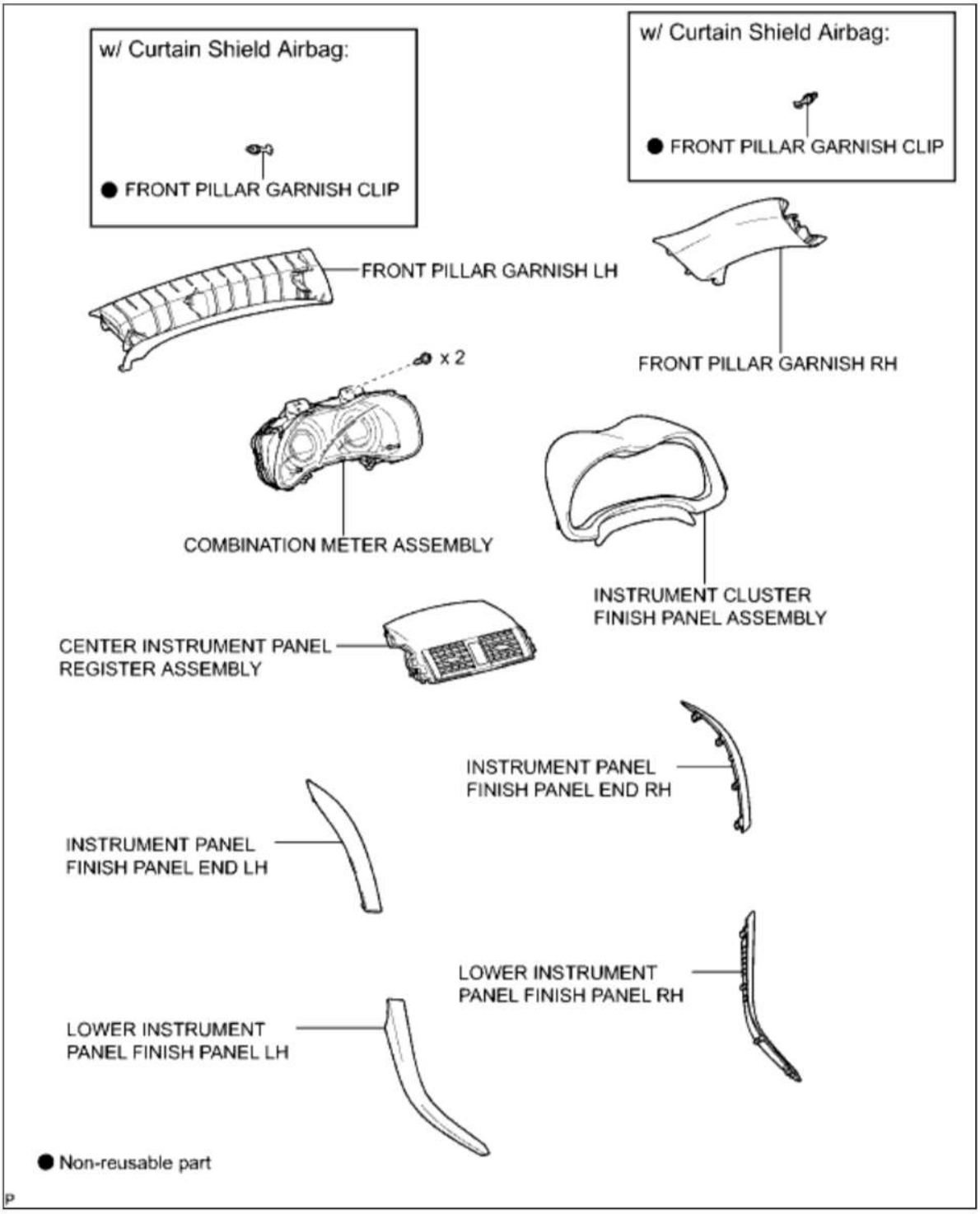
Last Modified: 3-10-2010	6.4 K	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM000002XBT006X
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION ANTENNA: COMPONENTS (2010 Corolla)		

COMPONENTS

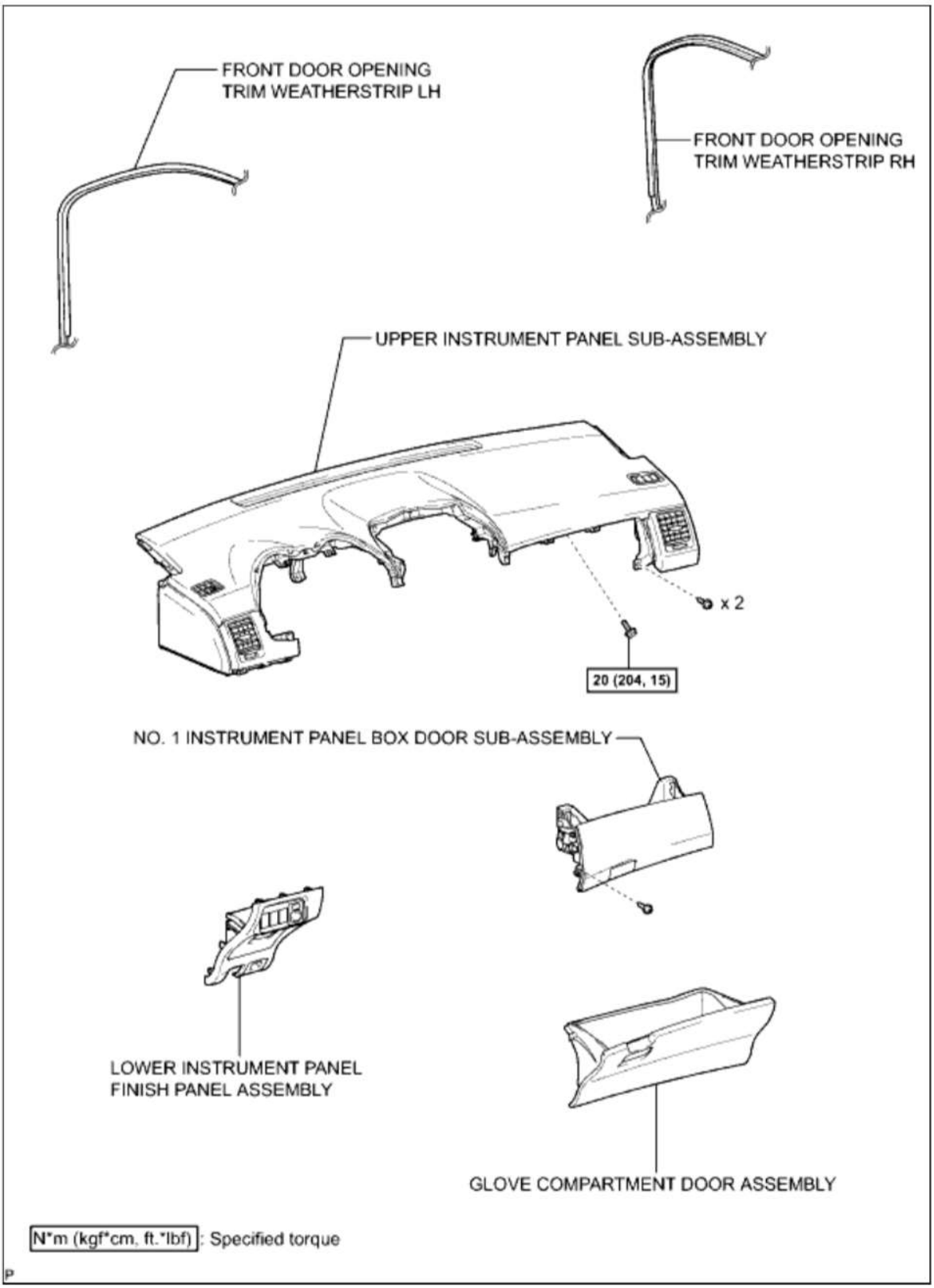
ILLUSTRATION

cardiagn.com



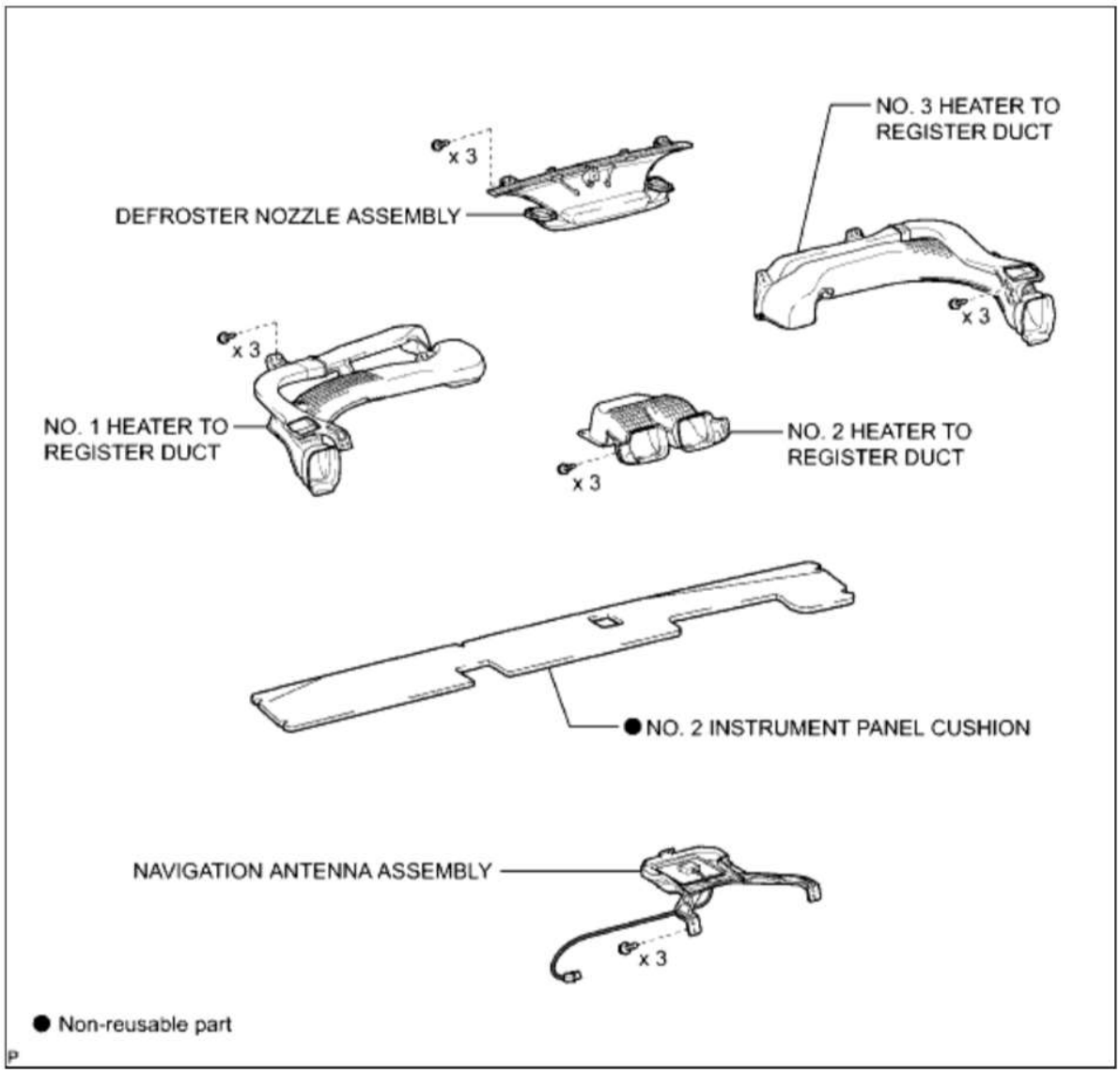
ILLUSTRATION

cardiagn.com



ILLUSTRATION

cardiagn.com



cardiagn.com

Last Modified: 3-10-2010	6.4 A	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM000002XBU007X
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION ANTENNA: REMOVAL (2010 Corolla)		

