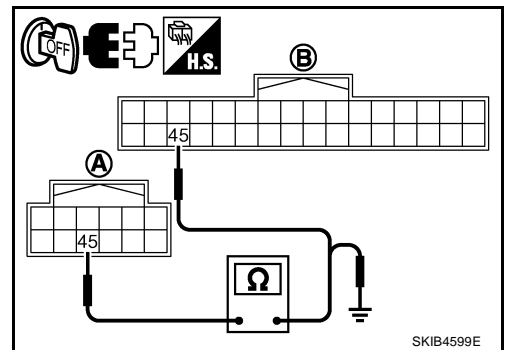
45 – 45 : Continuity should exist.

4. Check continuity between video distributor harness connector (A) M207 terminal 45 and ground.

45 – Ground : Continuity should not exist.

OK or NG

- OK >> GO TO 3.
NG >> Repair harness or connector.



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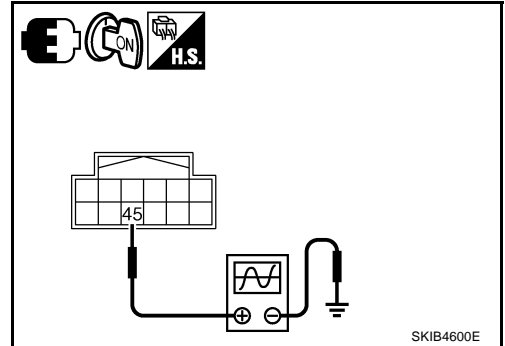
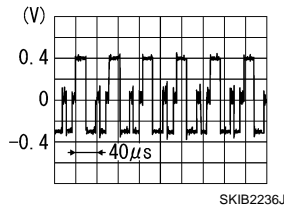
TROUBLE DIAGNOSIS

[WITH MOBILE ENTERTAINMENT SYSTEM]

3. CHECK RGB SIGNAL (G: GREEN)

1. Connect video distributor connector and AV (NAVI) control unit connector.
2. Turn ignition switch ON.
3. Start Confirmation/Adjustment mode. Refer to [AV-231, "Confirmation/Adjustment Mode"](#).
4. Display color bar by selecting "Display Color Spectrum Bar" on DISPLAY DIAGNOSIS screen. Refer to [AV-231, "DISPLAY DIAGNOSIS"](#).
5. Check signal between video distributor harness connector M207 terminal 45 and ground.

45 – Ground:



OK or NG

- OK >> Replace video distributor.
- NG >> Replace AV (NAVI) control unit.

4. CHECK HARNESS BETWEEN VIDEO DISTRIBUTOR AND FRONT DISPLAY UNIT

1. Turn ignition switch OFF.
2. Disconnect video distributor connector and front display unit connector.
3. Check continuity between video distributor harness connector (A) M205 terminal 11 and front display unit harness connector (B) M203 terminal 3.

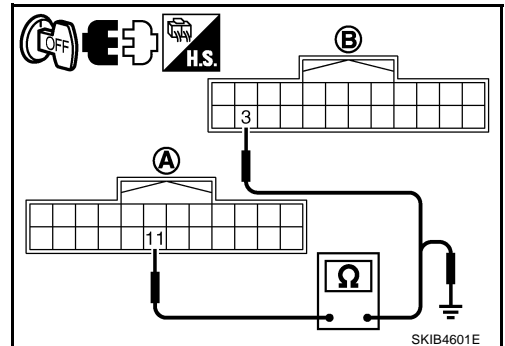
11 – 3 : Continuity should exist.

4. Check continuity between video distributor harness connector (A) M205 terminal 11 and ground.

11 – Ground : Continuity should not exist.

OK or NG

- OK >> GO TO 5.
- NG >> Repair harness or connector.



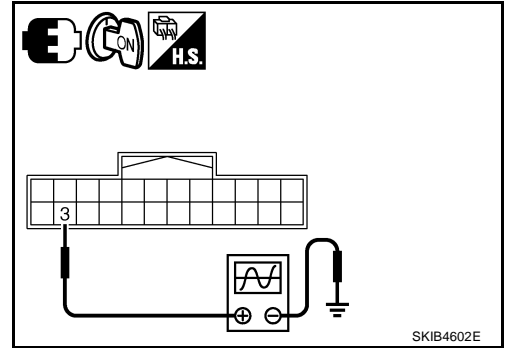
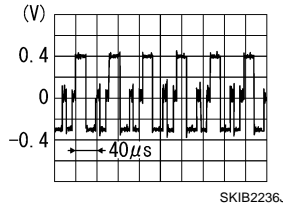
TROUBLE DIAGNOSIS

[WITH MOBILE ENTERTAINMENT SYSTEM]

5. CHECK RGB SIGNAL (G: GREEN)

1. Connect video distributor connector and front display unit connector.
2. Turn ignition switch ON.
3. Start Confirmation/Adjustment mode. Refer to [AV-231, "Confirmation/Adjustment Mode"](#).
4. Display color bar by selecting "Display Color Spectrum Bar" on DISPLAY DIAGNOSIS screen. Refer to [AV-231, "DISPLAY DIAGNOSIS"](#).
5. Check signal between front display unit harness connector M203 terminal 3 and ground.

3 – Ground:



OK or NG

- OK >> Replace front display unit.
- NG >> Replace video distributor.

ONLY REAR DISPLAY

1. CHECK DVD IMAGE

Make sure that the DVD image of rear display is rolling.

Is DVD image rolling?

- YES >> GO TO 2.
- NO >> GO TO 4.

2. CHECK HARNESS BETWEEN VIDEO DISTRIBUTOR AND REAR DISPLAY UNIT

1. Turn ignition switch OFF.
2. Disconnect video distributor connector and rear display unit connector.
3. Check continuity between video distributor harness connector (A) M206 terminal 33 and rear display unit harness connector (B) R102 terminal 15.

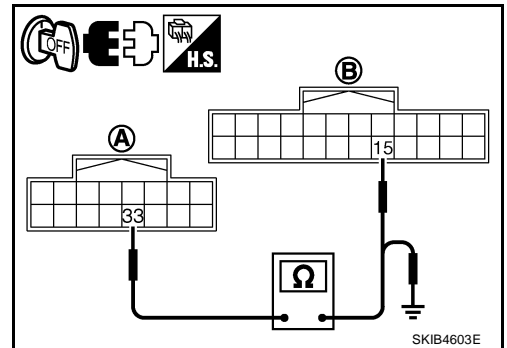
33 – 15 : Continuity should exist.

4. Check continuity between video distributor harness connector (A) M206 terminal 33 and ground.

33 – Ground : Continuity should not exist.

OK or NG

- OK >> GO TO 3.
- NG >> Repair harness or connector.



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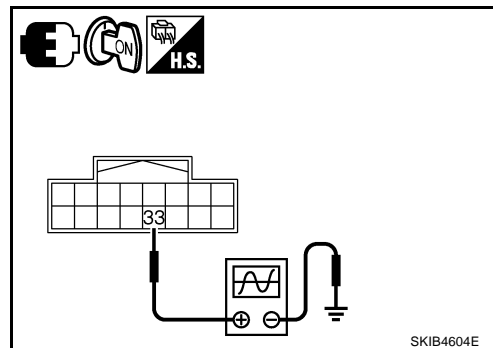
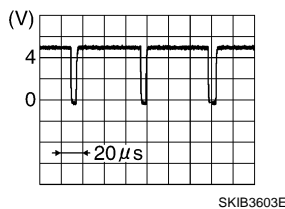
TROUBLE DIAGNOSIS

[WITH MOBILE ENTERTAINMENT SYSTEM]

3. CHECK RGB SYNCHRONIZING SIGNAL

1. Connect video distributor connector and rear display unit connector.
2. Turn ignition switch ON.
3. Displaying RGB image.
4. Check signal between video distributor harness connector M206 terminal 33 and ground.

33 – Ground:



OK or NG

- OK >> Replace rear display unit.
- NG >> Replace video distributor.

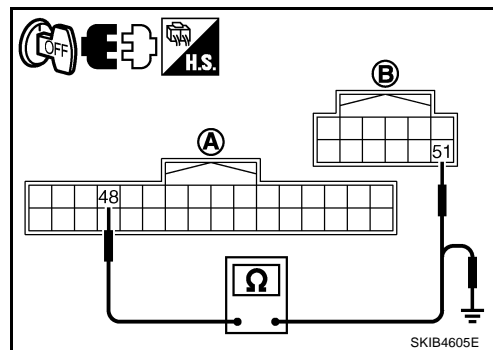
4. CHECK HARNESS BETWEEN AV (NAVI) CONTROL UNIT AND VIDEO DISTRIBUTOR

1. Turn ignition switch OFF.
2. Disconnect AV (NAVI) control unit connector and video distributor connector.
3. Check continuity between AV (NAVI) control unit harness connector (A) M210 terminal 48 and video distributor harness connector (B) M207 terminal 51.

48 – 51 : Continuity should exist.

4. Check continuity between AV (NAVI) control unit harness connector (A) M210 terminal 48 and ground.

48 – Ground : Continuity should not exist.



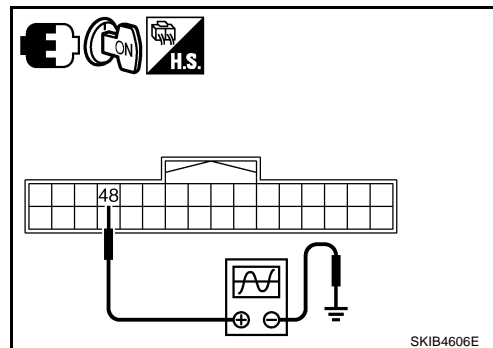
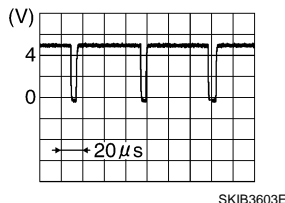
OK or NG

- OK >> GO TO 5.
- NG >> Repair harness or connector.

5. CHECK RGB SYNCHRONIZING SIGNAL FOR AV (NAVI) CONTROL UNIT

1. Connect AV (NAVI) control unit connector and video distributor connector.
2. Turn ignition switch ON.
3. Displaying RGB image.
4. Check signal between AV (NAVI) control unit harness connector M210 terminal 48 and ground.

48 – Ground:



OK or NG

- OK >> Replace video distributor.
- NG >> Replace AV (NAVI) control unit.

TROUBLE DIAGNOSIS

[WITH MOBILE ENTERTAINMENT SYSTEM]

Rear View Monitor Image Is Not Displayed DVD IMAGE IS DISPLAYED

NKS004B5

1. CONSULT-II DIAGNOSIS

Perform CONSULT-II self-diagnosis and check the malfunction. Refer to [AV-243, "SELF-DIAG RESULTS"](#).

Is there a malfunction?

YES >> Refer to [AV-243, "Display Item of Self-Diagnostic Results"](#).

NO >> GO TO 2.

2. REVERSE SIGNAL INSPECTION

1. Turn the ignition switch ON, and then select "Connection Confirmation" of "Camera Controller" on Confirmation/Adjustment mode.

2. Make sure that "Reverse Sensor" is turned ON when shifting the selector lever in R position.

Is it OK?

YES >> GO TO 3.

NO >> Check reverse signal circuit, and then repair the malfunctioning parts.

3. CHECK HARNESS BETWEEN CAMERA CONTROL UNIT AND REAR VIEW CAMERA

1. Turn ignition switch OFF.

2. Disconnect camera control unit connector and rear view camera connector.

3. Check continuity between camera control unit harness connector (A) B481 terminal 8 and rear view camera harness connector (B) T109 terminal 1.

8 – 1 : Continuity should exist.

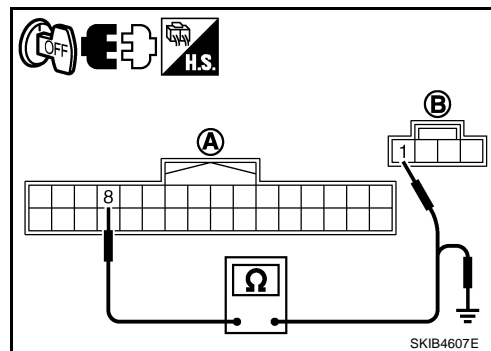
4. Check continuity between camera control unit harness connector (A) B481 terminal 8 and ground.

8 – Ground : Continuity should not exist.

OK or NG

OK >> GO TO 4.

NG >> Repair harness or connector.



4. CHECK REAR VIEW CAMERA POWER SUPPLY

1. Connect camera control unit connector and rear view camera connector.

2. Turn ignition switch ON.

3. Shift the selector lever in R position.

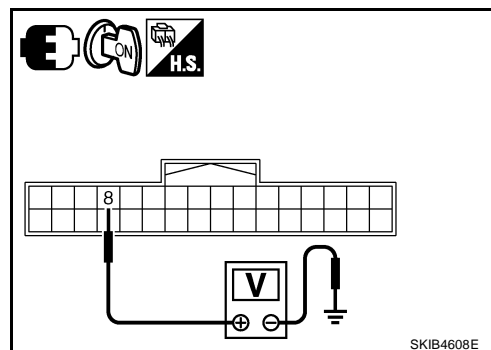
4. Check voltage between camera control unit harness connector B481 terminal 8 and ground.

8 – Ground : Approx. 6 V

OK or NG

OK >> GO TO 5.

NG >> Replace camera control unit.



TROUBLE DIAGNOSIS [WITH MOBILE ENTERTAINMENT SYSTEM]

5. CHECK HARNESS BETWEEN CAMERA CONTROL UNIT AND REAR VIEW CAMERA

1. Turn ignition switch OFF.
2. Disconnect camera control unit connector and rear view camera connector.
3. Check continuity between camera control unit harness connector (A) B481 terminal 6 and rear view camera harness connector (B) T109 terminal 3.

6 – 3 : Continuity should exist.

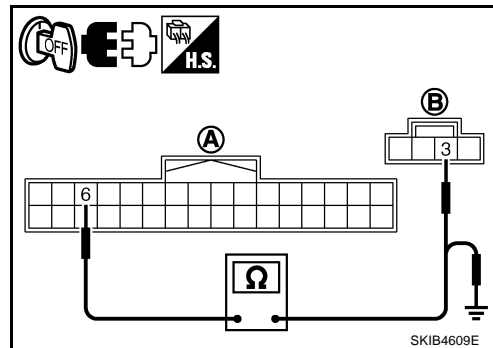
4. Check continuity between camera control unit harness connector (A) B481 terminal 6 and ground.

6 – Ground : Continuity should not exist.

OK or NG

OK >> GO TO 6.

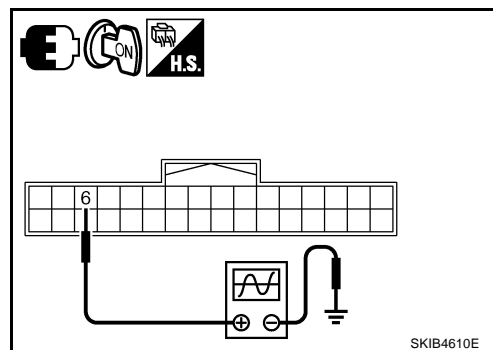
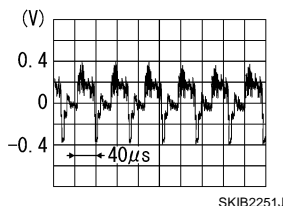
NG >> Repair harness or connector.