REMOVAL

1. DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

2. REMOVE LOWER INSTRUMENT PANEL FINISH PANEL LH INFO

3. REMOVE LOWER INSTRUMENT PANEL FINISH PANEL RH INFO

4. REMOVE INSTRUMENT PANEL FINISH PANEL END LH INFO

5. REMOVE INSTRUMENT PANEL FINISH PANEL END RH INFO

6. REMOVE CENTER INSTRUMENT PANEL REGISTER ASSEMBLY INFO

7. REMOVE INSTRUMENT CLUSTER FINISH PANEL ASSEMBLY INFO

8. REMOVE COMBINATION METER ASSEMBLY INFO

9. REMOVE FRONT PILLAR GARNISH LH (w/o Curtain Shield Airbag) INFO

10. REMOVE FRONT PILLAR GARNISH LH (w/ Curtain Shield Airbag) INFO

11. REMOVE FRONT PILLAR GARNISH RH (w/o Curtain Shield Airbag) INFO

12. REMOVE FRONT PILLAR GARNISH RH (w/ Curtain Shield Airbag) INFO

13. REMOVE LOWER INSTRUMENT PANEL FINISH PANEL ASSEMBLY INFO

14. DISCONNECT FRONT DOOR OPENING TRIM WEATHERSTRIP LH INFO

15. REMOVE GLOVE COMPARTMENT DOOR ASSEMBLY INFO

16. REMOVE NO. 1 INSTRUMENT PANEL BOX DOOR SUB-ASSEMBLY INFO

17. DISCONNECT FRONT DOOR OPENING TRIM WEATHERSTRIP RH INFO

18. DISCONNECT INSTRUMENT PANEL WIRE ASSEMBLY INFO

19. REMOVE UPPER INSTRUMENT PANEL SUB-ASSEMBLY INFO

20. REMOVE DEFROSTER NOZZLE ASSEMBLY INFO

21. REMOVE NO. 2 HEATER TO REGISTER DUCT INFO

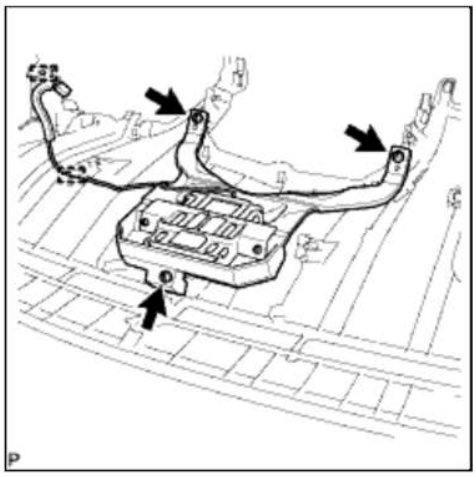
22. REMOVE NO. 1 HEATER TO REGISTER DUCT INFO

cardiagn.com

23. REMOVE NO. 3 HEATER TO REGISTER DUCT INFO

24. REMOVE NO. 2 INSTRUMENT PANEL CUSHION INFO

25. REMOVE NAVIGATION ANTENNA ASSEMBLY



(a) Disengage the 2 clamps.

(b) Remove the 3 screws and navigation antenna assembly.

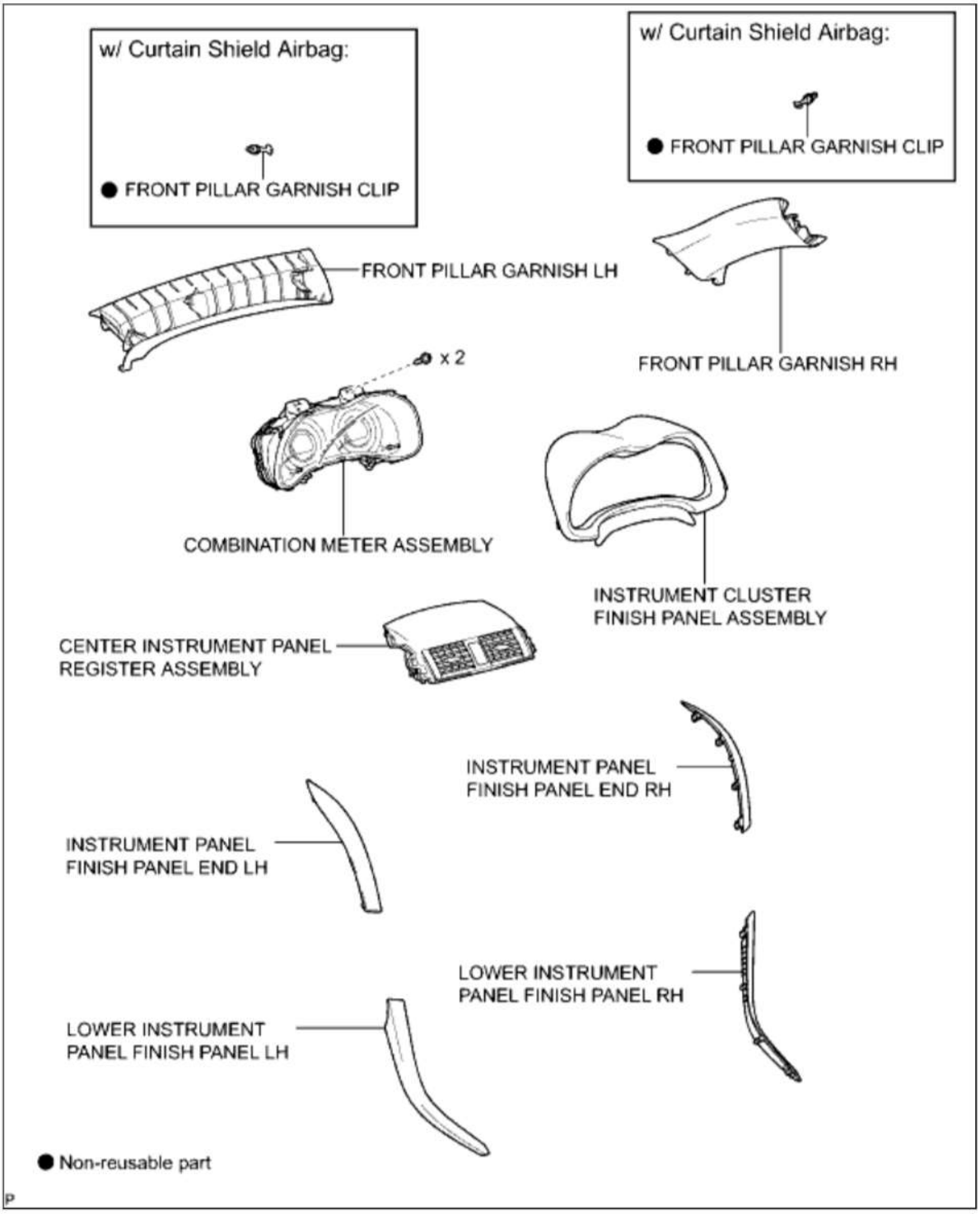
cardiagn.com

Last Modified: 3-10-2010	6.4 K	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM000002XBZ006X
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION ANTENNA CORD: COMPONENTS (2010 Corolla)		

COMPONENTS

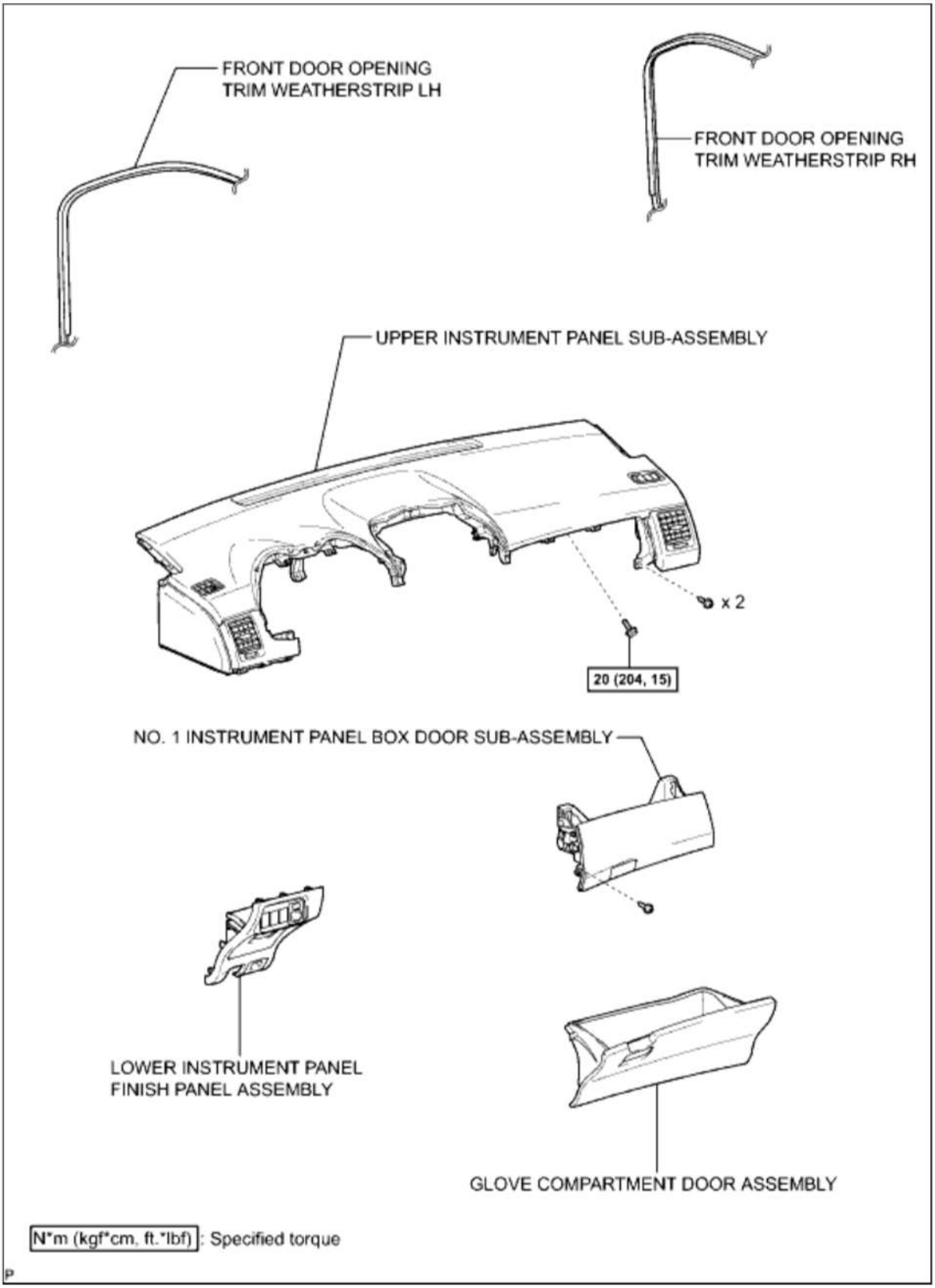
ILLUSTRATION

cardiagn.com



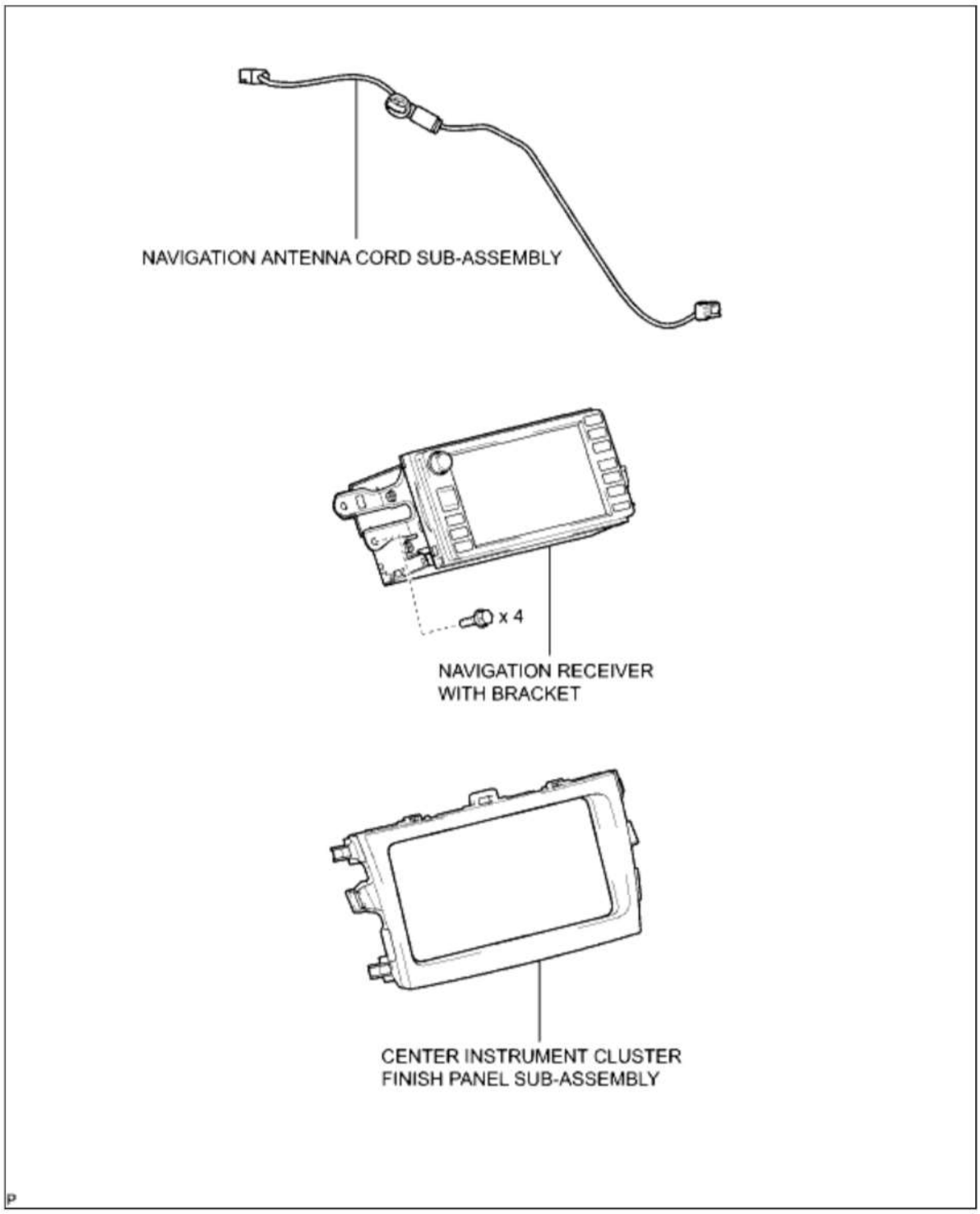
ILLUSTRATION

cardiagn.com



ILLUSTRATION

cardiagn.com

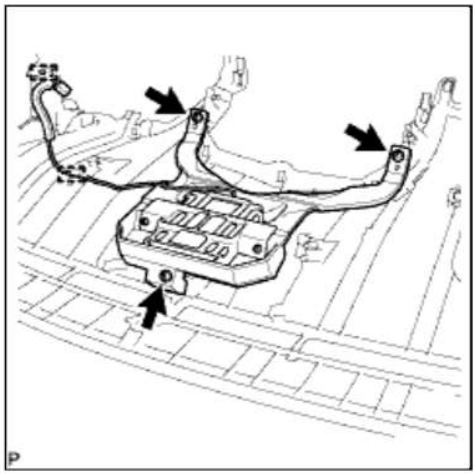


cardiagn.com

Last Modified: 3-10-2010	6.4 A	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM000002XBS007X
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION ANTENNA: INSTALLATION (2010 Corolla)		

INSTALLATION

1. INSTALL NAVIGATION ANTENNA ASSEMBLY



(a) Install the navigation antenna assembly with the 3 screws.

(b) Engage the 2 clamps.

2. INSTALL NO. 2 INSTRUMENT PANEL CUSHION INFO

3. INSTALL NO. 3 HEATER TO REGISTER DUCT INFO

4. INSTALL NO. 1 HEATER TO REGISTER DUCT INFO

5. INSTALL NO. 2 HEATER TO REGISTER DUCT INFO

6. INSTALL DEFROSTER NOZZLE ASSEMBLY INFO

7. INSTALL UPPER INSTRUMENT PANEL SUB-ASSEMBLY INFO

8. CONNECT INSTRUMENT PANEL WIRE ASSEMBLY INFO

9. CONNECT FRONT DOOR OPENING TRIM WEATHERSTRIP LH INFO

10. INSTALL LOWER INSTRUMENT PANEL FINISH PANEL ASSEMBLY INFO

11. CONNECT FRONT DOOR OPENING TRIM WEATHERSTRIP RH INFO

12. INSTALL NO. 1 INSTRUMENT PANEL BOX DOOR SUB-ASSEMBLY INFO

13. INSTALL GLOVE COMPARTMENT DOOR ASSEMBLY INFO

14. INSTALL FRONT PILLAR GARNISH LH (w/ Curtain Shield Airbag) INFO

cardiagn.com

15. INSTALL FRONT PILLAR GARNISH LH (w/o Curtain Shield Airbag) INFO

16. INSTALL FRONT PILLAR GARNISH RH (w/ Curtain Shield Airbag) INFO

17. INSTALL FRONT PILLAR GARNISH RH (w/o Curtain Shield Airbag) INFO

18. INSTALL COMBINATION METER ASSEMBLY INFO

19. INSTALL INSTRUMENT CLUSTER FINISH PANEL ASSEMBLY INFO

20. INSTALL CENTER INSTRUMENT PANEL REGISTER ASSEMBLY INFO

21. INSTALL INSTRUMENT PANEL FINISH PANEL END LH INFO

22. INSTALL INSTRUMENT PANEL FINISH PANEL END RH INFO

23. INSTALL LOWER INSTRUMENT PANEL FINISH PANEL LH INFO

24. INSTALL LOWER INSTRUMENT PANEL FINISH PANEL RH INFO

25. CONNECT CABLE TO NEGATIVE BATTERY TERMINAL

26. INSPECT SRS WARNING LIGHT

INFO



cardiagn.com

Last Modified: 3-10-2010	6.4 A	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM000002XC0007X
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION ANTENNA CORD: REMOVAL (2010 Corolla)		

REMOVAL

1. DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

2. REMOVE LOWER INSTRUMENT PANEL FINISH PANEL LH INFO

3. REMOVE LOWER INSTRUMENT PANEL FINISH PANEL RH INFO

4. REMOVE INSTRUMENT PANEL FINISH PANEL END LH INFO

5. REMOVE INSTRUMENT PANEL FINISH PANEL END RH INFO

6. REMOVE CENTER INSTRUMENT PANEL REGISTER ASSEMBLY INFO

7. REMOVE INSTRUMENT CLUSTER FINISH PANEL ASSEMBLY INFO

8. REMOVE COMBINATION METER ASSEMBLY INFO

9. REMOVE FRONT PILLAR GARNISH LH (w/o Curtain Shield Airbag) INFO

10. REMOVE FRONT PILLAR GARNISH LH (w/ Curtain Shield Airbag) INFO

11. REMOVE FRONT PILLAR GARNISH RH (w/o Curtain Shield Airbag) INFO

12. REMOVE FRONT PILLAR GARNISH RH (w/ Curtain Shield Airbag) INFO

13. REMOVE LOWER INSTRUMENT PANEL FINISH PANEL ASSEMBLY INFO

14. DISCONNECT FRONT DOOR OPENING TRIM WEATHERSTRIP LH INFO

15. REMOVE GLOVE COMPARTMENT DOOR ASSEMBLY INFO

16. REMOVE NO. 1 INSTRUMENT PANEL BOX DOOR SUB-ASSEMBLY INFO

17. DISCONNECT FRONT DOOR OPENING TRIM WEATHERSTRIP RH INFO

18. DISCONNECT INSTRUMENT PANEL WIRE ASSEMBLY INFO

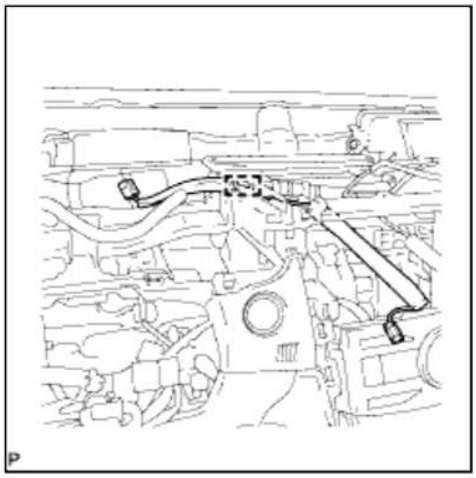
19. REMOVE UPPER INSTRUMENT PANEL SUB-ASSEMBLY INFO

20. REMOVE CENTER INSTRUMENT CLUSTER FINISH PANEL SUB-ASSEMBLY INFO

21. REMOVE NAVIGATION RECEIVER WITH BRACKET INFO

22. REMOVE NAVIGATION ANTENNA CORD SUB-ASSEMBLY

cardiagn.com



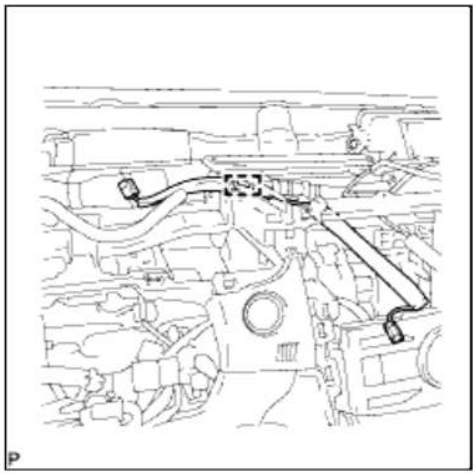
(a) Disengage the clamp and remove the navigation antenna cord sub-assembly.

cardiagn.com

Last Modified: 3-10-2010	6.4 A	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM000002XBY007X
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION ANTENNA CORD: INSTALLATION (2010 Corolla)		

INSTALLATION

1. INSTALL NAVIGATION ANTENNA CORD SUB-ASSEMBLY



(a) Engage the clamp and install the navigation antenna cord sub-assembly.