6. CHECK REAR VIEW CAMERA IMAGE SIGNAL

1. Connect camera control unit connector and rear view camera connector.
2. Turn ignition switch ON.
3. Shift the selector lever in R position.
4. Check signal between camera control unit harness connector B481 terminal 6 and ground.

6 – Ground:



OK or NG

OK >> GO TO 7.

NG >> Replace rear view camera.

7. HARNESS CHECK BETWEEN CAMERA CONTROL UNIT AND FRONT DISPLAY UNIT

1. Turn ignition switch OFF.
2. Disconnect camera control unit connector and front display unit connector.
3. Check continuity between camera control unit harness connector (A) B481 terminal 12 and front display unit harness connector (B) M203 terminal 11.

12 - 11 : Continuity should exist.

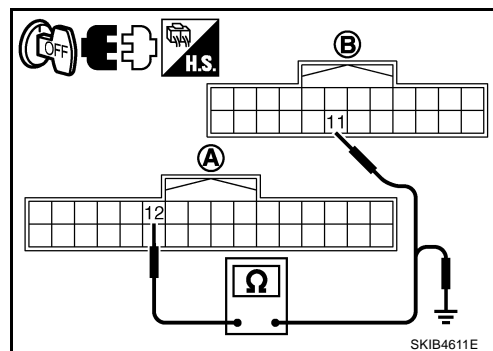
4. Check continuity between camera control unit harness connector (A) B481 terminal 12 and ground.

12 - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 8.

NG >> Repair harness or connector.

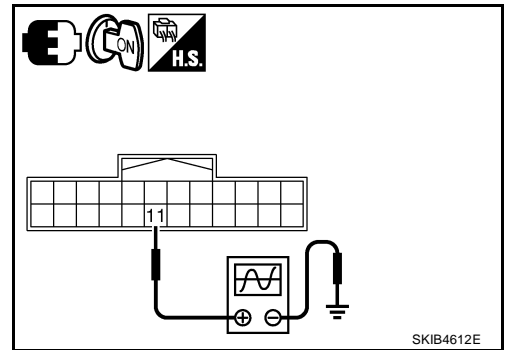
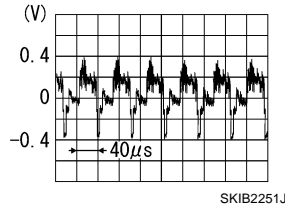


TROUBLE DIAGNOSIS [WITH MOBILE ENTERTAINMENT SYSTEM]

8. CHECK REAR VIEW IMAGE SIGNAL

Check signal between front display unit harness connector M203 terminal 11 and ground.

11 – Ground:



OK or NG

- OK >> Replace front display unit.
- NG >> Replace camera control unit.

DVD IMAGE IS NOT DISPLAYED

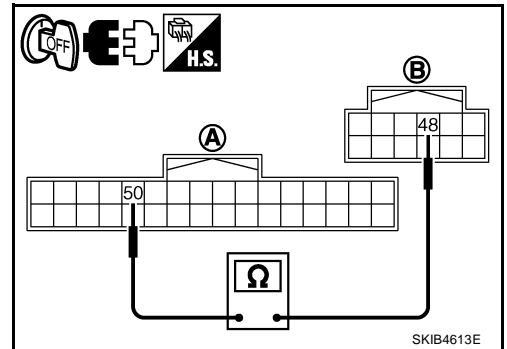
1. CHECK HARNESS BETWEEN AV (NAVI) CONTROL UNIT AND VIDEO DISTRIBUTOR

1. Disconnect AV (NAVI) control unit connector and video distributor connector.
2. Check continuity between AV (NAVI) control unit harness connector (A) M210 terminal 50 and video distributor harness connector (B) M207 terminal 48.

50 – 48 : Continuity should exist.

OK or NG

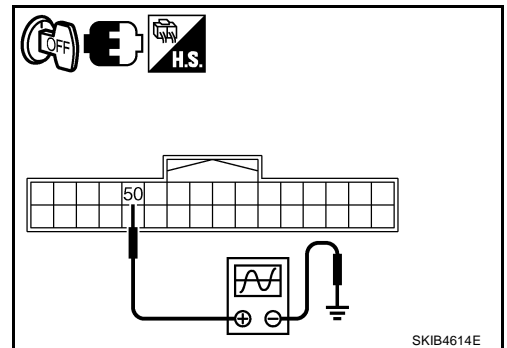
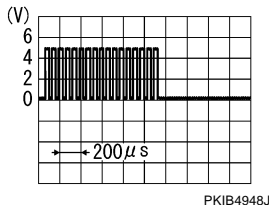
- OK >> GO TO 2.
- NG >> Repair harness or connector.



2. CHECK RGB AREA SIGNAL FOR AV (NAVI) CONTROL UNIT

1. Connect AV (NAVI) control unit connector and video distributor connector.
2. Turn ignition switch ON.
3. Shift the selector lever in R position.
4. Check signal between AV (NAVI) control unit harness connector M210 terminal 50 and ground.

50 – Ground:



OK or NG

- OK >> GO TO 3.
- NG >> Replace AV (NAVI) control unit.

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TROUBLE DIAGNOSIS

[WITH MOBILE ENTERTAINMENT SYSTEM]

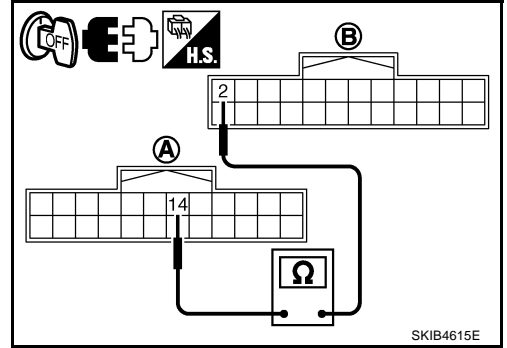
3. CHECK HARNESS BETWEEN VIDEO DISTRIBUTOR AND FRONT DISPLAY UNIT

1. Turn ignition switch OFF.
2. Disconnect video distributor connector and front display unit connector.
3. Check continuity between video distributor harness connector (A) M205 terminal 14 and front display unit harness connector (B) M203 terminal 2.

14 – 2 : Continuity should exist.

OK or NG

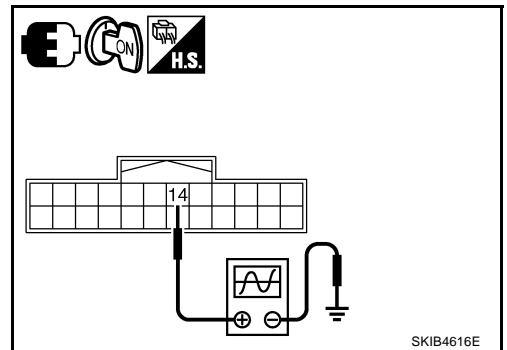
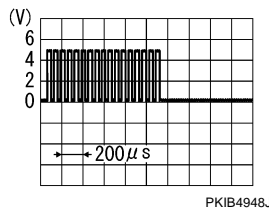
- OK >> GO TO 4.
NG >> Repair harness or connector.



4. CHECK RGB AREA SIGNAL FOR VIDEO DISTRIBUTOR

1. Connect video distributor connector and front display unit connector.
2. Turn ignition switch ON.
3. Shift the selector lever in R position.
4. Check signal between video distributor harness connector M205 terminal 14 and ground.

14 – Ground:



OK or NG

- OK >> Replace front display unit.
NG >> Replace video distributor.

IT CANNOT BE SWITCHED TO REAR VIEW MONITOR IMAGE

1. CHECK REVERSE SIGNAL

Select "Vehicle Signals" on Confirmation/Adjustment mode, and make sure that the reverse signal is input normally. Refer to [AV-232. "VEHICLE SIGNALS"](#).

OK or NG

- OK >> GO TO 2.
NG >> Check reverse signal circuit, and then repair the malfunctioning parts.

TROUBLE DIAGNOSIS

[WITH MOBILE ENTERTAINMENT SYSTEM]

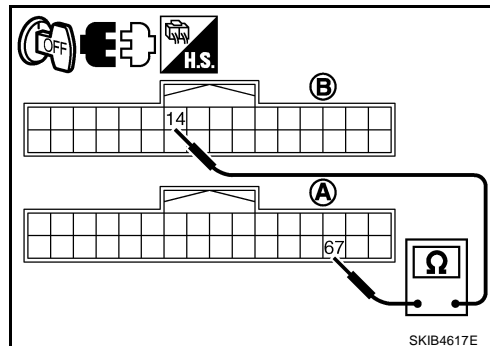
2. CHECK HARNESS BETWEEN AV (NAVI) CONTROL UNIT AND CAMERA CONTROL UNIT

1. Turn ignition switch OFF.
2. Disconnect AV (NAVI) control unit connector and camera control unit connector.
3. Check continuity between AV (NAVI) control unit harness connector (A) M210 terminal 67 and camera control unit harness connector (B) B481 terminal 14.

67 – 14 : Continuity should exist.

OK or NG

- OK >> GO TO 3.
NG >> Repair harness or connector.



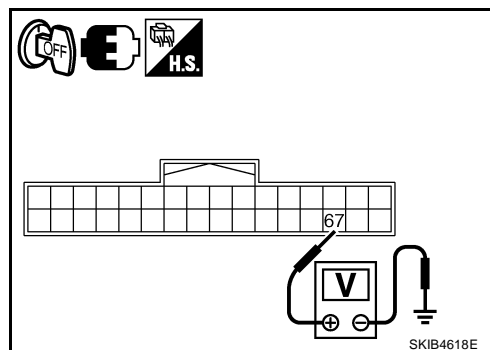
3. CHECK CAMERA-CONNECTION RECOGNITION SIGNAL

1. Connect AV (NAVI) control unit connector.
2. Turn ignition switch ON.
3. Check voltage between AV (NAVI) control unit harness connector M210 terminal 67 and ground.

67 – Ground: : Approx. 5 V

OK or NG

- OK >> Replace camera control unit.
NG >> Replace AV (NAVI) control unit.



DVD Image Is Not Displayed ONLY FRONT DISPLAY

1. REAR VIEW MONITOR IMAGE CONFIRMATION

Make sure that rear view monitor image is displayed when setting the selector lever in R position.

Is it displayed?

- YES >> GO TO 2.
NO >> GO TO 4.

2. CHECK HARNESS BETWEEN VIDEO DISTRIBUTOR AND FRONT DISPLAY UNIT

1. Turn ignition switch OFF.
2. Disconnect video distributor connector and front display unit connector.
3. Check continuity between video distributor harness connector (A) M205 terminal 8 and front display unit harness connector (B) M203 terminal 15.

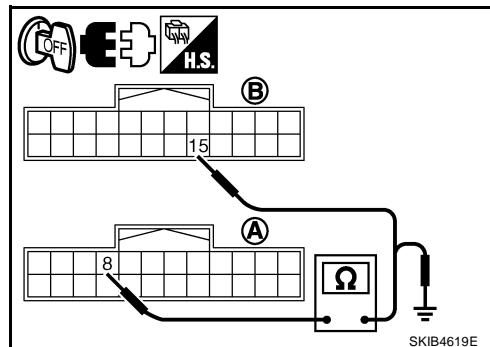
8 – 15 : Continuity should exist.

4. Check continuity between video distributor harness connector (A) M205 terminal 8 and ground.

8 – Ground : Continuity should not exist.

OK or NG

- OK >> GO TO 3.
NG >> Repair harness or connector.

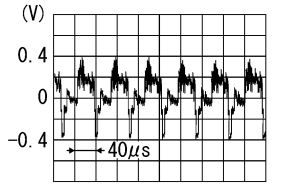


TROUBLE DIAGNOSIS [WITH MOBILE ENTERTAINMENT SYSTEM]

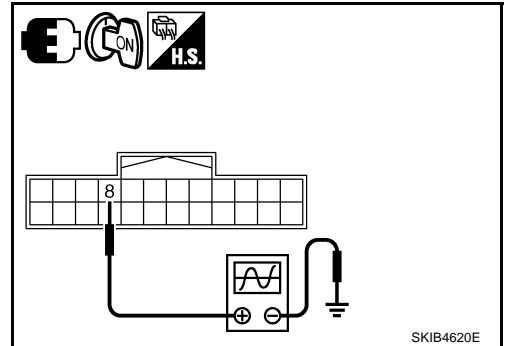
3. CHECK IMAGE SIGNAL

1. Connect video distributor connector and front display unit connector.
2. Turn ignition switch ON.
3. Display DVD image.
4. Check signal between video distributor harness connector M205 terminal 8 and ground.

8 – Ground:



SKIB2251J



OK or NG

- OK >> Replace front display unit.
- NG >> Replace video distributor.

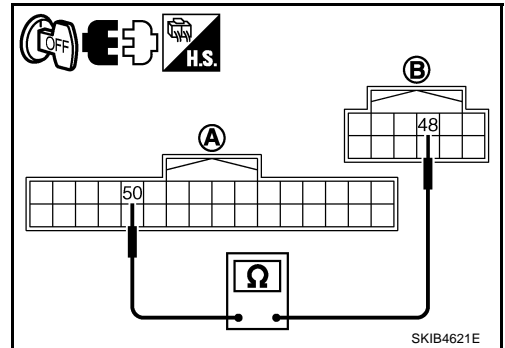
4. CHECK HARNESS BETWEEN AV (NAVI) CONTROL UNIT AND VIDEO DISTRIBUTOR

1. Turn ignition switch OFF.
2. Disconnect AV (NAVI) control unit connector and video distributor connector.
3. Check continuity between and AV (NAVI) control unit harness connector (A) M210 terminal 50 and video distributor harness connector (B) M207 terminal 48.

50 – 48 : Continuity should exist.

OK or NG

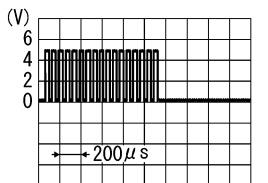
- OK >> GO TO 5.
- NG >> Repair harness or connector.



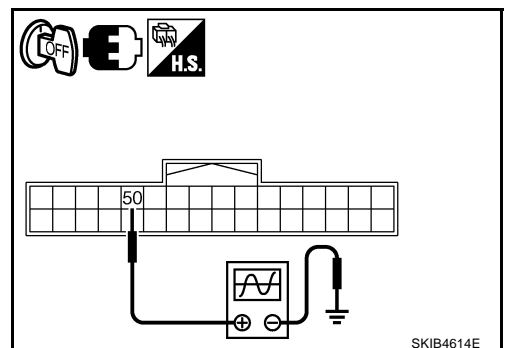
5. CHECK RGB AREA SIGNAL FOR AV (NAVI) CONTROL UNIT

1. Connect AV (NAVI) control unit connector and video distributor connector.
2. Turn ignition switch ON.
3. Shift the selector lever in R position.
4. Check signal between AV (NAVI) control unit harness connector M210 terminal 50 and ground.