2. INSTALL NAVIGATION RECEIVER WITH BRACKET INFO

3. INSTALL CENTER INSTRUMENT CLUSTER FINISH PANEL SUB-ASSEMBLY INFO

4. INSTALL UPPER INSTRUMENT PANEL SUB-ASSEMBLY INFO

5. CONNECT INSTRUMENT PANEL WIRE ASSEMBLY INFO

6. CONNECT FRONT DOOR OPENING TRIM WEATHERSTRIP LH INFO

7. REMOVE LOWER INSTRUMENT PANEL FINISH PANEL ASSEMBLY INFO

8. CONNECT FRONT DOOR OPENING TRIM WEATHERSTRIP RH INFO

9. INSTALL NO. 1 INSTRUMENT PANEL BOX DOOR SUB-ASSEMBLY INFO

10. INSTALL GLOVE COMPARTMENT DOOR ASSEMBLY INFO

11. INSTALL FRONT PILLAR GARNISH LH (w/ Curtain Shield Airbag) INFO

12. INSTALL FRONT PILLAR GARNISH LH (w/o Curtain Shield Airbag) INFO

13. INSTALL FRONT PILLAR GARNISH RH (w/ Curtain Shield Airbag) INFO

14. INSTALL FRONT PILLAR GARNISH RH (w/o Curtain Shield Airbag) INFO

cardiagn.com

15. INSTALL COMBINATION METER ASSEMBLY INFO

16. INSTALL INSTRUMENT CLUSTER FINISH PANEL ASSEMBLY INFO

17. INSTALL CENTER INSTRUMENT PANEL REGISTER ASSEMBLY INFO

18. INSTALL INSTRUMENT PANEL FINISH PANEL END LH INFO

19. INSTALL INSTRUMENT PANEL FINISH PANEL END RH INFO

20. INSTALL LOWER INSTRUMENT PANEL FINISH PANEL LH INFO

21. INSTALL LOWER INSTRUMENT PANEL FINISH PANEL RH INFO

22. CONNECT CABLE TO NEGATIVE BATTERY TERMINAL

23. INSPECT SRS WARNING LIGHT

INFO



cardiagn.com

Last Modified: 3-10-2010	6.4 D	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM000000NY601ZX
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION SYSTEM: SYSTEM DESCRIPTION (2010 Corolla)		

SYSTEM DESCRIPTION

1. NAVIGATION SYSTEM OUTLINE

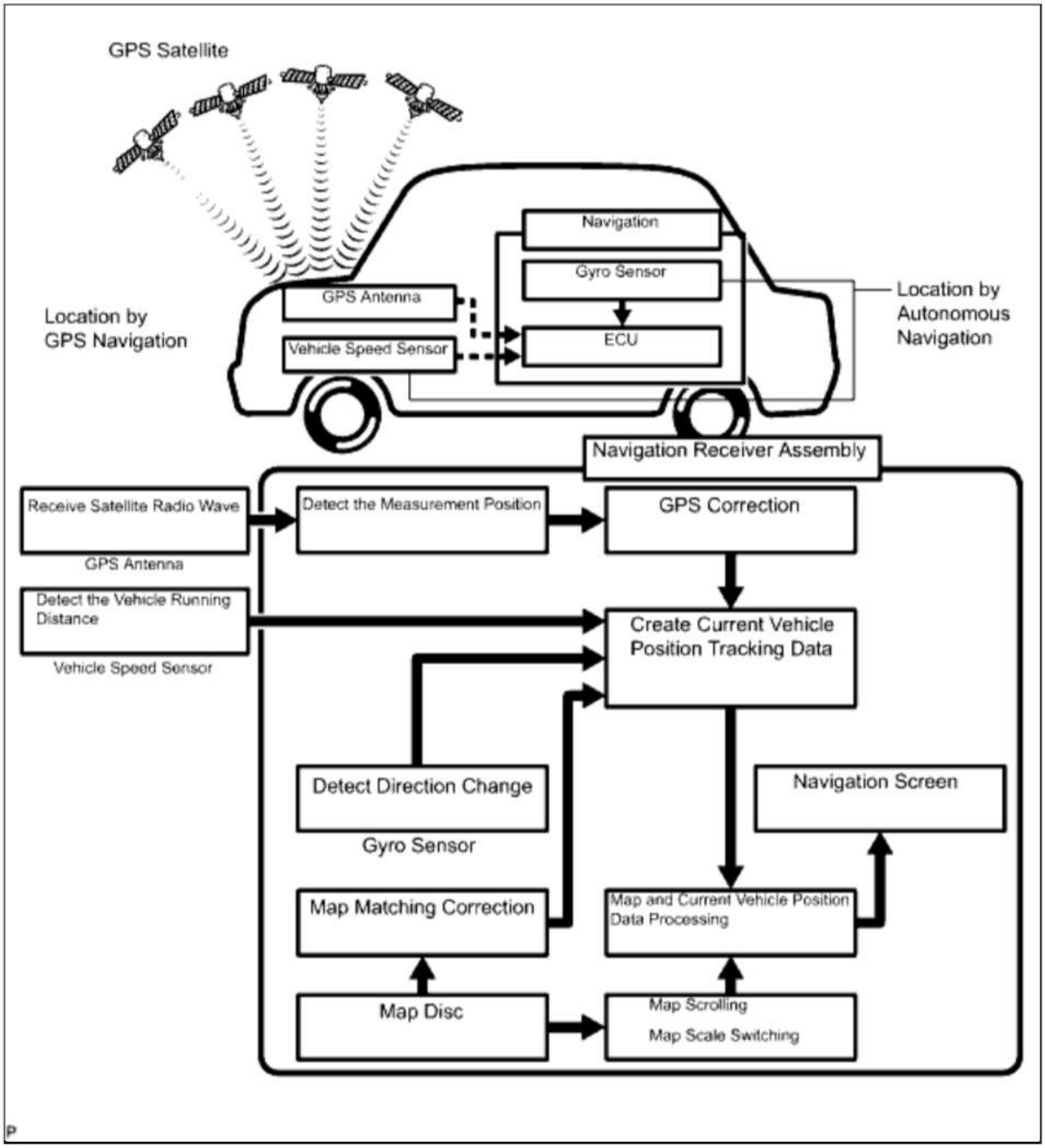
(a) Vehicle position tracking methods

(1) It is essential that the navigation system correctly tracks the current vehicle position and displays it on the map. There are 2 methods to track the current vehicle position: autonomous (dead reckoning) and GPS* (satellite) navigation. Both navigation methods are used in conjunction with each other.

HINT:

***: GPS (Global Positioning System)**

cardiagn.com



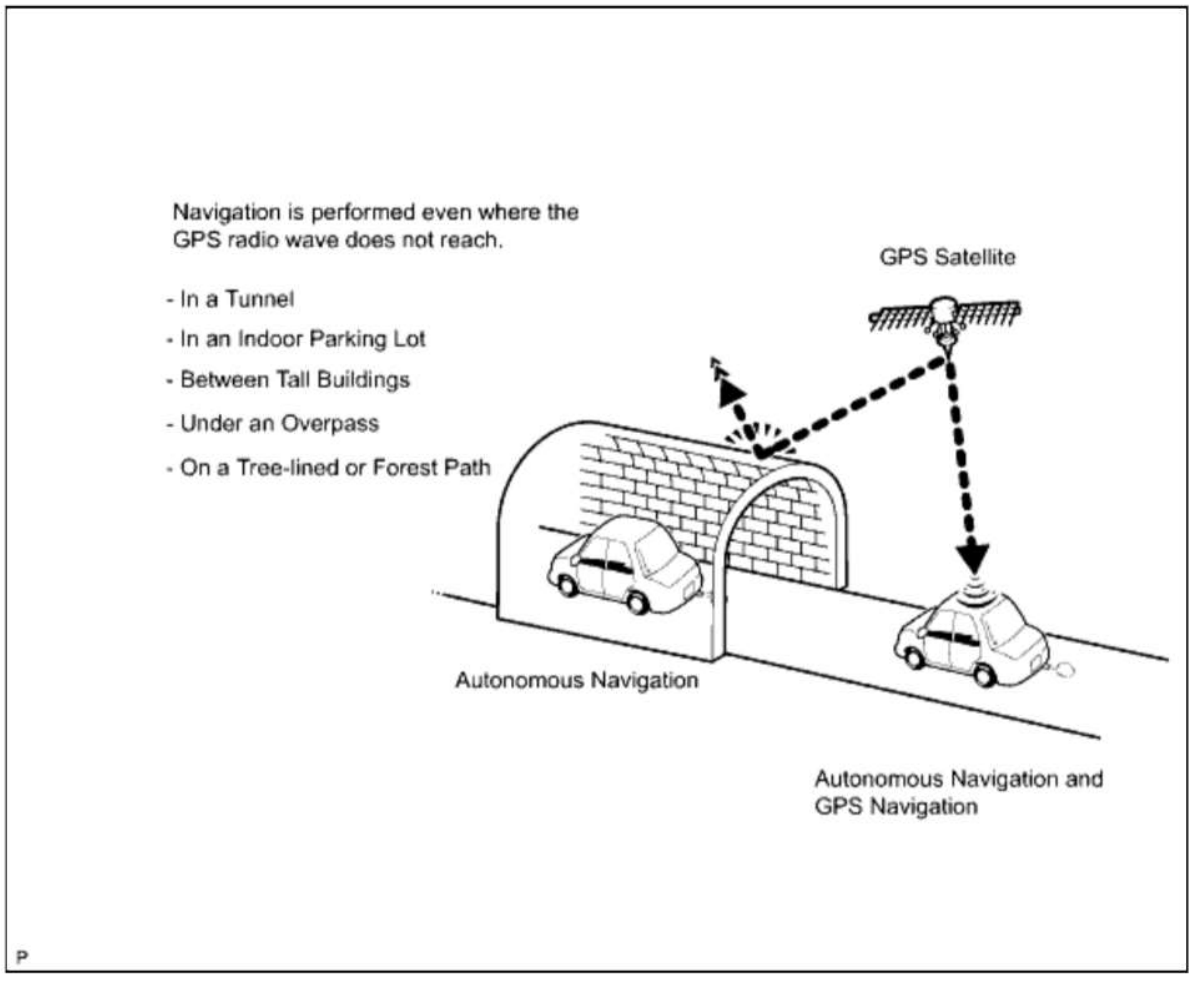
OPERATION	DESCRIPTION
Vehicle Position Calculation	The navigation receiver assembly calculates the current vehicle position (direction and current position) using the direction deviation signal from the gyro sensor and running distance signal from the vehicle speed sensor and creates the driving route.
Map Display Processing	The navigation receiver assembly processes the vehicle position data, vehicle running track, and map data from the map disc.
Map Matching	The map data from the map disc is compared to the vehicle position and running track data. Then, the vehicle position is matched with the nearest road.
GPS Correction	The vehicle position is matched to the position measured by the GPS. Then, the measurement position data from the GPS unit is compared with the vehicle position and running track data. If the position is very different, the GPS measurement

cardiagn.com

OPERATION	DESCRIPTION
	position is used.
Distance Correction	The running distance signal from the vehicle speed sensor includes error caused by tire wear and slippage between the tires and road surface. Distance correction is performed to account for this. The navigation ECU automatically offsets the running distance signal to make up for the difference between it and the distance data of the map. The offset is automatically updated.

HINT:

The combination of autonomous and GPS navigation makes it possible to display the vehicle position even when the vehicle is in places where the GPS radio wave cannot be received. When only autonomous navigation is used, the mapping accuracy may slightly decline.



(b) Autonomous navigation

This method determines the relative vehicle position based on the running track determined by the gyro and vehicle speed sensors located in the navigation receiver assembly.

(1) Gyro sensor

Calculates the direction by detecting angular velocity. It is located in the navigation receiver assembly.

cardiagn.com

(2) Vehicle speed sensor

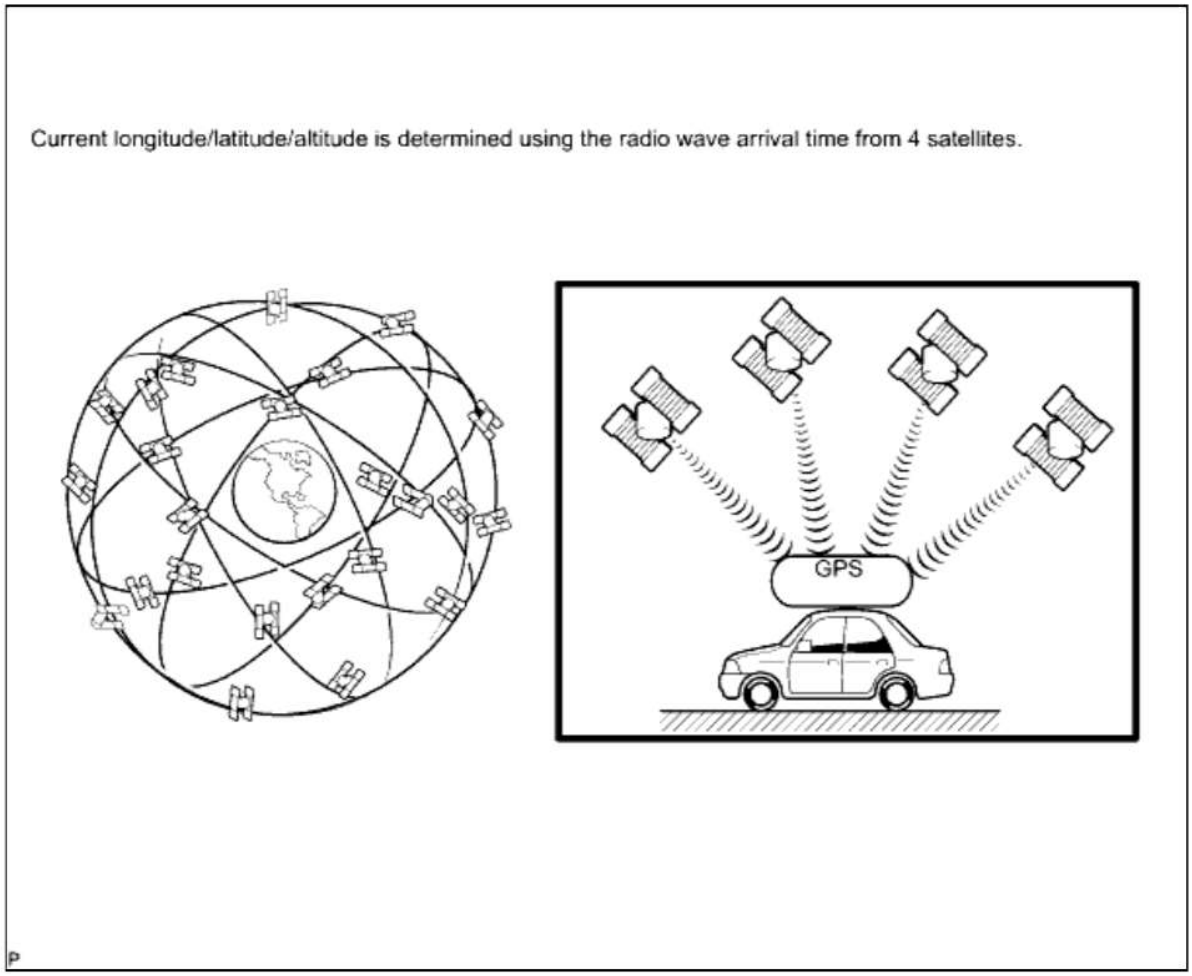
Used to calculate the vehicle running distance.

(c) GPS navigation (satellite navigation)

This method detects the absolute vehicle position using radio waves from a GPS satellite*.

HINT:

***: GPS satellites were launched by the U.S. Department of Defense for military purposes.**

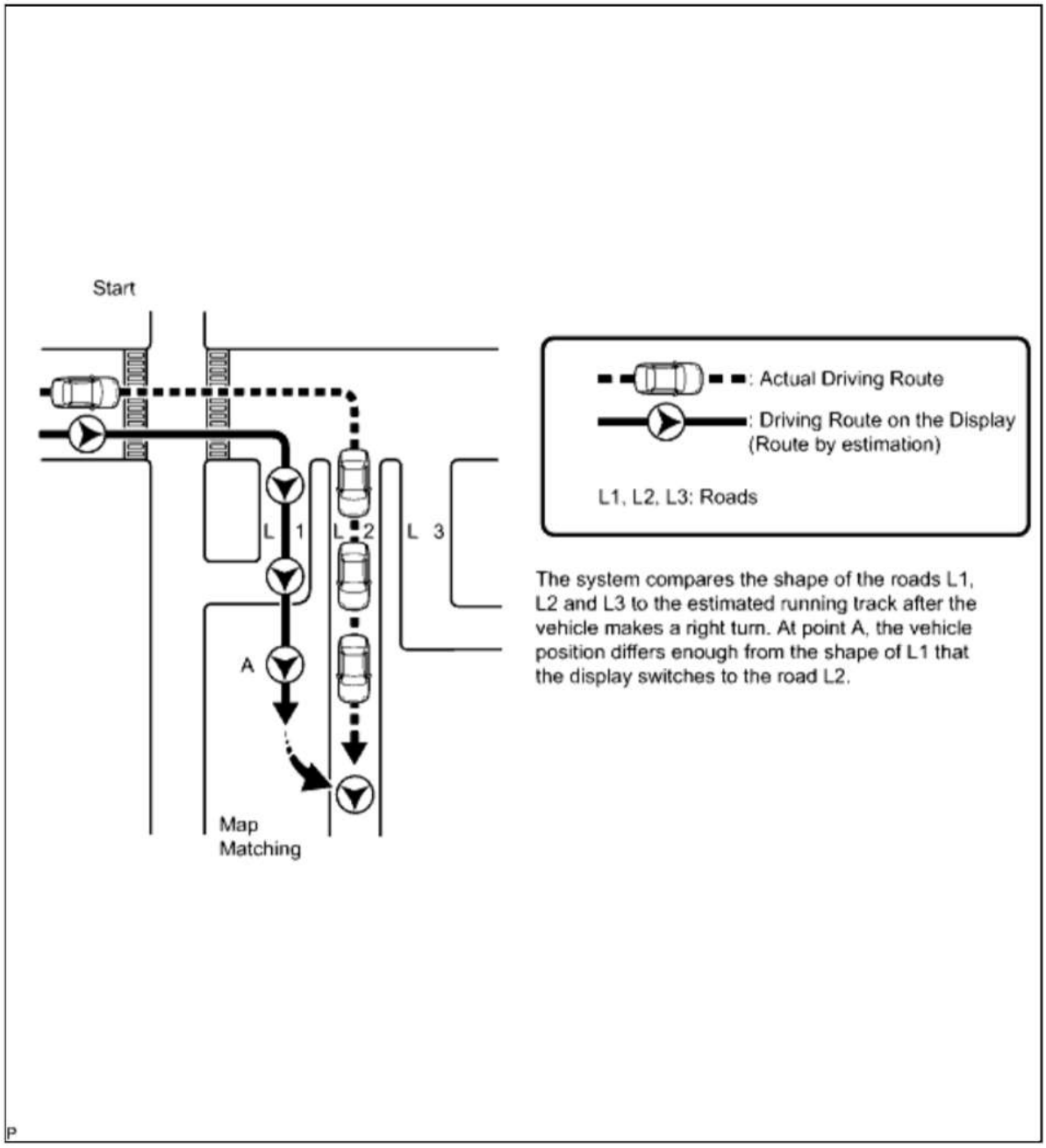


NUMBER OF SATELLITES	MEASUREMENT	DESCRIPTION
2 or less	Measurement impossible	The vehicle position cannot be obtained because the number of satellites is not enough.
3	2-dimensional measurement is possible	The vehicle position is obtained based on current longitude and latitude (this is less precise than 3-dimensional measurement).
4	3-dimensional measurement is possible	The vehicle position is obtained based on current longitude, latitude and altitude.