50 – Ground:



PKIB4948J



OK or NG

- OK >> GO TO 6.
- NG >> Replace AV (NAVI) control unit.

TROUBLE DIAGNOSIS [WITH MOBILE ENTERTAINMENT SYSTEM]

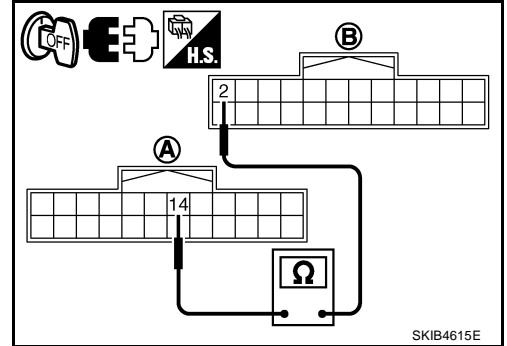
6. CHECK HARNESS BETWEEN VIDEO DISTRIBUTOR AND FRONT DISPLAY UNIT

1. Turn ignition switch OFF.
2. Disconnect video distributor connector and front display unit connector.
3. Check continuity between video distributor harness connector (A) M205 terminal 14 and front display unit harness connector (B) M203 terminal 2.

14 – 2 : Continuity should exist.

OK or NG

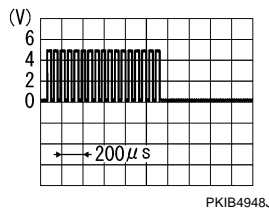
- OK >> GO TO 7.
NG >> Repair harness or connector.



7. CHECK RGB AREA SIGNAL FOR VIDEO DISTRIBUTOR

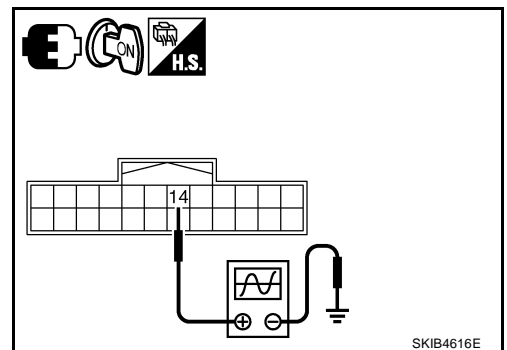
1. Connect video distributor connector and front display unit connector.
2. Turn ignition switch ON.
3. Shift the selector lever in R position.
4. Check signal between video distributor harness connector M205 terminal 14 and ground.

14 – Ground:



OK or NG

- OK >> Replace front display unit.
NG >> Replace video distributor.



ONLY REAR DISPLAY

1. CHECK HARNESS BETWEEN VIDEO DISTRIBUTOR AND REAR DISPLAY UNIT

1. Disconnect video distributor connector and rear display unit connector.
2. Check continuity between video distributor harness connector (A) M206 terminal 34 and rear display unit harness connector (B) R102 terminal 16.

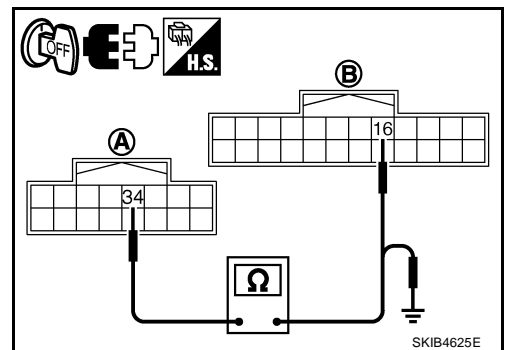
34 – 16 : Continuity should exist.

3. Check continuity between video distributor harness connector (A) M206 terminal 34 and ground.

34 – Ground : Continuity should not exist.

OK or NG

- OK >> GO TO 2.
NG >> Repair harness or connector.



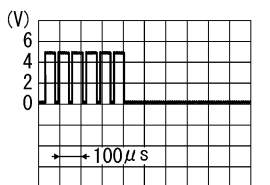
TROUBLE DIAGNOSIS

[WITH MOBILE ENTERTAINMENT SYSTEM]

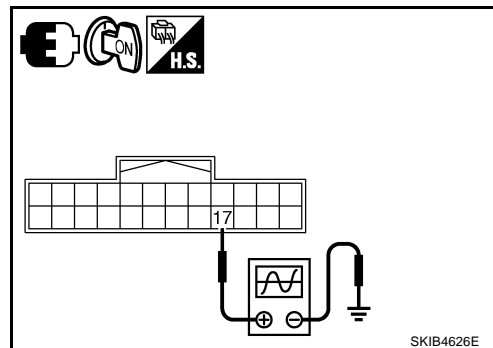
2. CHECK RGB AREA SIGNAL

1. Connect video distributor connector and rear display unit connector.
2. Turn ignition switch ON.
3. Select DVD mode on rear display.
4. Check signal between rear display unit harness connector R102 terminal 17 and ground.

17 – Ground:



PKIB4949J



SKIB4626E

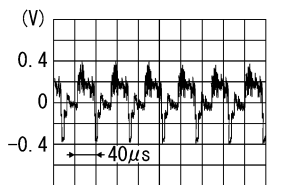
OK or NG

- OK >> GO TO 3.
- NG >> Replace video distributor.

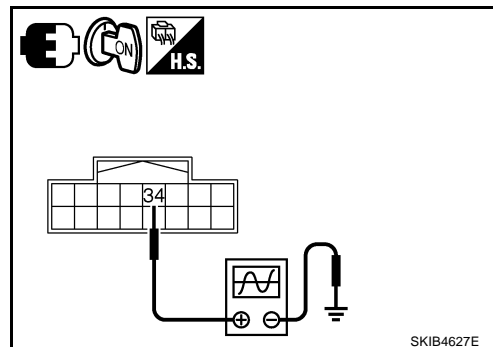
3. CHECK IMAGE SIGNAL

1. Connect video distributor connector and rear display unit connector.
2. Turn ignition switch ON.
3. Display DVD image.
4. Check signal between video distributor harness connector M206 terminal 34 and ground.

34 – Ground:



SKIB2251J



SKIB4627E

OK or NG

- OK >> Replace rear display unit.
- NG >> Replace video distributor.

BOTH FRONT DISPLAY AND REAR DISPLAY

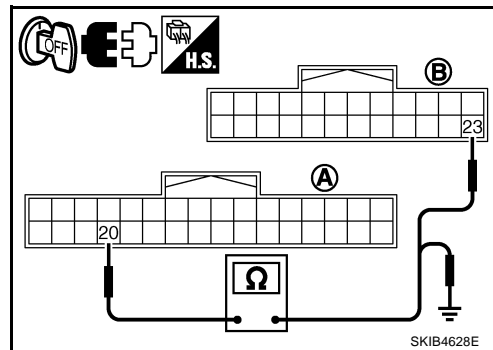
1. CHECK HARNESS BETWEEN DVD PLAYER AND VIDEO DISTRIBUTOR

1. Disconnect DVD player connector and video distributor connector.
2. Check continuity between DVD player harness connector (A) M272 terminal 20 and video distributor harness connector (B) M205 terminal 23.

20 – 23 : Continuity should exist.

3. Check continuity between DVD player harness connector (A) M272 terminal 20 and ground.

20 – Ground : Continuity should not exist.



SKIB4628E

OK or NG

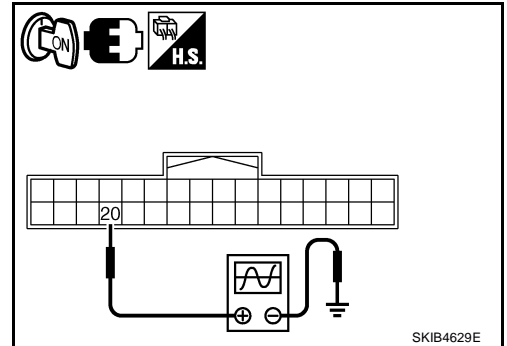
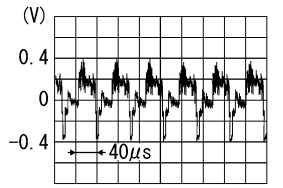
- OK >> GO TO 2.
- NG >> Repair harness or connector.

TROUBLE DIAGNOSIS [WITH MOBILE ENTERTAINMENT SYSTEM]

2. CHECK IMAGE SIGNAL

1. Connect DVD player and video distributor connector.
2. Turn ignition switch ON.
3. Display DVD image.
4. Check signal between DVD player harness connector M272 terminal 20 and ground.

20 – Ground:



OK or NG

- OK >> Replace video distributor.
- NG >> Replace DVD player.

Warning Message of Whether Rear View Image Is Rolling or Not Displayed

NKS004B7

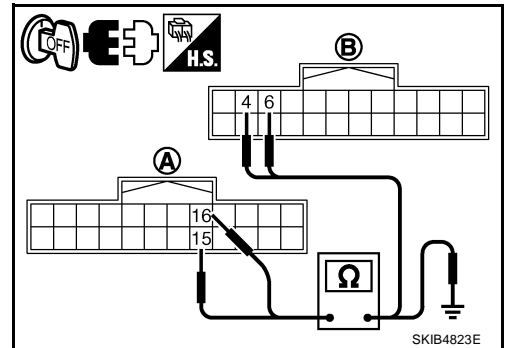
1. CHECK HARNESS BETWEEN VIDEO DISTRIBUTOR AND FRONT DISPLAY UNIT

1. Disconnect video distributor connector and front display unit connector.
2. Check continuity between video distributor harness connector (A) M205 terminals 15, 16 and front display unit harness connector (B) M203 terminals 4, 6.

15 – 4 : Continuity should exist.
16 – 6 : Continuity should exist.

3. Check continuity between video distributor harness connector (A) M205 terminals 15, 16 and ground.

15, 16 – Ground : Continuity should not exist.



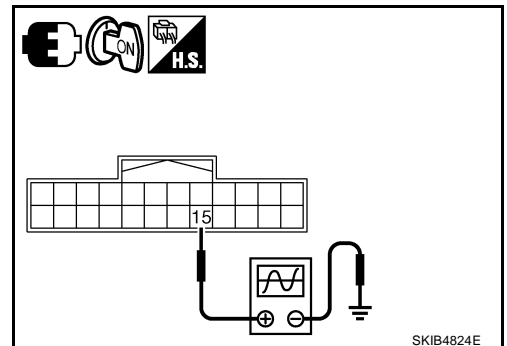
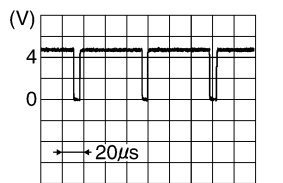
OK or NG

- OK >> GO TO 2.
- NG >> Repair harness or connector.

2. CHECK HORIZONTAL SYNCHRONIZING SIGNAL

1. Connect AV (NAVI) control unit connector and display unit connector.
2. Turn ignition switch ON.
3. Check signal between video distributor harness connector M205 terminal 15 and ground.

15 – Ground:



OK or NG

- OK >> GO TO 3.
- NG >> Replace front display unit.

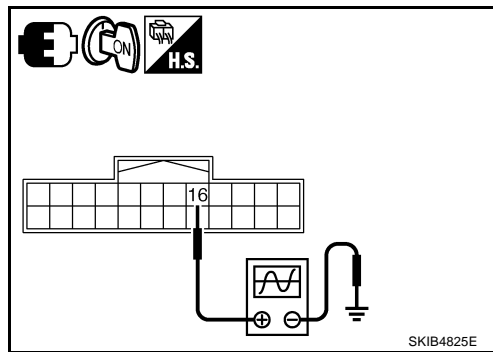
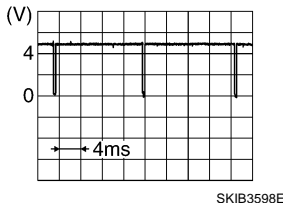
TROUBLE DIAGNOSIS

[WITH MOBILE ENTERTAINMENT SYSTEM]

3. CHECK VERTICAL SYNCHRONIZING SIGNAL

Check signal between video distributor harness connector M205 terminals 16 and ground.

16 – Ground:



OK or NG

- OK >> GO TO 4.
- NG >> Replace front display unit.

4. CHECK HARNESS BETWEEN AV (NAVI) CONTROL UNIT AND VIDEO DISTRIBUTOR

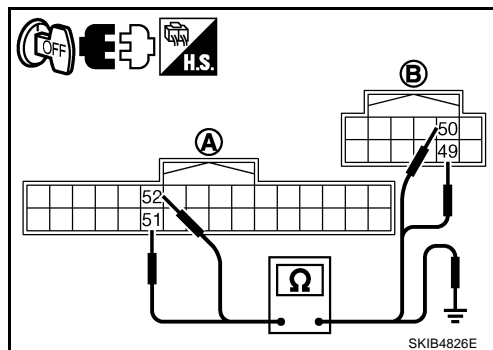
1. Disconnect AV (NAVI) control unit connector and video distributor connector.
2. Check continuity between AV (NAVI) control unit harness connector (A) M210 terminals 51, 52 and video distributor harness connector (B) M207 terminals 49, 50.

51 – 49 : Continuity should exist.

52 – 50 : Continuity should exist.

3. Check continuity between AV (NAVI) control unit harness connector (A) M210 terminals 51, 52 and ground.

51, 52 – Ground : Continuity should not exist.



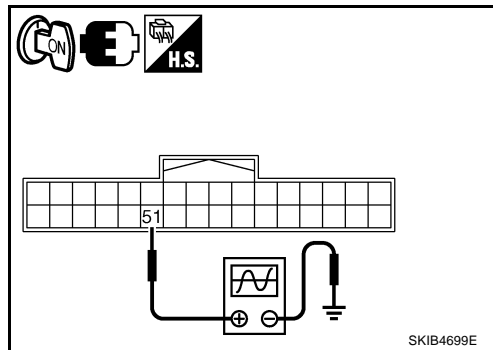
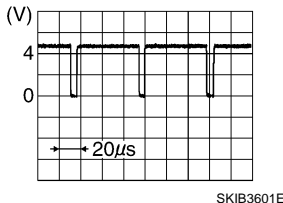
OK or NG

- OK >> GO TO 5.
- NG >> Repair harness or connector.

5. CHECK HORIZONTAL SYNCHRONIZING SIGNAL

1. Connect AV (NAVI) control unit connector and display unit connector.
2. Turn ignition switch ON.
3. Check signal between AV (NAVI) control unit harness connector M210 terminal 51 and ground.

51 – Ground:



OK or NG

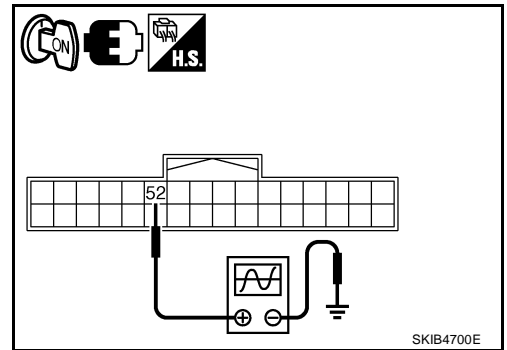
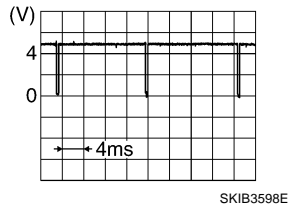
- OK >> GO TO 6.
- NG >> Replace video distributor.

TROUBLE DIAGNOSIS [WITH MOBILE ENTERTAINMENT SYSTEM]

6. CHECK VERTICAL SYNCHRONIZING SIGNAL

Check signal between AV (NAVI) control unit harness connector M210 terminal 52 and ground.

52 – Ground:



OK or NG

- OK >> Replace AV (NAVI) control unit.
- NG >> Replace video distributor.

DVD Operation Screen Is Not Displayed ONLY FRONT DISPLAY

NKS004B8

Refer to [AV-263, "Warning Message of Whether Rear View Image Is Rolling or Not Displayed"](#).

ONLY REAR DISPLAY

1. CHECK HARNESS BETWEEN VIDEO DISTRIBUTOR AND REAR DISPLAY UNIT

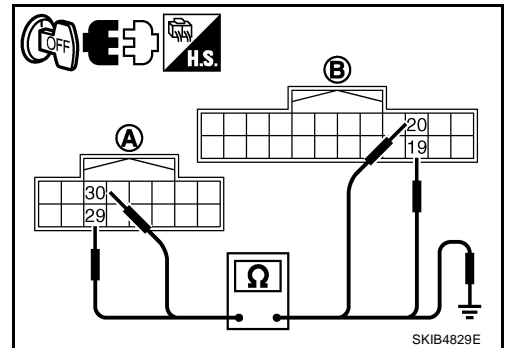
1. Disconnect video distributor connector and rear display unit connector.
2. Check continuity between video distributor harness connector (A) M206 terminals 29, 30 and rear display unit harness connector (B) R102 terminals 19, 20.

29 – 19 : Continuity should exist.

30 – 20 : Continuity should exist.

3. Check continuity between AV (NAVI) control unit harness connector (A) M206 terminals 29, 30 and ground.

29, 30 – Ground : Continuity should not exist.



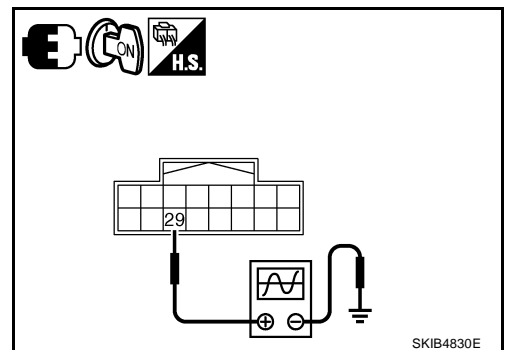
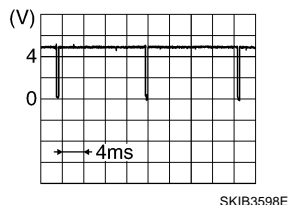
OK or NG

- OK >> GO TO 2.
- NG >> Repair harness or connector.

2. CHECK VERTICAL SYNCHRONIZING SIGNAL

1. Connect video distributor connector and rear display unit connector.
2. Turn ignition switch ON.
3. Check signal between video distributor harness connector M206 terminal 29 and ground.

29 – Ground:



OK or NG

- OK >> GO TO 3.
- NG >> Replace rear display unit.

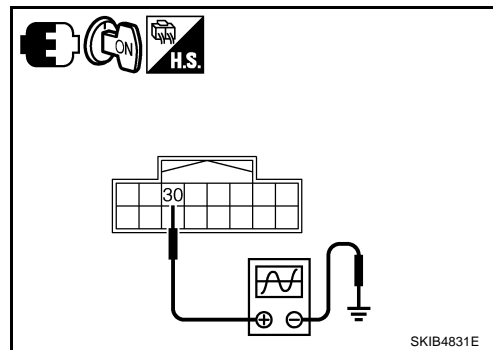
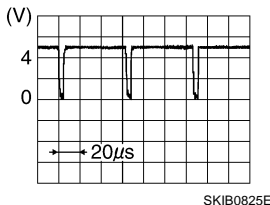
TROUBLE DIAGNOSIS

[WITH MOBILE ENTERTAINMENT SYSTEM]

3. CHECK HORIZONTAL SYNCHRONIZING SIGNAL

Check signal between video distributor harness connector M206 terminal 30 and ground.

30 – Ground:



OK or NG

- OK >> Replace video distributor.
- NG >> Replace rear display unit.

It Cannot Be Switched to DVD Mode

NKS004B9

Refer to [AV-266, "DVD SOUND IS NOT OUTPUT"](#) .

Sound Is Not Output (Voice Guidance and TEL Voice Are Normal) DVD AND AUDIO SOUND ARE NOT OUTPUT

NKS004BA

1. CONSULT-II SELF-DIAGNOSIS

Perform "SELF-DIAG RESULT" of CONSULT-II and check the malfunction. Refer to [AV-243, "SELF-DIAG RESULTS"](#) .

OK or NG

- OK >> GO TO 2.
- NG >> Refer to [AV-243, "Display Item of Self-Diagnostic Results"](#) .

2. CHECK AV COMM MONITOR

Select "AUDIO" of "AV COMM MONITOR", and then check the displays of "TRANSMIT DG" and "SPEAKER AMP".

| | | |
|--------------------|----------|--------------|
| A | | |
| TRANSMIT DG | : | OK |
| SPEAKER AMP | : | UNKWN |
| B | | |
| TRANSMIT DG | : | UNKWN |
| SPEAKER AMP | : | OK |

A or B

- A >> Replace BOSE amp.
- B >> Replace audio unit.

DVD SOUND IS NOT OUTPUT

1. CONSULT-II SELF-DIAGNOSIS

Perform "SELF-DIAG RESULT" of CONSULT-II and check the malfunction. Refer to [AV-243, "SELF-DIAG RESULTS"](#) .

OK or NG

- OK >> GO TO 2.
- NG >> Refer to [AV-243, "Display Item of Self-Diagnostic Results"](#) .

TROUBLE DIAGNOSIS

[WITH MOBILE ENTERTAINMENT SYSTEM]

2. CHECK AV COMM MONITOR

Select "AUDIO" of "AV COMM MONITOR", and then check the displays of "TRANSMIT DG" and "DVD player".

A
TRANSMIT DG : OK
DVD PLAYER : UNKWN

B
TRANSMIT DG : UNKWN
DVD PLAYER : OK

A or B

- A >> Replace DVD player
- B >> Replace audio unit.

HEADPHONE SOUND IS NOT OUTPUT (BOTH SIDES)

1. CHECK HEADPHONE AMP POWER SUPPLY AND GROUND CIRCUIT

Check headphone amp power supply and ground circuit.

OK or NG

- OK >> GO TO 2.
- NG >> Repair harness or connector.

2. CHECK HARNESS BETWEEN VIDEO DISTRIBUTOR AND HEADPHONE AMP

1. Disconnect video distributor connector and headphone amp connector.
2. Check continuity between video distributor harness connector (A) M208 terminal 60 and headphone amp harness connector (B) R103 terminal 10.

60 – 10 : Continuity should exist.

3. Check continuity video distributor harness connector (A) M208 terminal 60 and ground.

60 – Ground : Continuity should not exist.

OK or NG

- OK >> GO TO 3.
- NG >> Repair harness or connector.

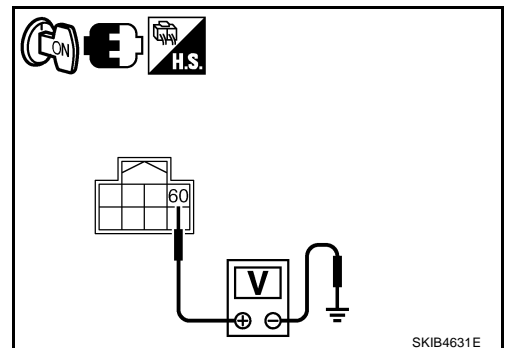
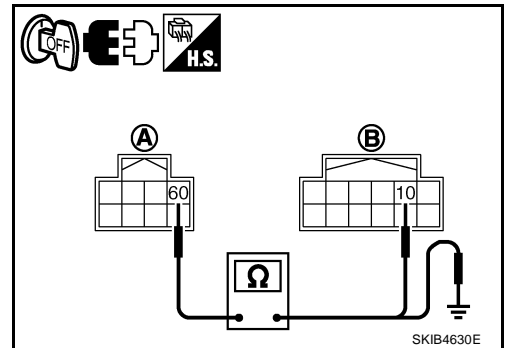
3. CHECK HEADPHONE AMP ON SIGNAL

1. Connect video distributor connector and headphone amp connector.
2. Turn ignition switch ON.
3. Turn the headphone mode ON.
4. Check voltage between video distributor harness connector M208 terminal 60 and ground.

60 – Ground : Approx. 4 V

OK or NG

- OK >> Replace headphone amp.
- NG >> Replace video distributor.



TROUBLE DIAGNOSIS

[WITH MOBILE ENTERTAINMENT SYSTEM]

Voice Activated Control System Is Not Activated THE SCREEN IS SWITCHED BY PRESSING THE STEERING SWITCH

NKS004BB

1. VOICE MICROPHONE TEST

Turn "Voice Microphone Test" ON at Confirmation/Adjustment mode, and then check the sounds emitted from the speaker. Refer to [AV-238, "Voice Microphone Test"](#).

Is the sound output?

- YES >> Replace AV (NAVI) control unit.
NO >> GO TO 2.

2. CHECK HARNESS BETWEEN AV (NAVI) CONTROL UNIT AND MIC.

1. Turn ignition switch OFF.
2. Disconnect AV (NAVI) control unit connector and MIC. connector.
3. Check continuity between AV (NAVI) control unit harness connector (A) M78 terminals 6, 7, 8 and MIC. harness connector (B) R52 terminals 4, 2, 1.

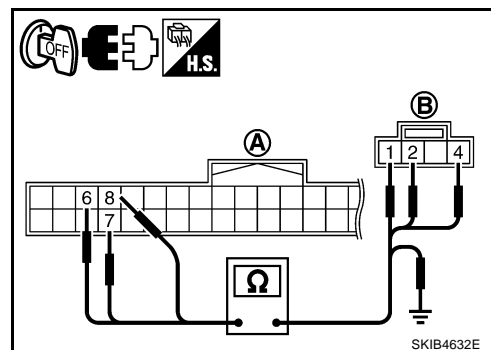
6 – 4 : Continuity should exist.

7 – 2 : Continuity should exist.

8 – 1 : Continuity should exist.

4. Check continuity between AV (NAVI) control unit harness connector (A) M78 terminals 6, 7, 8 and ground.

6, 7, 8 – Ground : Continuity should not exist.



OK or NG

- OK >> GO TO 3.
NG >> Repair harness or connector.

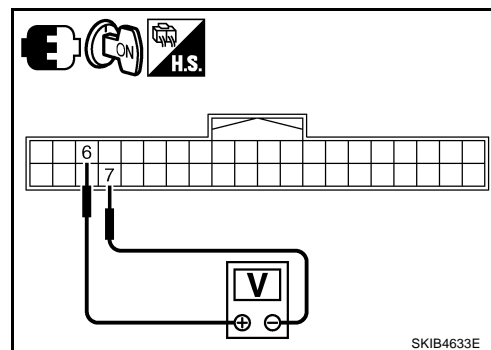
3. CHECK MIC. POWER SUPPLY

1. Connect AV (NAVI) control unit and MIC. connector.
2. Turn ignition switch ON.
3. Check voltage between AV (NAVI) control unit harness connector M78 terminals 6 and 7.

6 – 7 : Approx. 5 V

OK or NG

- OK >> GO TO 4.
NG >> Replace AV (NAVI) control unit.

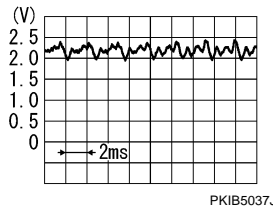


TROUBLE DIAGNOSIS [WITH MOBILE ENTERTAINMENT SYSTEM]

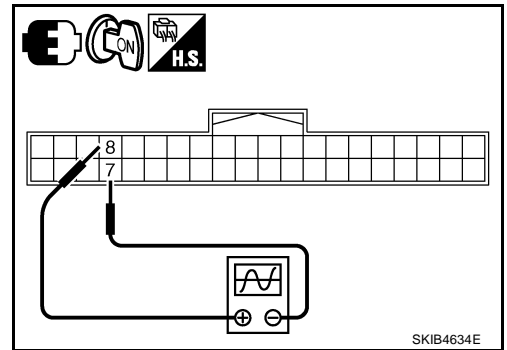
4. CHECK MIC. SIGNAL

1. Check signal between AV (NAVI) control unit harness connector M78 terminals 8 and 7.

Give a voice



8 – 7:



OK or NG

- OK >> Replace AV (NAVI) control unit.
- NG >> Replace MIC.

THE SCREEN IS NOT SWITCHED BY PRESSING THE STEERING SWITCH

Refer to [AV-269, "Steering Switch Cannot Be Operated"](#) .

Steering Switch Cannot Be Operated NONE OF THE OPERATIONS WORK.

NKS004BC

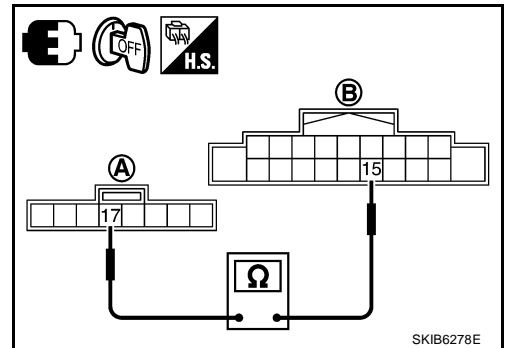
1. CHECK HARNESS

1. Check continuity between spiral cable harness connector (A) M303 terminal 17 and audio unit harness connector (B) M76 terminal 15.

17 – 15 : Continuity should exist.

OK or NG

- OK >> Replace steering switch.
- NG >> Check spiral cable. If the malfunction is detected, repair the harness and connector.



“ENTER”, “MENU UP-DOWN”, AND “SOURCE” SWITCHES ARE NOT OPERATED

1. CHECK HARNESS

1. Check continuity between spiral cable harness connector (A) M303 terminal 20 and audio unit harness connector (B) M76 terminal 6.

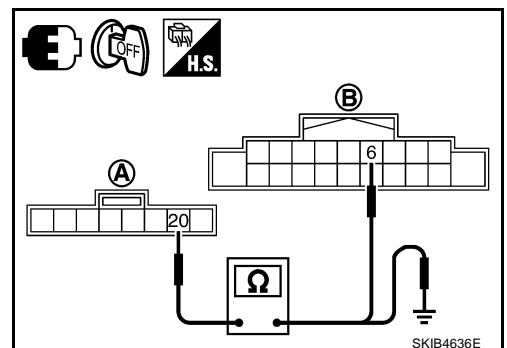
20 – 6 : Continuity should exist.

2. Check continuity between steering switch harness connector (A) M303 terminal 20 and ground.

20 – Ground : Continuity should not exist.