(d) Map matching

cardiagn.com

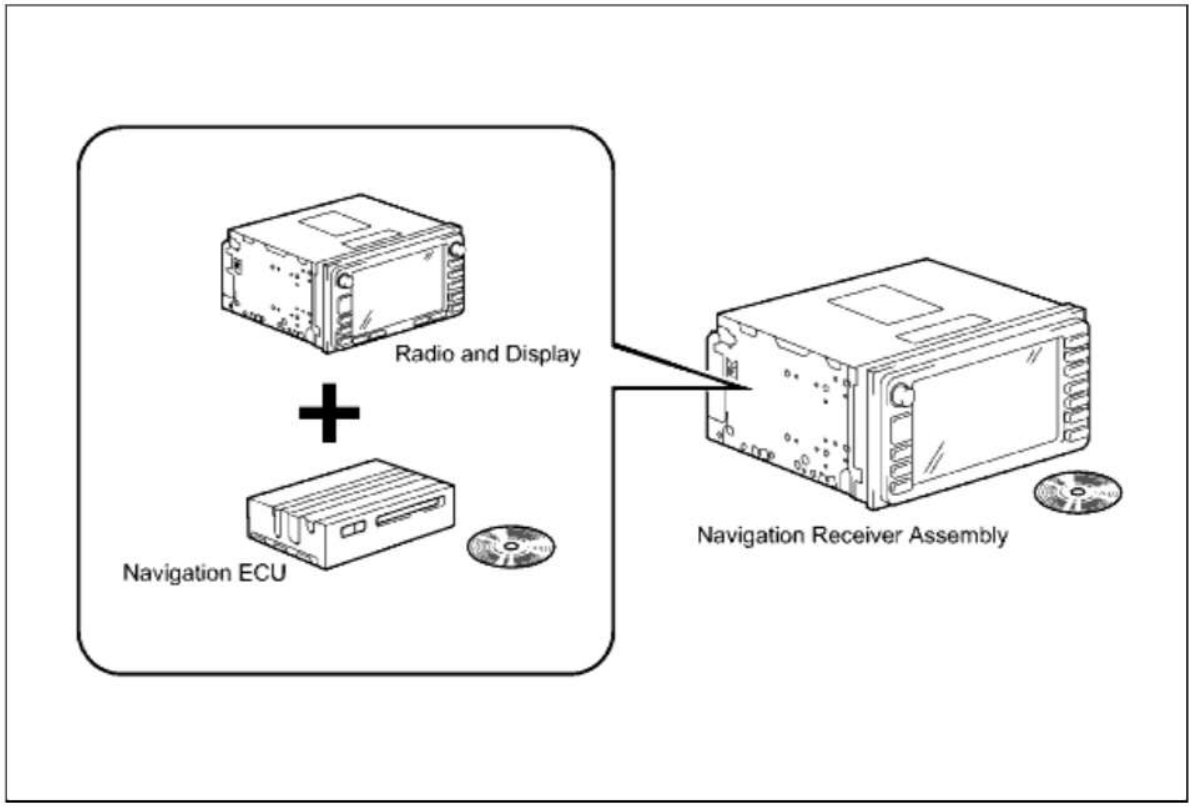
The current driving route is calculated by autonomous navigation (according to the gyro sensor and vehicle speed sensor) and GPS navigation. This information is then compared with possible road shapes from the map data in the map disc and the vehicle position is set onto the most appropriate road.



2. NAVIGATION RECEIVER ASSEMBLY OUTLINE

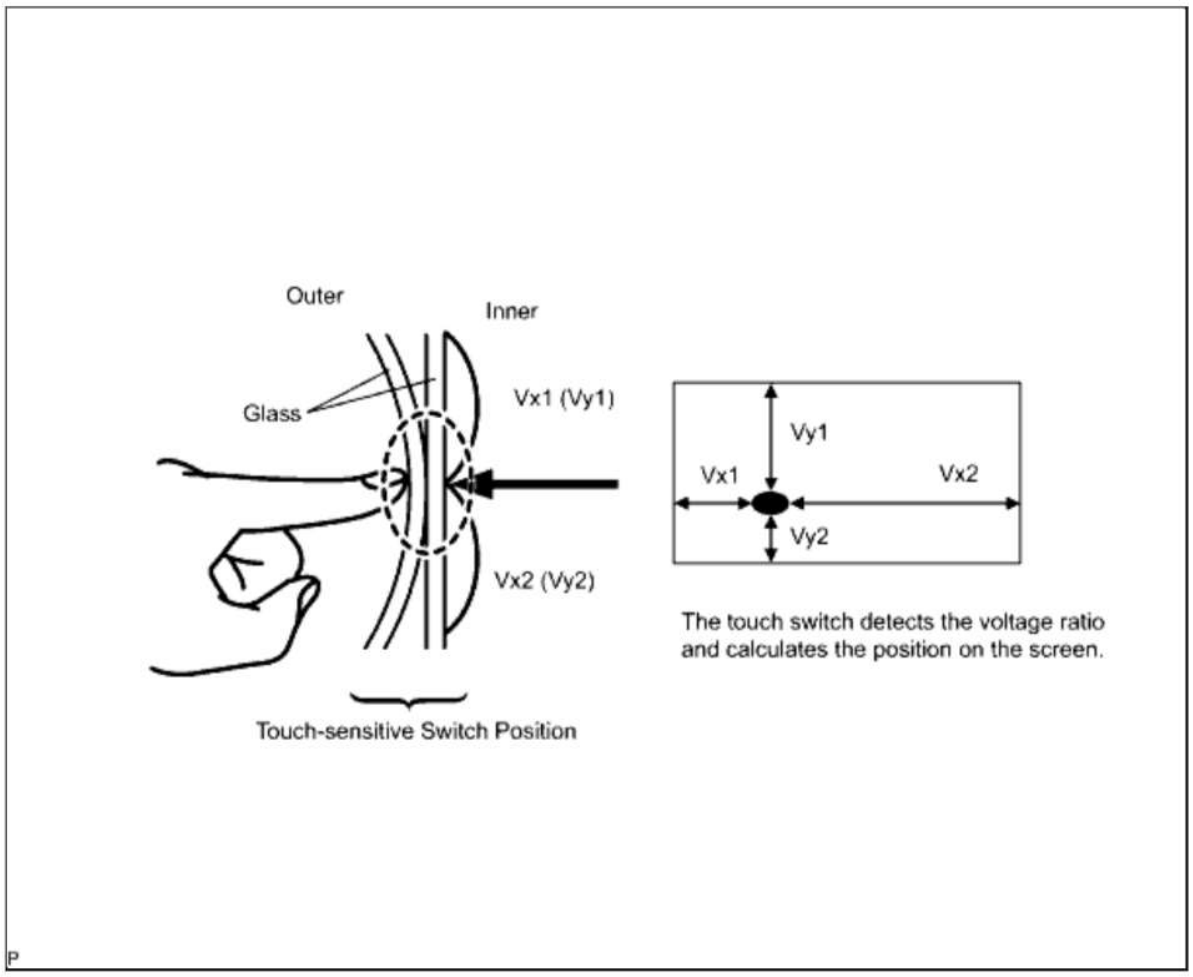
(a) Conventionally, 2 separate devices, a "radio and display" and a "navigation ECU" are used. This model has adopted a new type, combining these devices into a signal unit.

cardiagn.com



(b) Touch switches are touch-sensitive (interactive) switches operated by touching the screen. When a switch is pressed, the outer glass bends to contact the inner glass at the pressed position. By doing this, the voltage ratio is measured and the pressed position is detected.

cardiagn.com



3. DVD (Digital Versatile Disc) PLAYER OUTLINE (for Navigation Map)

(a) The navigation receiver assembly (built-in navigation ECU) uses a laser pickup to read the digital signals recorded on a DVD.

CAUTION:

Because the navigation system uses an invisible laser beam, do not look directly at the laser pickup. Be sure to only operate the navigation as instructed.

NOTICE:

- Do not disassemble any part of the navigation receiver assembly (built-in navigation ECU).
- Do not apply oil to the navigation receiver assembly (built-in navigation ECU).
- Do not insert anything but a DVD into the navigation receiver assembly (built-in navigation ECU).

4. CD (Compact Disc) player outline

(a) A compact disc player uses a laser pickup to read digital signals recorded on a compact disc (CD). By converting the digital signals to analog, it can play music and other content.

NOTICE:

- Do not disassemble any part of the CD player.
- Do not apply oil to the CD player.
- Do not insert anything but a CD into the CD player.

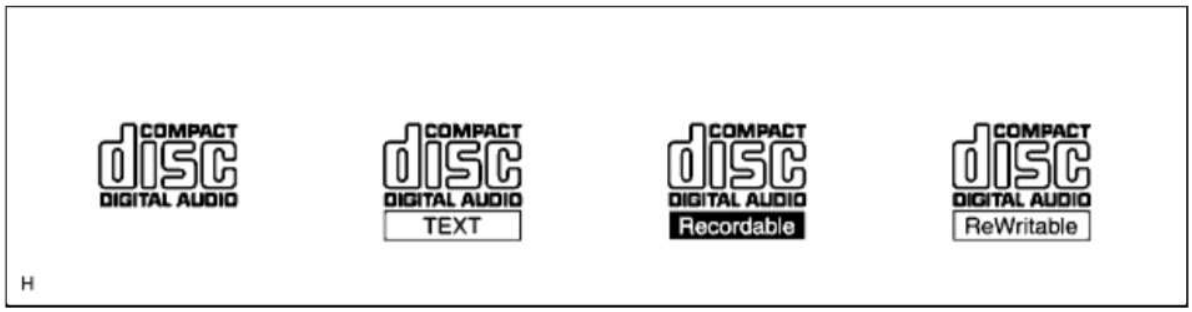
CAUTION:

Do not look directly at the laser pickup because the CD player uses an invisible laser beam. Be sure to operate the player only as instructed.

cardiagn.com

(b) Usable discs

(1) This player can play only audio CDs, CD-Rs (CD-Recordable), and CD-RWs (CD-ReWritable) that have any of the following marks:



(c) Precautions for use of discs

NOTICE:

- Copy-protected CDs cannot be played.
- CD-Rs and CD-RWs may not be played depending on the recording conditions or characteristics of the discs, or due to damage, dirt, or deterioration caused by leaving the discs in the cabin for a long time.
- Unfinalized CD-Rs and CD-RWs cannot be played.
- DualDiscs that mate DVD recorded material on one side with CD digital audio material on the other cannot be played.
- Keep the discs away from dirt. Be careful not to damage the discs or leave your fingerprints on them.
- Hold discs by the outer edge and center hole with the label side up.
- Leaving the disc exposed halfway out of the slot for a long time after pressing the disc eject button may cause deformation of the disc, making the disc unusable.
- If discs have adhesive tape, stickers, CDR labels, or any traces of such labels attached, the discs may not be ejected or player malfunctions may result.
- Keep the discs away from direct sunlight. (Exposure to direct sunlight may cause deformation of the disc, making the disc unusable.)
- Do not use odd-shaped CDs because these may cause player malfunctions.
- Do not use discs whose recording portion is transparent or translucent because they may not be inserted, ejected, or played normally.

HINT:

- When it is cold or it is raining, if the windows mist up, mist and condensation may form in the player. In such cases, the CD may skip or stop in the middle of play. Ventilate or dehumidify the cabin for a while before using the player.
- The CD may skip if the player experiences strong vibrations when the vehicle is driven on rough roads or similar uneven surface(s).