OK or NG

- OK >> GO TO 2.
- NG >> Check spiral cable. If the malfunction is detected, repair the harness and connector.



TROUBLE DIAGNOSIS

[WITH MOBILE ENTERTAINMENT SYSTEM]

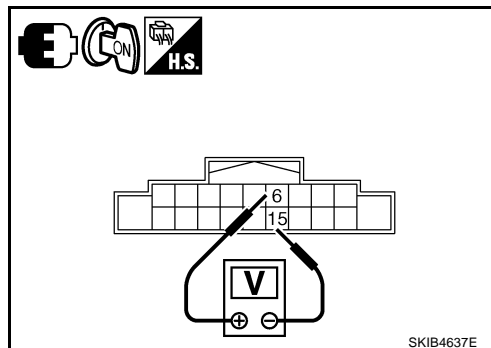
2. CHECK STEERING SWITCH SIGNAL A

1. Turn ignition switch ON.
2. Check voltage between audio unit harness connector M76 terminals 6 and 15

6 – 15 : Approx. 5 V

OK or NG

- OK >> Replace steering switch.
NG >> Replace audio unit.



“PTT/TEL”, “BACK”, AND “VOLUME CONTROL” SWITCHES ARE NOT OPERATED

1. CHECK HARNESS

1. Check continuity between spiral cable harness connector (A) M303 terminal 16 and audio unit harness connector (B) M76 terminal 16.

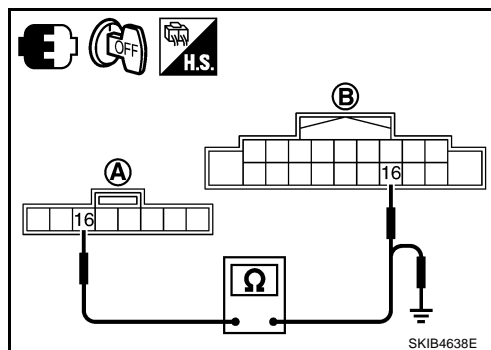
16 – 16 : Continuity should exist.

2. Check continuity between steering switch harness connector (A) M303 terminal 16 and ground.

16 – Ground : Continuity should not exist.

OK or NG

- OK >> GO TO 2.
NG >> Check spiral cable. If the malfunction is detected, repair the harness and connector.



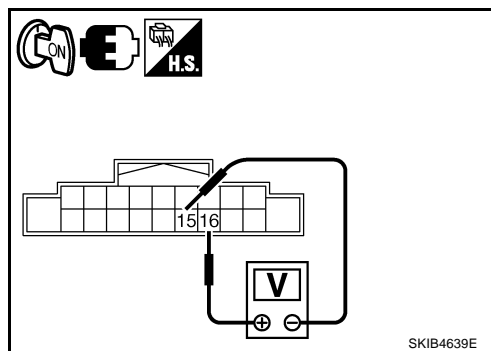
2. CHECK STEERING SWITCH SIGNAL B

1. Turn ignition switch ON.
2. Check voltage between audio unit harness connector M76 terminals 16 and 15

16 – 15 : Approx. 5 V

OK or NG

- OK >> Replace steering switch.
NG >> Replace audio unit.



TROUBLE DIAGNOSIS

[WITH MOBILE ENTERTAINMENT SYSTEM]

NKS004BD

The Hands-Free Phone Cannot Be Used THE VOICE CANNOT BE HEARD

1. CHECK HARNESS AV (NAVI) CONTROL UNIT AND AUDIO UNIT

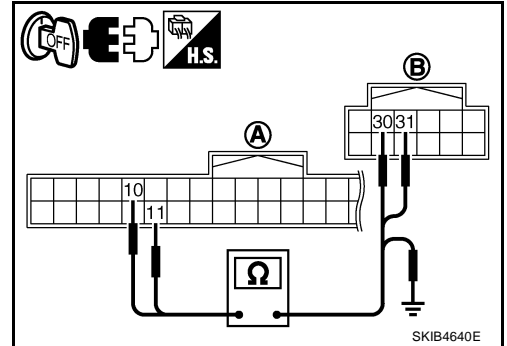
1. Disconnect AV (NAVI) control unit connector and audio unit connector.
2. Check continuity between AV (NAVI) control unit harness connector (A) M78 terminals 10, 11 and audio unit harness connector (B) M77 terminals 30, 31.

10 – 30 : Continuity should exist.

11 – 31 : Continuity should exist.

3. Check continuity between AV (NAVI) control unit harness connector (A) M78 terminals 10, 11 and ground.

10, 11 – Ground : Continuity should not exist.



OK or NG

OK >> GO TO 2.

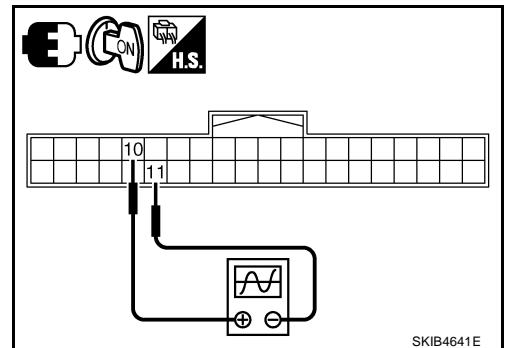
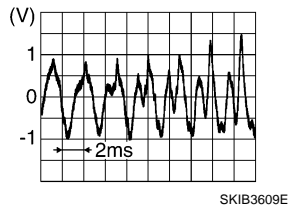
NG >> Repair harness or connector.

2. CHECK TEL VOICE SIGNAL

1. Connect AV (NAVI) control unit connector and audio unit connector.
2. Turn ignition switch ON.
3. Check signal between AV (NAVI) control unit harness connector M78 terminals 10 and 11.

When inputting TEL voice

10 – 11:



OK or NG

OK >> Replace audio unit.

NG >> Replace AV (NAVI) control unit.

THE VOICE CANNOT BE TRANSMITTED

Refer to [AV-268](#), "THE SCREEN IS SWITCHED BY PRESSING THE STEERING SWITCH" .

TROUBLE DIAGNOSIS

[WITH MOBILE ENTERTAINMENT SYSTEM]

NKS004BE

Voice Guidance Is Not Heard

1. CHECK HARNESS BETWEEN AV (NAVI) CONTROL UNIT AND BOSE AMP

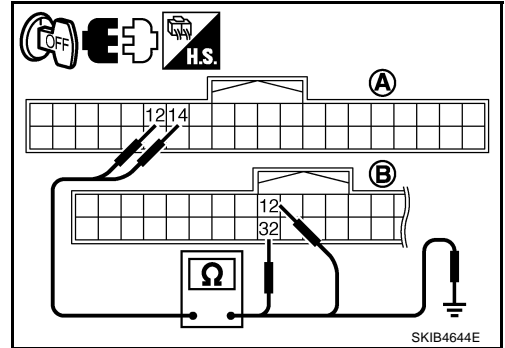
1. Disconnect AV (NAVI) control unit connector and BOSE amp connector.
2. Check continuity between AV (NAVI) control unit harness connector (A) M78 terminals 12, 14 and BOSE amp harness connector (B) B107 terminals 32, 12.

12 – 32 : Continuity should exist.

14 – 12 : Continuity should exist.

3. Check continuity between AV (NAVI) control unit harness connector (A) M78 terminals 12, 14 and ground.

12, 14 – Ground : Continuity should not exist.



OK or NG

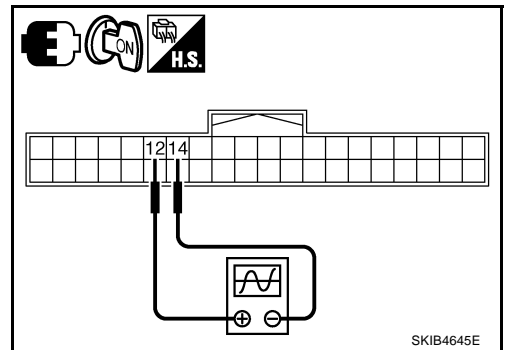
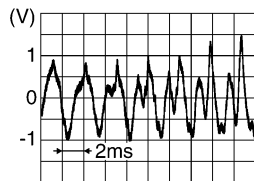
OK >> GO TO 2.

NG >> Repair harness or connector.

2. CHECK VOICE GUIDANCE SIGNAL

1. Connect AV (NAVI) control unit connector and BOSE amp connector.
2. Turn ignition switch ON.
3. Push the voice button.
4. Check signal between AV (NAVI) control unit harness connector M78 terminals 12 and 14.

12 – 14:



OK or NG

OK >> Replace AV (NAVI) control unit.

NG >> Replace BOSE amp.

TROUBLE DIAGNOSIS

[WITH MOBILE ENTERTAINMENT SYSTEM]

NKS004BF

Example of Symptoms Judged Not Malfunction

NOTE:

For navigation system operation information, refer to navigation system owner's manual.

BASIC OPERATION

| Symptom | Possible cause | Possible solution |
|---|---|--|
| No image is displayed. | The brightness is at the lowest setting. | Adjust the brightness of the display. |
| | The display is turns off. | Push and hold to turn on the display. |
| No voice guidance is available. The volume is too high or too low. | The volume is not set correctly, or it is turned off. | Adjust the volume of voice guidance. |
| | Volume guidance is not provided for narrow streets (roads displayed in gray). | This is not a malfunction. |
| No map is displayed on the screen. | The map DVD-ROM is not inserted, or it is inserted upside down. | Insert the map DVD-ROM correctly. |
| | A screen other than map screen is displayed. | Push "MAP". |
| The screen is too dim. The movement is slow. | The temperature in the interior of the vehicle is low. | Wait until the interior of the vehicle has warmed up. |
| Some pixels in the display are darker or brighter than others. | This condition is an inherent characteristic of liquid crystal displays. | This is not a malfunction. |
| Some menu items cannot be selected. | Some menu items become unavailable while the vehicle is driven. | Park the vehicle in a safe location, and then operate the navigation system. |

NOTE:

Locations stored in the Address Book and other memory functions may be lost if the vehicle's battery is disconnected or becomes discharged. If this occurs, service the vehicle's battery as necessary and re-enter the information in the Address Book.

VEHICLE ICON

| Symptom | Possible cause | Possible solution |
|---|---|---|
| Names of roads and locations differ between Plan view and Bird-view™. | This is because the quantity of the displayed information is reduced so that the screen does not become too crowded. There is also a chance that names of the roads or locations may be displayed multiple times, and the names appearing on the screen may be different because of a processing procedure. | This is not a malfunction. |
| The vehicle icon is not displayed in the correct position. | The vehicle was transported after the ignition switch was turned off, for example, by a ferry or car transporter. | Drive the vehicle for a while on a road where GPS can be received. |
| | The position and direction of the vehicle may be incorrect depending on the driving environments and the levels of positioning accuracy of the navigation system. | This is not a malfunction. Drive the vehicle for a while to automatically correct the position and direction of the vehicle icon. |
| When the vehicle is travelling on a new road, the vehicle icon is located on another road nearby. | Because the new road is not stored in the map data, the system automatically places the vehicle icon on the nearest road available. | Updated road information will be included in the next version of the map DVD-ROM. |
| The screen does not switch to the night screen even after turning on the headlights. | The daytime screen was set the last time the headlights were turned on. | Set the screen to the night screen mode using when turning on the headlights. |
| The map does not scroll even when the vehicle is moving. | The current location map screen is not displayed. | Push "MAP". |
| The vehicle icon is not displayed. | The current location map screen is not displayed. | Push "MAP". |

TROUBLE DIAGNOSIS [WITH MOBILE ENTERTAINMENT SYSTEM]

| Symptom | Possible cause | Possible solution |
|--|---|--|
| The GPS indicator on the screen remains gray. | GPS signals cannot be received depending on the vehicle location, such as in a parking garage, on a road that has numerous tall buildings, etc. | Drive on an open, straight road for a while. |
| | GPS signals cannot be received because objects are placed on the instrument panel. | Remove the objects from the instrument panel. |
| | A sufficient amount of GPS satellites are not available. | Wait for the satellites to move locations available for navigation system. |
| The location of vehicle icon is misaligned from the actual position. | When using tire chains or replacing the tires, speed calculations based on the speed sensor may be incorrect. | Drive the vehicle for a while [at approximately 30 km/h (19 MPH) for about 30 minutes] to automatically correct the vehicle icon position. If this does not correct the vehicle icon position, inspect AV system. |
| | The map data has mistake or is incomplete (the vehicle icon position is always misaligned in the same area). | Updated road information will be included in the next version of the map DVD-ROM. |

MAP DVD-ROM

| Symptom | Possible cause | Possible solution |
|------------------------------|--|--|
| The message "Error" appears. | Map DVD-ROM is dirty or partially damaged. | Check the DVD-ROM and wipe it clean with a soft cloth. |
| | | If there is any damage, replace the DVD-ROM. |

ROUTE CALCULATION AND VISUAL GUIDANCE

| Symptom | Possible cause | Possible solution |
|---|---|--|
| In the auto reroute calculation, waypoints are not included. | Waypoints already passed are not included in the auto reroute calculation. | In case of going to that waypoints again, edit the route. |
| Route information is not displayed. | Route calculation has not yet been performed. | Set the destination and perform route calculation. |
| | The vehicle is not driven on the suggested route. | Drive on the suggested route. |
| | Route guidance is set to off. | Turn on route guidance. |
| | Route information is not provided for narrow streets (roads displayed in gray). | This is not a malfunction. |
| The auto reroute calculation (or detour calculation) suggests the same route as the one previously suggested. | Route calculation took priority conditions into consideration, but the same route was calculated. | This is not a malfunction. |
| A waypoint cannot be added. | Five waypoints are already set on the route, including ones that already passed. | A maximum of 5 waypoints can be set on the route. In case of going to 6 or more waypoints, perform route calculations multiple times as necessary. |
| The suggested route is not displayed. | Roads near the destination cannot be calculated. | Reset the destination to a main or ordinary road, and recalculate the route. |
| | The starting point and destination are too close. | Set a more distant destination. |
| | The starting point and destination are too far away. | Divide the way by selecting one or two intermediate destinations, and perform route calculations multiple times. |
| | There are time restricted roads (by day of week, by time) near the current vehicle location or destination. | Set "Use Time Restricted Roads" to off. |
| A part of the route is not displayed. | The suggested route includes narrow streets (roads displayed in gray). | This is not a malfunction. |

TROUBLE DIAGNOSIS [WITH MOBILE ENTERTAINMENT SYSTEM]

| Symptom | Possible cause | Possible solution |
|--|--|--|
| The part of the route already passed is deleted. | A route is managed by sections between waypoints. If you passed the first waypoint, the section between the starting point and the waypoint is deleted. (It may not be deleted depending on the area.) | This is not a malfunction. |
| An indirect route is suggested. | If there are restrictions (such as one way streets) on roads close to the starting point or destination, the system may suggest an indirect route. | Adjust the location of the starting point or destination. |
| | The system may suggest an indirect route because route calculation does not take into consideration some areas such as narrow streets (gray roads). | Reset the destination to a main or ordinary road, and recalculate the route. |
| The landmark information does not correspond to the actual information. | This may be caused by insufficient or incorrect data on the DVD-ROM. | This is not a malfunction. |
| The suggested route does not exactly connect to the starting point, waypoints, or destination. | There is no data for route calculation closer to these locations. | Set the starting point, waypoints and destination on main road, and perform route calculation. |