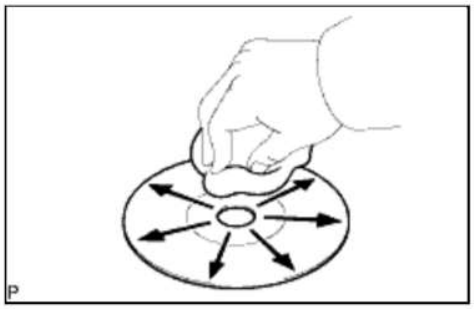
(d) Cleaning

NOTICE:

Do not use a lens cleaner because it may cause a malfunction in the pickup portion of the player.

(1) If dirt is on the disc surface, wipe it clean with a soft dry cloth such as an eyeglass cleaner for plastic lenses

cardiagn.com



from the inside to the outside in a radial direction.

NOTICE:

- Pressing on the disc by hand or rubbing the disc with a hard cloth may scratch the disc surface.
- Use of solvent such as a record spray, antistatic agent, alcohol, benzine, and thinner, or a chemical cloth may cause damage to the disc, making the disc unusable.

5. MP3/WMA OUTLINE

(a) Playable MP3 file standards

COMPATIBLE STANDARD	MP3 (MPEG1 LAYER3, MPEG2 LSF LAYER 3)
Compatible sampling frequency	• MPEG1 LAYER3: 44.1, 48 (kHz) • MPEG2 LSF LAYER3: 16, 22.05, 24 (kHz)
Compatible bit rate	• MPEG1 LAYER3: 64, 80, 96, 112, 128, 160, 192, 224, 256, 320 (kbps) • MPEG2 LSF LAYER3: 64, 80, 96, 112, 128, 144, 160 (kbps) • Compatible with VBR
Compatible channel mode	Stereo, joint stereo, dual channel, monaural

(b) Playable WMA file standards

COMPATIBLE STANDARD	WMA VER. 7, 8, AND 9
Compatible sampling frequency	44.1, 48 (kHz)
Compatible bit rate	• Ver. 7, 8: CBR48, 64, 80, 96, 128, 160, 192 (kbps) • Ver. 9: CBR48, 64, 80, 96, 128, 160, 192, 256, 320 (kbps) • Compatible with playback of channel 2 only

(c) ID3 tag and WMA tag

(1) Additional textual information called ID3 tag can be input to MP3 files. Information such as song titles and artist names can be stored.

HINT:

This player is compatible with the ID3 tags of ID3 Ver. 1.0 and 1.1, and ID3 Ver. 2.2 and 2.3. (Number of characters complies with ID3 Ver. 1.0 and 1.1.)

(2) Additional textual information called WMA tag can be input to WMA files. Information such as song titles and artist names can be stored.

(d) Usable media

cardiagn.com

(1) Only CD-ROMs, CD-Rs (CD-Recordable), and CD-RWs (CD-ReWritable) can be used to play MP3/WMA files.

NOTICE:

- CD-Rs and CD-RWs are more easily affected by a hot and humid environment than discs used for normal audio CDs. For this reason, some CD-Rs and CD-RWs may not be played.
- If there are fingerprints or scratches on the disc, the disc may not be played or the CD may skip.
- Some CD-Rs and CD-RWs deteriorate if they are left in the cabin for a long time.
- Keep CD-Rs and CD-RWs in a storage case that is impenetrable to light.

(e) Usable media format

(1) Usable media format

Disc format	CD-ROM Mode 1, CD-ROM XA Mode 2 Form 1
File format	ISO9660 Level 1 and Level 2 (Joliet, Romeo)

HINT:

- As for MP3/WMA files written in any format other than those above, the contents of the files may not be played normally or the file names or folder names may not be displayed correctly.
- This player is compatible with multi-session discs and can play CD-Rs and CD-RWs on which MP3/WMA files are added. However, only the first session can be played.
- Discs whose first session includes both music data and MP3 or WMA format data cannot be played.

(2) Standard and restrictions

Maximum directory levels	8 levels
Maximum number of characters for a folder name/file name	32 characters
Maximum number of folders	192 (Including empty folders, route folders, and folders that do not contain MP3/WMA files)
Maximum number of files in a disc	255 (Including non-MP3/WMA files)

(f) File names

(1) Only files with an extension of ".mp3" or ".wma" can be recognized and played as MP3 or WMA files.

(2) Save MP3 or WMA files with an extension of ".mp3" or ".wma".

NOTICE:

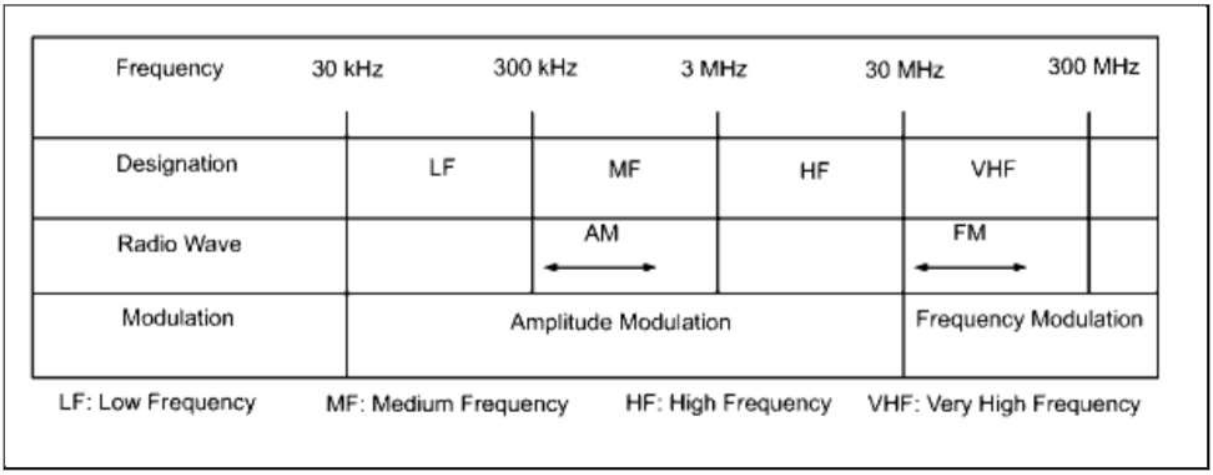
If saving non-MP3 or non-WMA files with an extension of ".mp3" or ".wma", those files are wrongly recognized as MP3 or WMA files and played. A loud noise may occur and damage to the speaker may result.

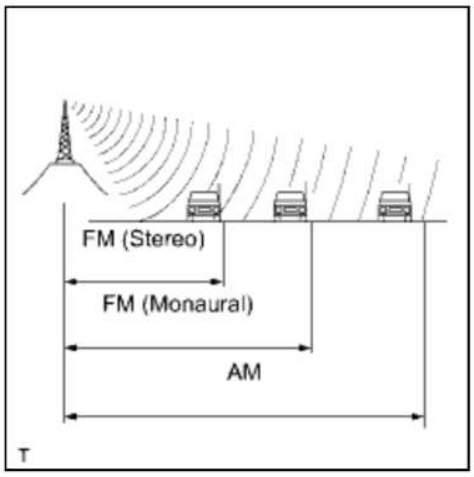
6. RADIO DESCRIPTION

(a) Radio frequency band

(1) Radio broadcasts use the radio frequency bands shown in the table below.

cardiagn.com





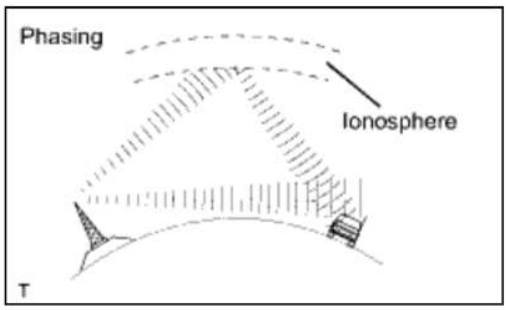
(b) Service area

(1) The service areas of AM and FM broadcasts are vastly different. Sometimes an AM broadcast can be received very clearly but an FM stereo cannot. FM stereo has the smallest service area, and is prone to pick up static and other types of interference such as noise.

(c) Radio reception problems

HINT:

In addition to static, other problems such as "phasing", "multipath", and "fade out" exist. These problems are not caused by electrical noise, but by the radio signal propagation method itself.



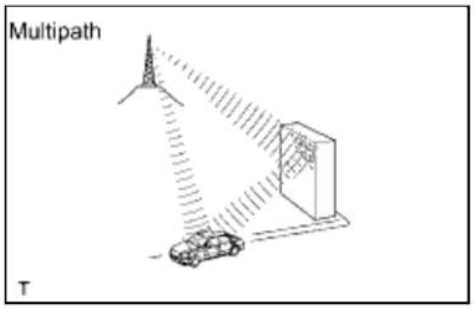
(1) Phasing

AM broadcasts are susceptible to electrical interference and another kind of interference called phasing. Occurring only at night, phasing is the interference created when a vehicle receives 2 radio wave signals from the same transmitter. One signal is reflected off the ionosphere and the other signal is received directly from the transmitter.

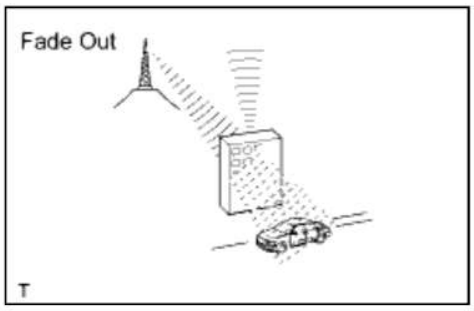
(2) Multipath

Multipath is a type of interference created when a vehicle receives 2 radio wave signals from the same

cardiagn.com



transmitter. One signal is reflected off buildings or mountains and the other signal is received directly from the transmitter.



(3) Fade out

Fade out is caused by objects (buildings, mountains, and other such large obstacles) that deflect away part of a signal, resulting in a weaker signal when the object is between the transmitter and vehicle. High frequency radio waves, such as FM broadcasts, are easily deflected by obstructions. Low frequency radio waves, such as AM broadcasts, are much more difficult to deflect.

(d) Noise problem

Technicians must have a clear understanding about each customer's noise complaint. Use the following table to diagnose noise problems.

RADIO FREQUENCY	NOISE OCCURRENCE CONDITION	PRESUMABLE CAUSE
AM	Noise occurs in a specified area	Foreign noise
AM	Noise occurs when listening to an intermittent broadcast	An identical program transmitted from multiple towers can cause noise where the signals overlap
AM	Noise occurs only at night	Music beat from a distant broadcast
FM	Noise occurs while driving in a specified area	Multipath or phasing noise resulting from a change in FM frequency

HINT:

If the noise does not match the examples above, refer to the descriptions about phasing and multipath.

7. ASL (Automatic Sound Levelizer) FUNCTION OUTLINE

(a) The ASL (Automatic Sound Levelizer) function automatically adjusts the sound data in order to maintain clear audio sound even when vehicle noise increases (as vehicle noise increases, the volume is turned up etc.). Vehicle speed signals are received from the combination meter and used for the ASL (Automatic Sound Levelizer).