VOICE GUIDANCE

| Symptom | Possible cause | Possible solution |
|---|---|--|
| The voice guidance is not available. | Voice guidance is only available at certain intersections. In some cases, voice guidance is not available even when the vehicle should make a turn. | This is not a malfunction. |
| | The vehicle has deviated from the suggested route. | Go back to the suggested route or request route calculation again. |
| | Voice guidance is set to off. | Turn on the voice guidance. |
| | Route guidance is set to off. | Turn on the voice guidance. |
| The guidance content does not correspond to the actual condition. | The content of the voice guidance may vary, depending on the types of intersections at which turns are made. | Follow all traffic rules and regulations. |

VOICE RECOGNITION

| Symptom | Possible cause | Possible solution |
|--|---|--|
| The system does not recognize the command. The system recognizes the command incorrectly. | The interior of the vehicle is too noisy. | Close the windows or have other occupants be quiet. |
| | The volume of the voice is too low. | Speak louder. |
| | Pronunciation is unclear. | Speak clearly. |
| | Voice recognition mode is not yet ready to speak. | Push the release "PTT" on the steering switch, and speak a command after the tone sounds. |
| | 5 seconds or more have passed after pushed and released "PTT" on the steering switch. | Make sure to speak a command within 5 seconds after push and release "PTT" on the steering switch. |
| | Only a limited range of voice commands is usable for each screen. | Use a correct voice command appropriate for the current screen. |

REAR VIEW MONITOR

| Symptom | Possible cause | Possible solution |
|--|--|---|
| Rear view monitor image is not displayed | The selector lever is not shifted in R position. | Shift the selector lever in R position. |

TROUBLE DIAGNOSIS [WITH MOBILE ENTERTAINMENT SYSTEM]

| Symptom | Possible cause | Possible solution |
|---|--|---|
| Rear view monitor image is not clear | Front glass of camera lens is dirty | Dip a soft cloth into water and wipe the glass softly. |
| | There are raindrops, snow, etc. | Wipe it with a soft cloth softly. |
| | The sunlight or the headlight of following vehicle is shining directly to the camera lens. | It returns to the original condition if the light applied to the lens disappears |
| The center position of possible route line is not in the correct position | <ul style="list-style-type: none"> ● Remove or replace the battery. ● Replace steering angle sensor or camera control unit. ● Turn steering wheel when turning ignition switch OFF. | Perform the neutral position correction as follows. <ul style="list-style-type: none"> ● Fully turn the steering wheel to left/right. ● Drive 100 m or more at vehicle speed 30 km/h or more. |

REMOTE CONTROLLER

| Symptom | Possible cause | Possible solution |
|---|--|--|
| The remote controller does not respond. | The remote controller is not pointing at the receiver. | Point the remote controller at the receiver. |
| | The battery in the remote controller is not set correctly. | Set the battery correctly. |
| | The battery in the remote controller is discharged. | Replace the battery. |
| | The transmitter of the remote controller or the receiver is dirty. | Clean the transmitter of the remote controller and the receiver. |
| | The electrodes of the battery in the remote controller are not contacting correctly. | Take out the battery and clean the electrodes. |

REMOVAL AND INSTALLATION [WITH MOBILE ENTERTAINMENT SYSTEM]

REMOVAL AND INSTALLATION

PF0:00000

Removal and Installation/Precautions for Replacement REMOVAL OF BATTERY

NKS004BG

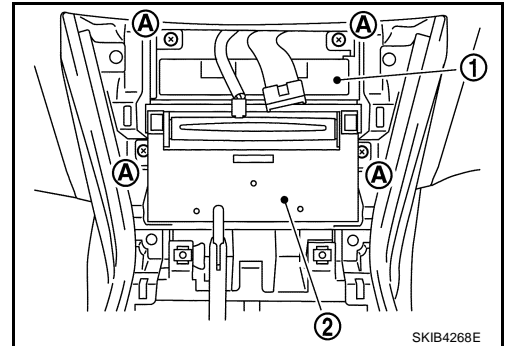
When the battery is removed, the possible route line center position of rear view monitor may not be in the correct position. Perform the center position correction with the following procedure.

1. Fully turn the steering wheel to left/right.
2. Drive 100m (328.1 ft) or more at vehicle speed 30 km/h (18.6 MPH) or more.

Audio Unit REMOVAL

NKS004BH

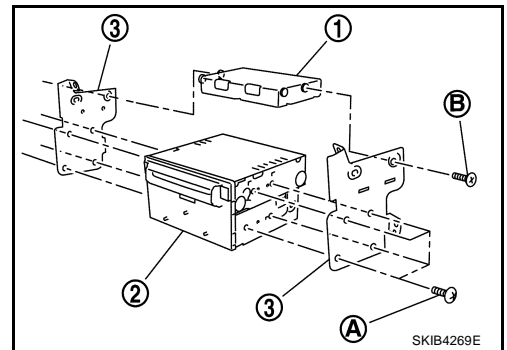
1. Remove cluster lid C. Refer to [IP-10, "INSTRUMENT PANEL ASSEMBLY"](#).
2. Remove screws (A) and remove audio unit (2) in conjunction with unified meter and A/C amp (1).



3. Remove screws (A) and (B)
4. Remove meter and A/C amp (1), audio unit (2) and bracket (3).

CAUTION:

Be careful not to allow foreign material to enter from CD slot.



INSTALLATION

Installation is the reverse order of removal.

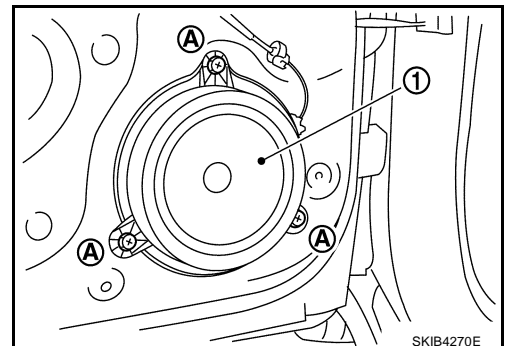
CAUTION:

Unified meter and A/C amp screws are different from other securing screws. Never confuse them when installing.

Front Door Speaker REMOVAL

NKS004BI

1. Remove front door finisher. Refer to [EI-34, "DOOR FINISHER"](#).
2. Remove screws (A) and remove front door speaker (1).



INSTALLATION

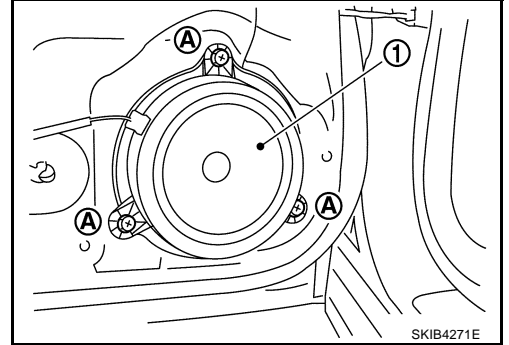
Installation is the reverse order of removal.

REMOVAL AND INSTALLATION [WITH MOBILE ENTERTAINMENT SYSTEM]

Rear Door Speaker REMOVAL

NKS004BJ

1. Remove rear door finisher. Refer to [EI-34, "DOOR FINISHER"](#) .
2. Remove screws (A) and remove rear door speaker (1).



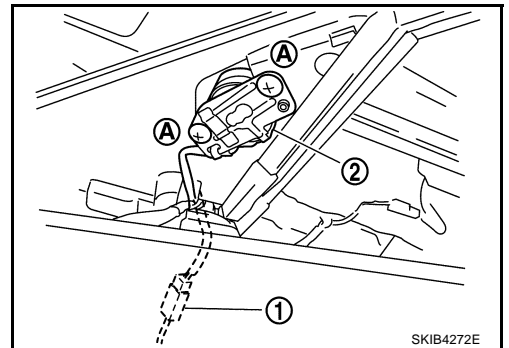
INSTALLATION

Installation is the reverse order of removal.

Tweeter REMOVAL

NKS004BK

1. Remove front door finisher. Refer to [EI-34, "DOOR FINISHER"](#) .
2. Remove door sash inner cover (front). Refer to [EI-34, "DOOR FINISHER"](#) .
3. Remove screws (A), and disconnect connector (1).
4. Remove tweeter (2).



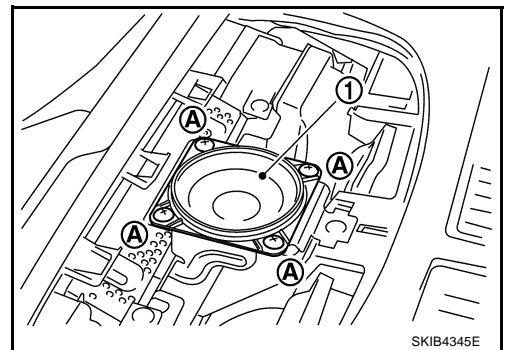
INSTALLATION

Installation is the reverse order of removal.

Center Speaker REMOVAL

NKS004BL

1. Remove upper ventilator grill. Refer to [ATC-145, "REMOVAL"](#) .
2. Remove screws (A) and disconnect connector.
3. Remove center speaker (1).



INSTALLATION

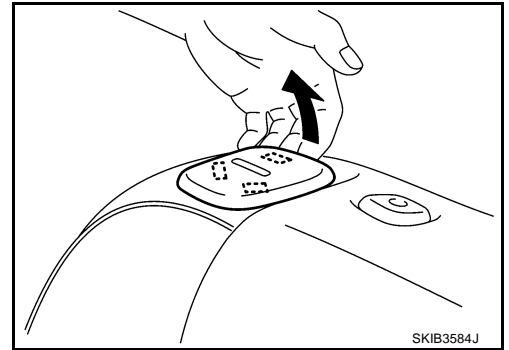
Installation is the reverse order of removal.

REMOVAL AND INSTALLATION [WITH MOBILE ENTERTAINMENT SYSTEM]

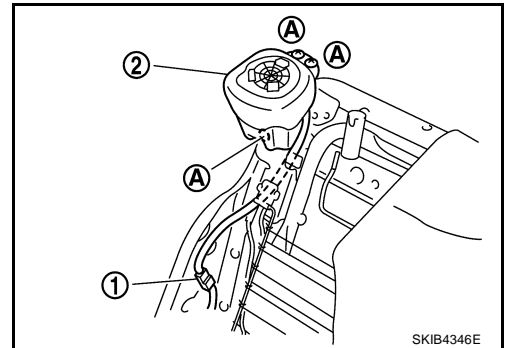
Seat Speaker REMOVAL

NKS004BM

1. Remove seat speaker grill as shown in the figure.
CAUTION:
Never reuse seat speaker grill. The pawl is broken when removing.
2. Remove front seat back trim and pad. Refer to [SE-168](#), "[Removal and Installation](#)".



3. Remove screws (A) and disconnect connector (1).
4. Remove seat speaker (2).



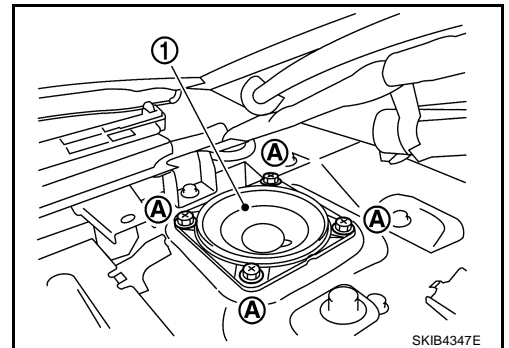
INSTALLATION

Installation is the reverse order of removal.

Rear Surround Speaker REMOVAL

NKS004BN

1. Remove rear parcel shelf finisher. Refer to [EI-42](#), "[Removal and Installation](#)".
2. Remove screws (A) and disconnect connector.
3. Remove rear surround speaker (1).



INSTALLATION

Installation is the reverse order of removal.

Woofers REMOVAL

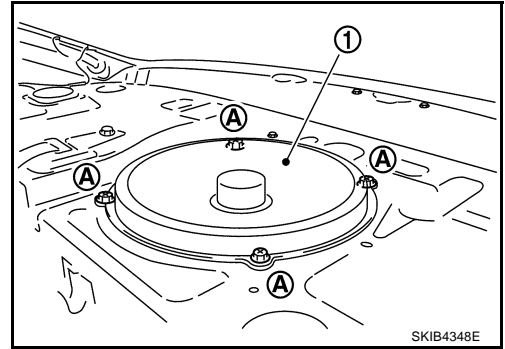
NKS004BO

1. Remove rear parcel shelf finisher. Refer to [EI-42](#), "[Removal and Installation](#)".

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REMOVAL AND INSTALLATION [WITH MOBILE ENTERTAINMENT SYSTEM]

2. Remove screws (A) and disconnect connector.
3. Remove woofer (1).



INSTALLATION

Installation is the reverse order of removal.

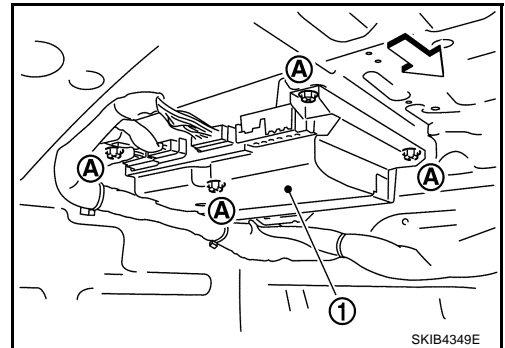
BOSE Amp

NKS004BP

↔: Vehicle front

REMOVAL

1. Remove trunk front finisher. Refer to [EI-56, "Removal and Installation for Trunk Room Trim"](#).
2. Remove screws (A), and disconnect connector.
3. Remove BOSE amp (1).



INSTALLATION

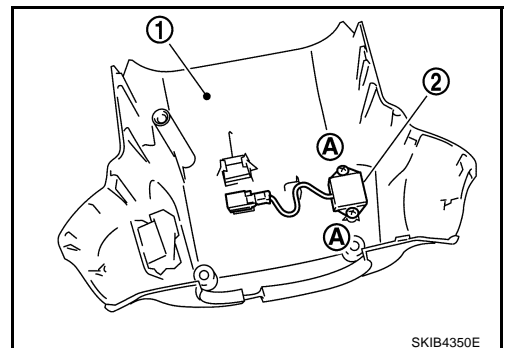
Installation is the reverse order of removal.

AudioPilot[®] Microphone

NKS004BQ

REMOVAL

1. Remove steering column lower cover. Refer to [IP-11, "Removal and Installation of Instrument Panel & Pad"](#).
2. Remove screws (A) and disconnect connector.
3. Remove Microphone (2) from steering column lower cover (1).



INSTALLATION

Installation is the reverse order of removal.

Satellite Radio Tuner

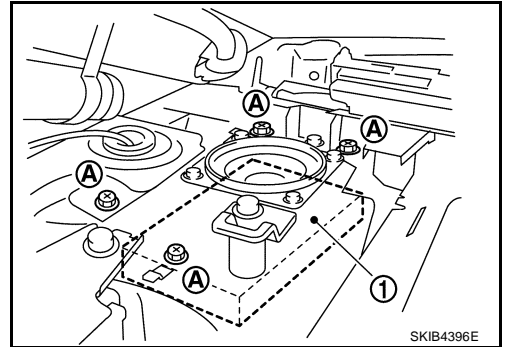
NKS004BR

REMOVAL

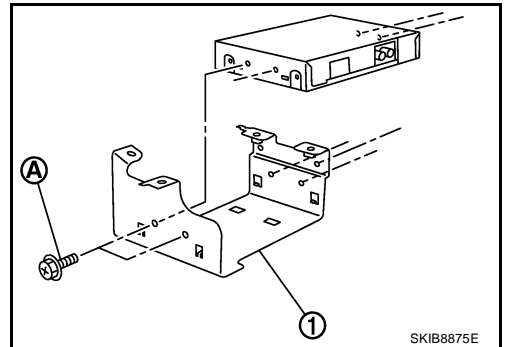
1. Remove trunk front finisher. Refer to [EI-56, "Removal and Installation for Trunk Room Trim"](#).
2. Remove rear parcel shelf finisher. Refer to [EI-42, "Removal and Installation"](#).

REMOVAL AND INSTALLATION [WITH MOBILE ENTERTAINMENT SYSTEM]

3. Remove screws (A).
4. Disconnect connector and remove satellite radio tuner (1) from trunk room side.



5. Disconnect screws (A), and remove bracket (1).



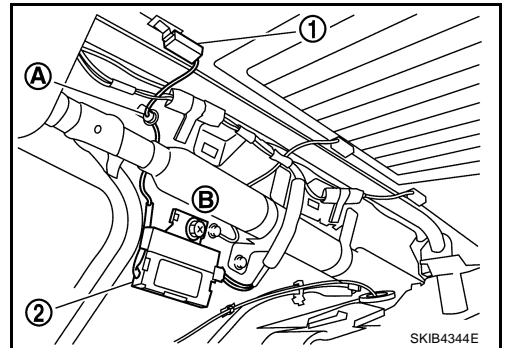
INSTALLATION

Installation is the reverse order of removal.

Antenna Amp REMOVAL

NKS004BS

1. Remove rear pillar finisher (RH). Refer to [EI-37, "Removal and Installation"](#).
2. Disengaged the clip (A) to separate glass terminal (1).
3. Remove screw (B) and remove antenna amp (2) from vehicle.



INSTALLATION

Installation is the reverse order of removal.

Satellite Radio Antenna

NKS004BT

↔ Vehicle front

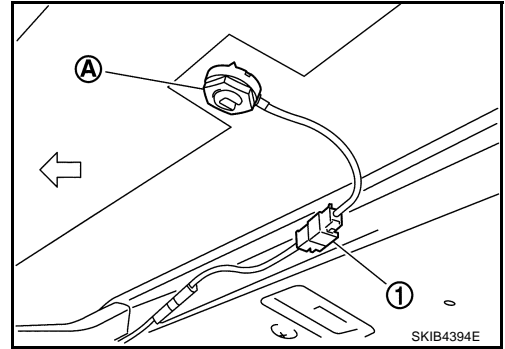
REMOVAL

1. Remove rear pillar finisher. Refer to [EI-37, "Removal and Installation"](#).
2. Remove personal lamp. Refer to [LT-289, "REMOVAL AND INSTALLATION"](#).
3. Remove assist grip (rear). Refer to [EI-52, "Removal and Installation"](#).
4. Remove rear display cover. Refer to [AV-283, "Rear Display Unit"](#).
5. Remove head lining assembly (rear) to obtain work space between the head lining assembly and vehicle.

REMOVAL AND INSTALLATION

[WITH MOBILE ENTERTAINMENT SYSTEM]

6. Remove nut (A), and then disconnect connector (1).
7. Remove satellite radio antenna.



INSTALLATION

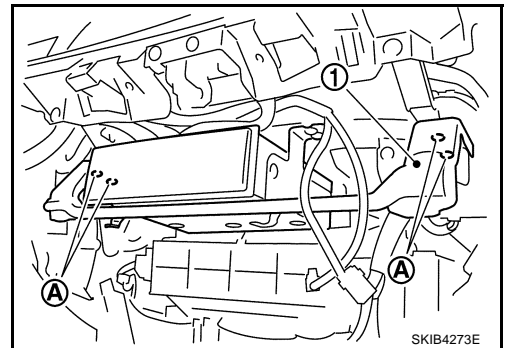
Installation is the reverse order of removal.

Roof antenna mounting nut  : 6.0 N·m (0.61 kg·m, 53 in·lb)

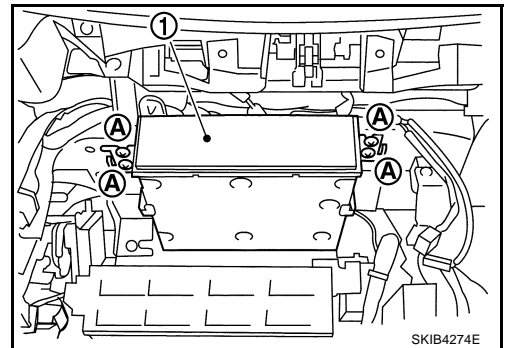
AV (NAVI) Control Unit REMOVAL

NKS004BV

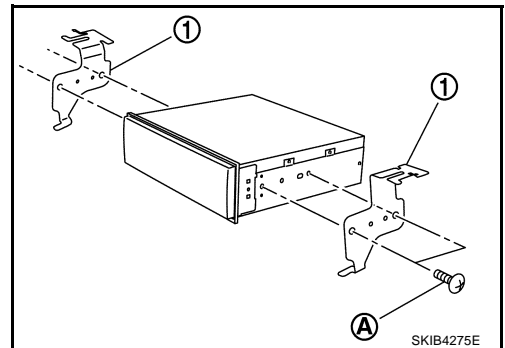
1. Remove glove box cover. Refer to [IP-10, "INSTRUMENT PANEL ASSEMBLY"](#).
2. Remove screws (A), and remove knee assist protector assembly (1).



3. Remove screws (A), and disconnect connector.
4. Remove AV (NAVI) control unit (1).



5. Remove screws (A) and remove bracket (1).



INSTALLATION

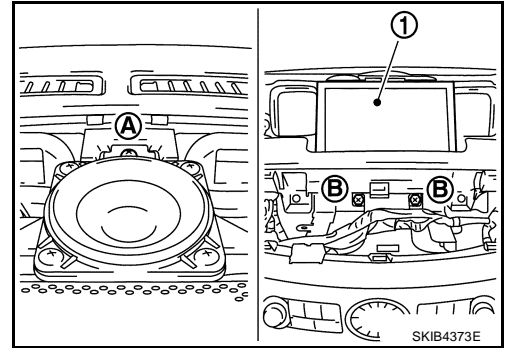
Installation is the reverse order of removal.

REMOVAL AND INSTALLATION [WITH MOBILE ENTERTAINMENT SYSTEM]

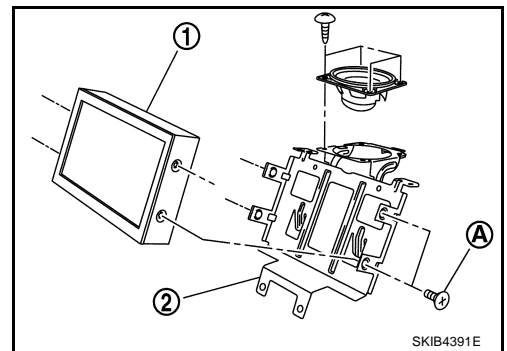
NKS004BW

Front Display Unit REMOVAL

1. Remove upper ventilator grille. Refer to [IP-10, "INSTRUMENT PANEL ASSEMBLY"](#).
2. Remove multifunction switch. Refer to [ATC-123, "Removal and Installation of Multifunction Switch"](#).
3. Remove screw (A).
4. Remove screws (B) and disconnect connector, and remove display (1).



5. Remove screws (A) separate front display (1) unit from bracket (2).



INSTALLATION

Installation is the reverse order of removal.

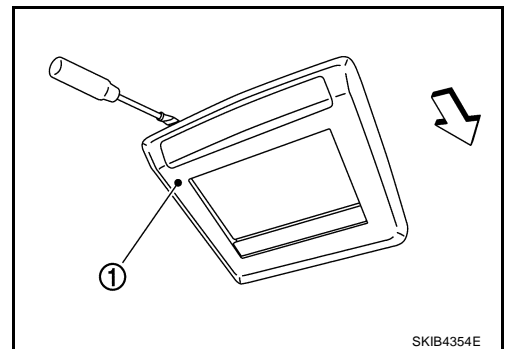
Rear Display Unit

NKS004BX

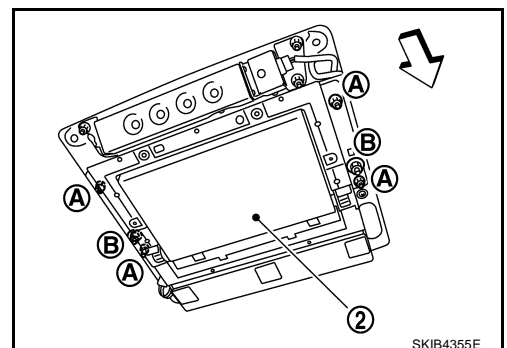
←: Vehicle front

REMOVAL

1. Insert cloth-covered driver into gaps between rear display cover (1) and headlining, and remove rear display cover (1).



2. Remove nuts (A) and plastic nuts (B).
3. Disconnect connector, and remove rear display unit (2).



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REMOVAL AND INSTALLATION

[WITH MOBILE ENTERTAINMENT SYSTEM]

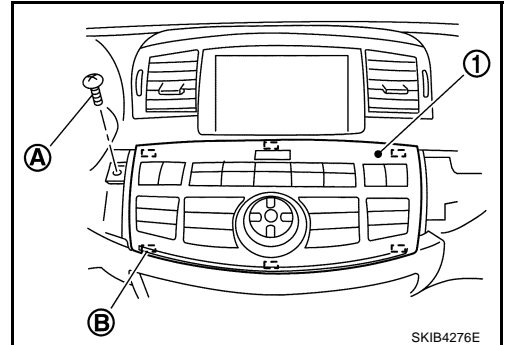
INSTALLATION

Installation is the reverse order if removal.

Multifunction Switch REMOVAL

NKS004BY

1. Remove instrument panel finisher B and C. Refer to [IP-10, "INSTRUMENT PANEL ASSEMBLY"](#).
2. Remove screw (A).
3. Disengage tabs (B) and connector to separate multifunction switch (1) from instrument panel.



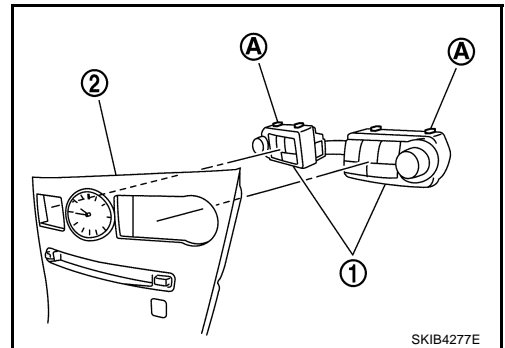
INSTALLATION

Installation is the reverse order of removal.

Preset Switch REMOVAL

NKS004BZ

1. Remove cluster lid C. Refer to [IP-10, "INSTRUMENT PANEL ASSEMBLY"](#).
2. Disengage tabs (A) to separate preset switch (1) from cluster lid C (2).



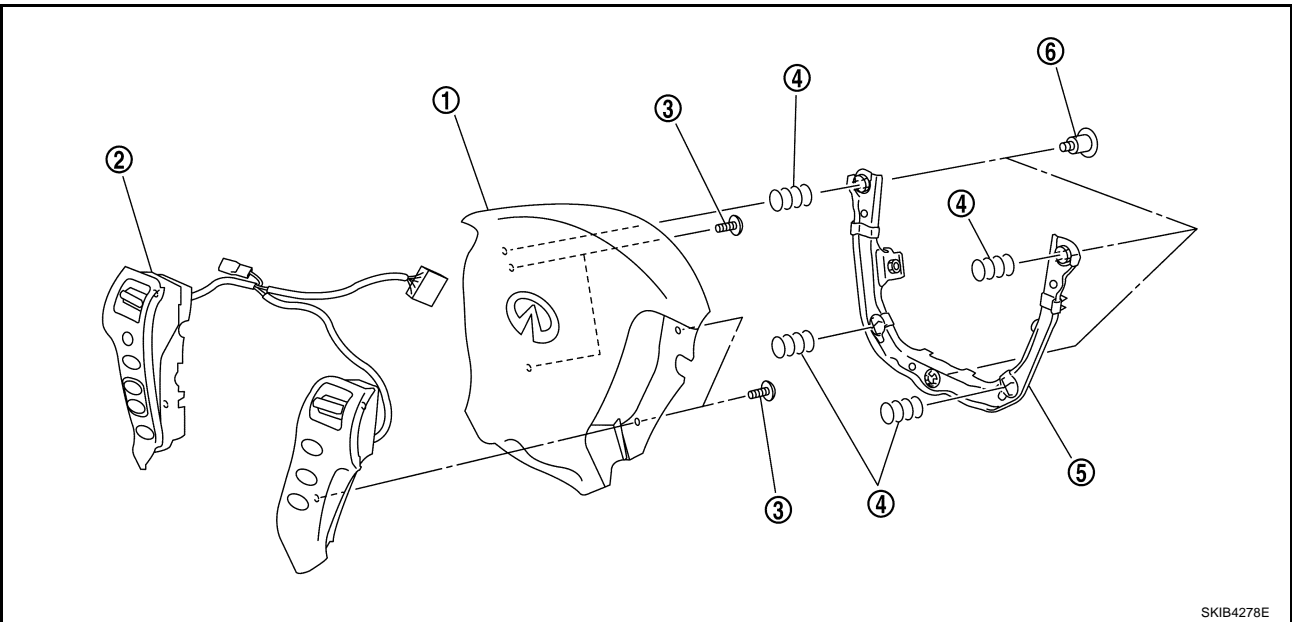
INSTALLATION

Installation is the reverse order of removal.

REMOVAL AND INSTALLATION [WITH MOBILE ENTERTAINMENT SYSTEM]

Steering Switch REMOVAL

NKS004C0



- | | | |
|------------|--------------------|----------|
| 1. Air bag | 2. Steering switch | 3. Screw |
| 4. Spring | 5. Bracket | 6. Screw |

1. Refer to [SRS-42, "DRIVER AIR BAG MODULE"](#) .

INSTALLATION

Installation is the reverse order of removal.

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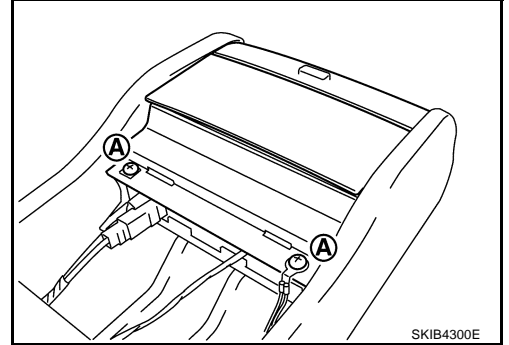
REMOVAL AND INSTALLATION

[WITH MOBILE ENTERTAINMENT SYSTEM]

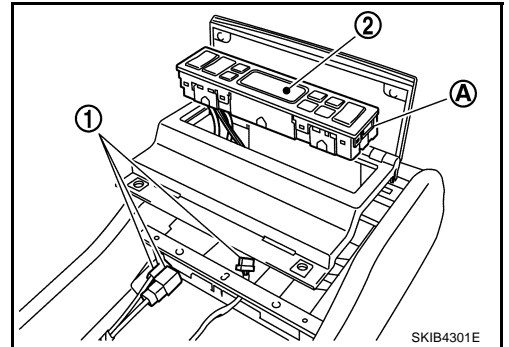
NKS004C1

Rear Control Switch REMOVAL

1. Remove tray box from armrest. Refer to [SE-168, "Removal and Installation"](#) .
2. Remove screws (A).



3. Disconnect connector (1) and disengage tabs (A) to separate rear control switch (2).



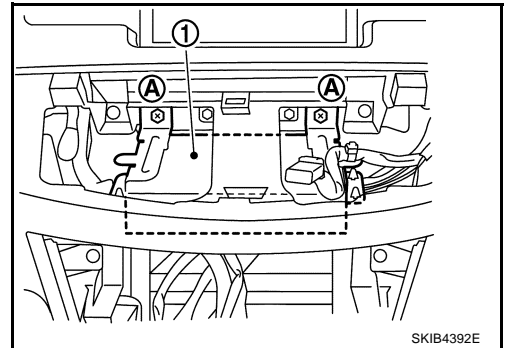
INSTALLATION

Installation is the reverse order of removal.

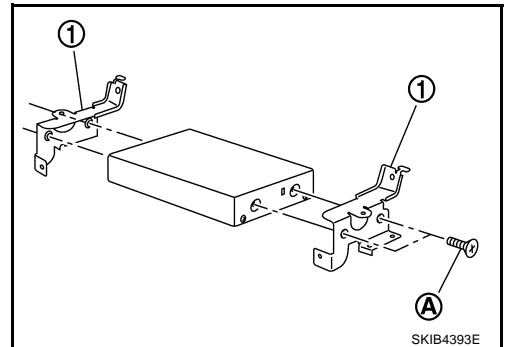
Video Distributor REMOVAL

NKS004C2

1. Remove multifunction switch. Refer to [AV-284, "Multifunction Switch"](#) .
2. Remove audio unit assembly. Refer to [AV-277, "Audio Unit"](#) .
3. Remove screws (A).
4. Disconnect connector and remove video distributor (1).



5. Remove screws (A) and remove bracket (1).



REMOVAL AND INSTALLATION [WITH MOBILE ENTERTAINMENT SYSTEM]

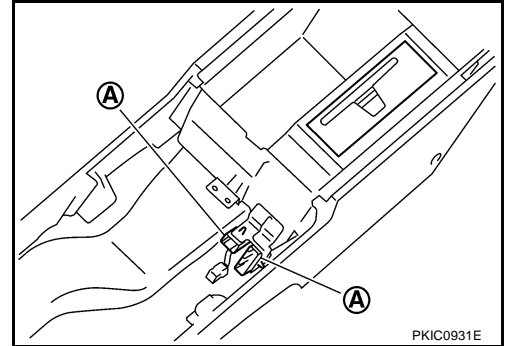
INSTALLATION

Installation is the reverse order of removal.

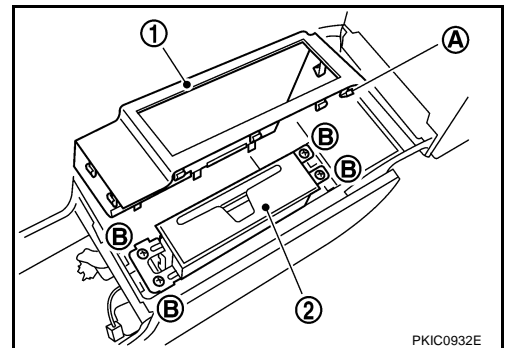
DVD Player REMOVAL

NKS004C3

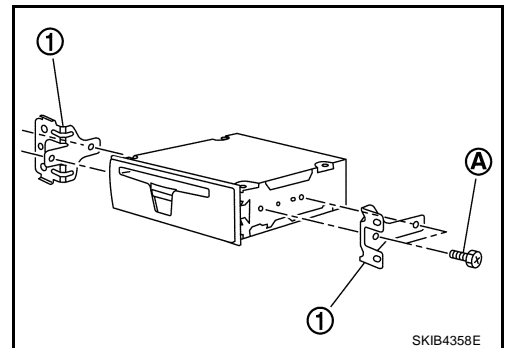
1. Remove cup holder. Refer to [JP-11, "Removal and Installation of Instrument Panel & Pad"](#).
2. Disconnect sub harness connector.
3. Remove sub harness connectors (A) from bracket.



4. Remove metal clips (A) and 8 pawls. Then remove DVD player cover (1).
5. Remove screws (B) and remove DVD player (2).



6. Remove screws (A) and remove brackets (1).



INSTALLATION

Installation is the reverse order of removal.

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REMOVAL AND INSTALLATION

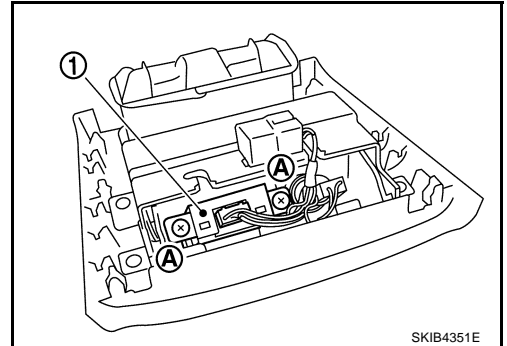
[WITH MOBILE ENTERTAINMENT SYSTEM]

Auxiliary Input Jacks

REMOVAL

NKS004C4

1. Remove center console rear finisher. Refer to [IP-10, "INSTRUMENT PANEL ASSEMBLY"](#) .
2. Remove screws (A) and disconnect connector. Remove auxiliary input jacks (1) from center console rear finisher.



INSTALLATION

Installation is the reverse order of removal.

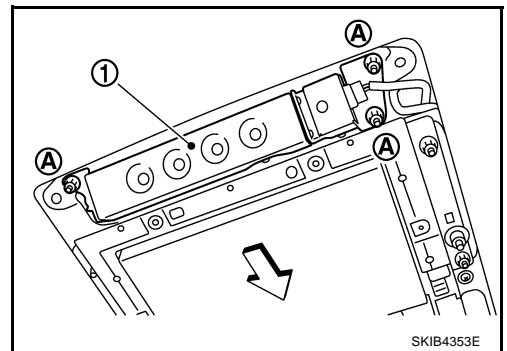
Headphone Amp

NKS004C5

↔: Vehicle front

REMOVAL

1. Remove rear display cover. Refer to [IP-19, "Disassembly and Assembly"](#) .
2. Remove nuts (A) and disconnect connector. Remove headphone amp (1).



INSTALLATION

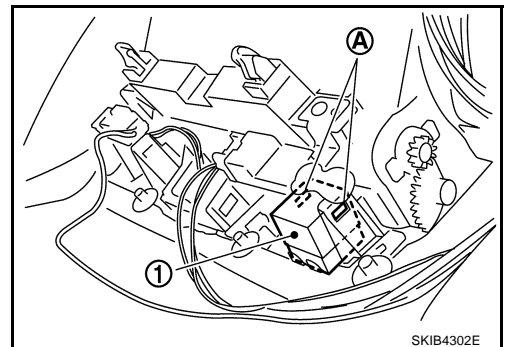
Installation is the reverse order of removal.

Microphone

REMOVAL

NKS004C6

1. Remove front pillar garnish. Refer to [EI-37, "BODY SIDE TRIM"](#) .
2. Remove sun-visor and sun-visor holder. Refer to [EI-52, "HEADLINING"](#) .
3. Remove dual-sunvisor. Refer to [EI-52, "HEADLINING"](#) .
4. Remove assistance grip (front). Refer to [EI-52, "HEADLINING"](#) .
5. Bear down headlining assembly (front) to obtain work space between headlining assembly and vehicle.
6. Disengage tabs (A) and connector to separate microphone unit (1).



REMOVAL AND INSTALLATION [WITH MOBILE ENTERTAINMENT SYSTEM]

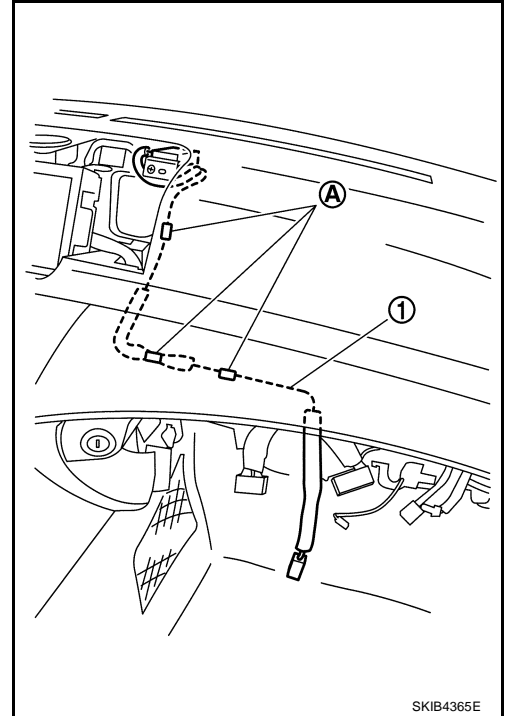
INSTALLATION

Installation is the reverse order of removal.

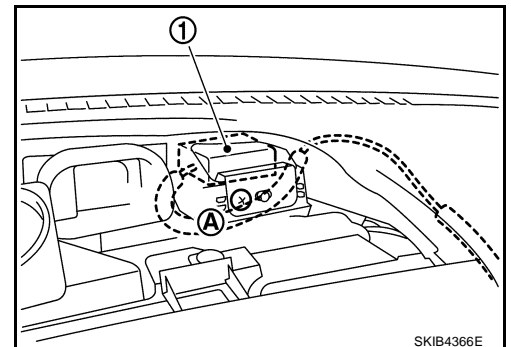
GPS Antenna REMOVAL

NKS004C7

1. Remove NAVI control unit. Refer to [AV-282, "AV \(NAVI\) Control Unit"](#) .
2. Remove upper ventilator grille. Refer to [IP-10, "INSTRUMENT PANEL ASSEMBLY"](#) .
3. Remove clips (A) and remove antenna feeder (1) from instrument panel and pad.



4. Remove screw (A) and remove GPS antenna (1).



INSTALLATION

Installation is the reverse order of removal.

A
B
C
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J
AV
L
M

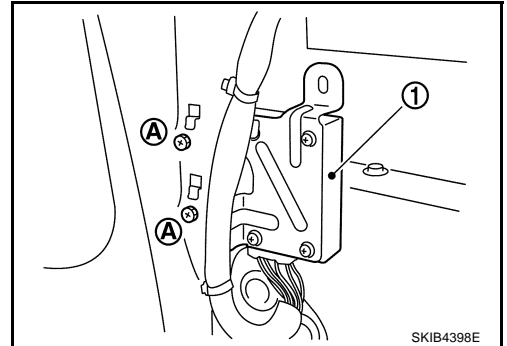
REMOVAL AND INSTALLATION

[WITH MOBILE ENTERTAINMENT SYSTEM]

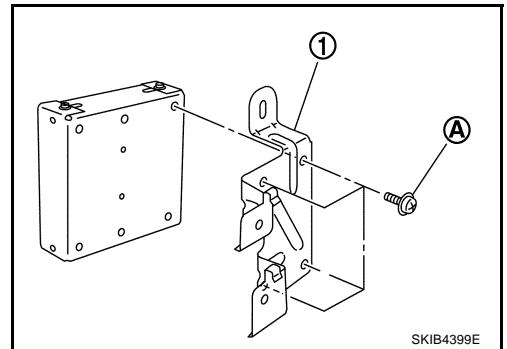
Camera Control Unit REMOVAL

NKS004C8

1. Remove trunk side finisher (RH). Refer to [EI-56, "Removal and Installation for Trunk Room Trim"](#) .
2. Remove screws (A) and disconnect connector, and remove rear view camera control unit (1).



3. Remove screws (A) and remove bracket (1).



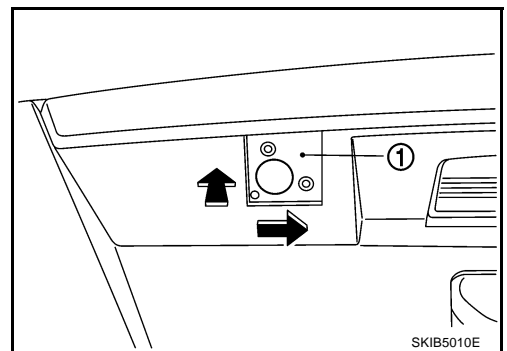
INSTALLATION

Installation is the reverse order of removal.

Rear View Camera REMOVAL

NKS004C9

1. Remove trunk lid finisher inner. Refer to [EI-56, "TRUNK ROOM TRIM & TRUNK LID FINISHER"](#) .
2. Remove screws attaching camera and camera bracket.
3. Remove connector and connector clip.
4. Remove camera bracket (1) while pushing right direction of vehicle.



INSTALLATION

1. Install rear view camera and camera bracket while pressing to trunk room side.
2. Install connector and connector clip.
3. Install trunk lid finisher inner.

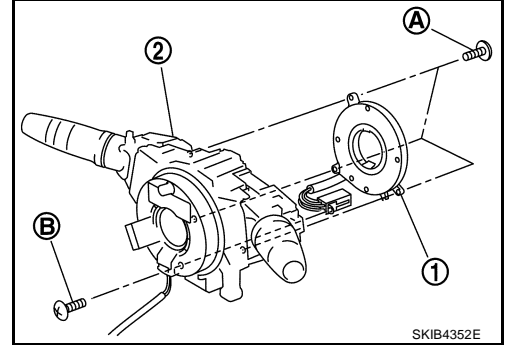
REMOVAL AND INSTALLATION

[WITH MOBILE ENTERTAINMENT SYSTEM]

Steering Angle Sensor REMOVAL

NKS004CA

1. Remove combination switch. Refer to [SRS-44. "SPIRAL CABLE"](#) .
2. Remove screws (A) and remove connector mount screw (B).
3. Remove steering angle sensor (1) from combination switch (2).



INSTALLATION

Installation is the reverse order of removal.

CAUTION:

Insert the projection area, and install steering wheel angle sensor while fitting adjusting the triangle marks (Larger mark should be upward.).

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L
M

AV

REMOVAL AND INSTALLATION
[WITH MOBILE ENTERTAINMENT SYSTEM]