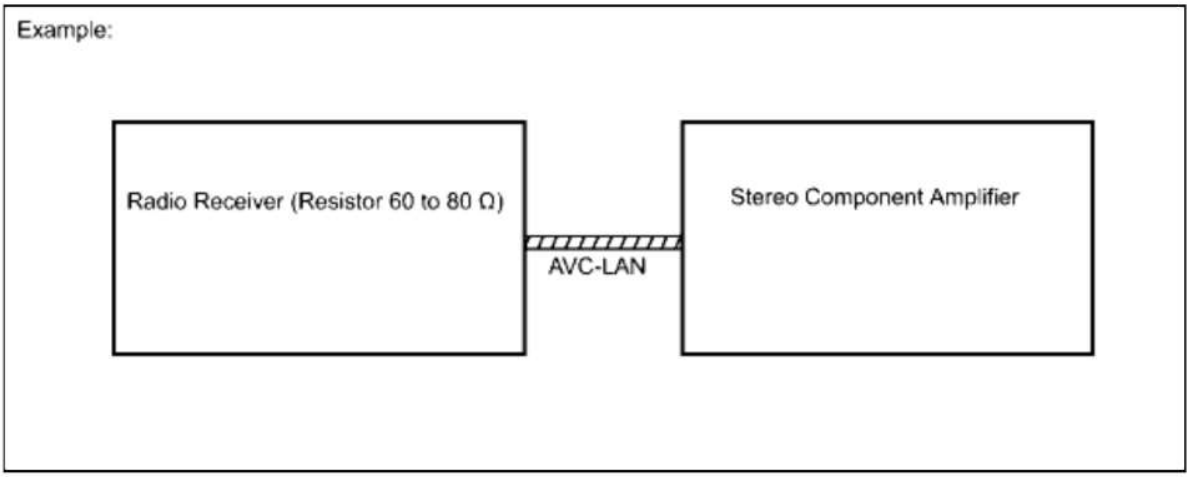
8. AVC-LAN DESCRIPTION

(a) What is AVC-LAN?

AVC-LAN, an abbreviation for "Audio Visual Communication Local Area Network", is a united

cardiagn.com

standard developed by manufacturers in affiliation with Toyota Motor Corporation. This standard pertains to audio and visual signals as well as switch and communication signals.



(b) Purpose:

Recently, car audio systems have rapidly developed and the functions have vastly changed. The conventional car audio system is being integrated with multimedia interfaces similar to those in navigation systems. At the same time, customers are demanding higher quality from their audio systems. This is merely an overview of the standardization background. The specific purposes are as follows:

(1) To solve sound problems, etc. caused by using components of different manufacturers through signal standardization.

(2) To allow each manufacturer to concentrate on developing products they do best. From this, reasonably priced products can be produced.

HINT:

- If a short to +B or short to ground is detected in the AVC-LAN circuit, communication is interrupted and the navigation system will stop functioning.
- The multi-display unit acts as the master unit.

9. COMMUNICATION SYSTEM OUTLINE

(a) Components of the navigation system communicate with each other via the AVC-LAN.

(b) The navigation receiver assembly has enough resistance (60 to 80 Ω) necessary for transmitting communication signals. This is essential for communication.

(c) If a short circuit or open circuit occurs in the AVC-LAN circuit, communication is interrupted and the navigation system will stop functioning.

10. DIAGNOSTIC FUNCTION OUTLINE

(a) The navigation system has a diagnostic function (the result is indicated on the master unit).

(b) Each component has a specified number (3-digit) called a physical address. Each function has a number (2-digit) called a logical address.

(c) A 3-digit hexadecimal component code (physical address) is allocated to each component on the AVC-LAN. Using this code, the component in the diagnostic function can be displayed.

11. DIAGNOSIS DISPLAY DETAILED DESCRIPTION

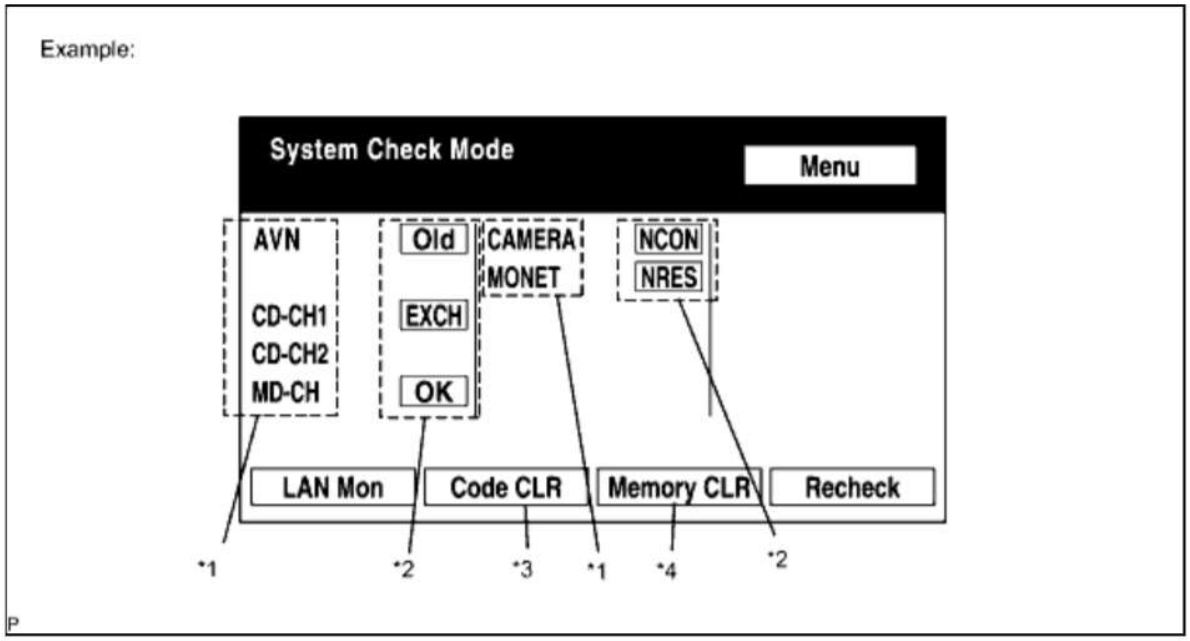
cardiagn.com

HINT:

- This section contains a detailed description of displays within diagnostic mode.
- Illustrations may differ from the actual vehicle depending on the device settings and options. Therefore, some detailed areas may not be exactly the same as on the actual vehicle.

(a) SYSTEM CHECK

(1) System Check Mode Screen



*1 : Device Names and Hardware Address

HINT:

Registered device names are displayed.
If a device name is unknown to the system, its physical address is shown instead.

ADDRESS NO.	NAME	ADDRESS NO.	NAME
110	EMV	120	AVX
128	1DIN TV	140	AVN
144	G-BOOK	178	NAVI
17C	MONET	190	AUDIO H/U
1AC	CAMERA-C	1B0	Rr-TV
1C0	Rr-CONT	19D	BT-HF
1C4	PANEL	1C6	G/W
1C8	FM-M-LCD	1D8	CONT-SW
1EC	Body	118	EMVN
1F1	XM	1F2	SIRIUS

cardiagn.com

ADDRESS NO.	NAME	ADDRESS NO.	NAME
230	TV-TUNER	240	CD-CH2
250	DVD-CH	280	CAMERA
360	CD-CH1	3A0	MD-CH
17D	TEL	440	DSP-AMP
530	ETC	1F6	RSE
1A0	DVD-P	1D6	CLOCK
238	DTV	480	AMP

*2: Check Result

HINT:

Result codes for all devices are displayed.

RESULT	MEANING	ACTION
OK	Device did not respond with DTC (excluding communication DTCs from AVC-LAN).	-
EXCH	Device responds with "replace" type DTC.	Look up DTC in "Unit Check Mode" and replace device.
CHEK	Device responds with "check" type DTC.	Look up DTC in "Unit Check Mode".
NCON	Device was previously present, but does not respond in diagnostic mode.	- Check power supply wire harness of device. - Check AVC-LAN of device.
Old	Device responds with "old" type DTC.	Look up DTC in "Unit Check Mode".
NRES	Device responds in diagnostic mode, but gives no DTC information.	- Check power supply wire harness of device. - Check AVC-LAN of device.

*3: Code Clear

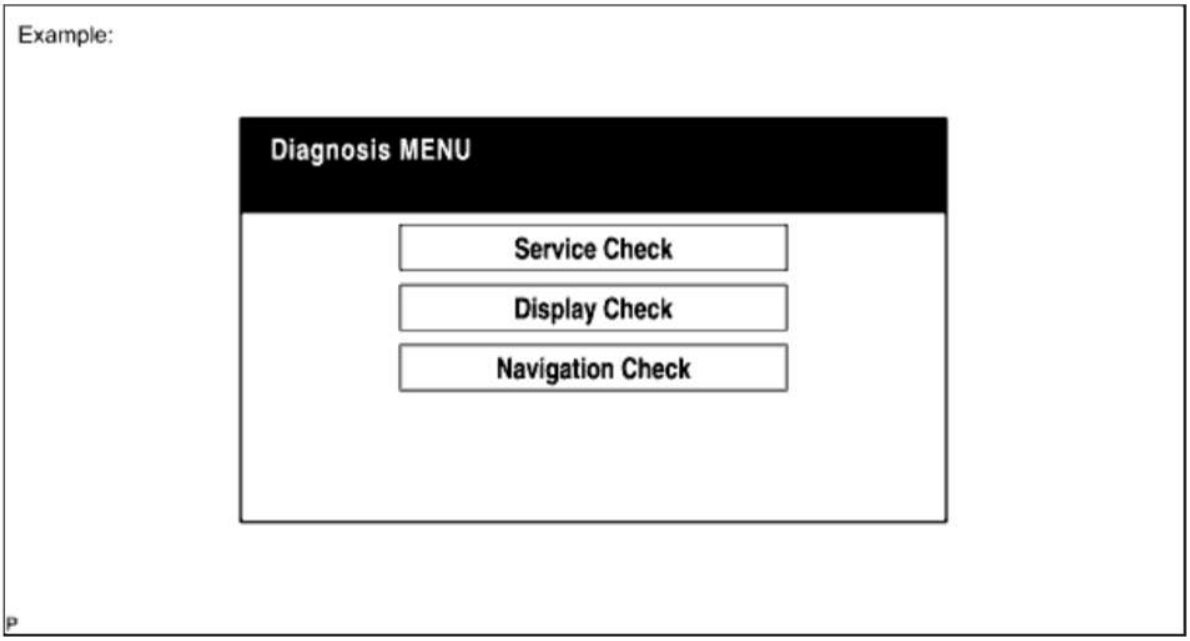
- Present DTCs are cleared.
- Press the "Code CLR" switch for 3 seconds.

*4: Memory Clear

- Present and past DTCs and registered connected device names are cleared.
- Press the "Memory CLR" switch for 3 seconds.

(2) Diagnosis MENU Screen

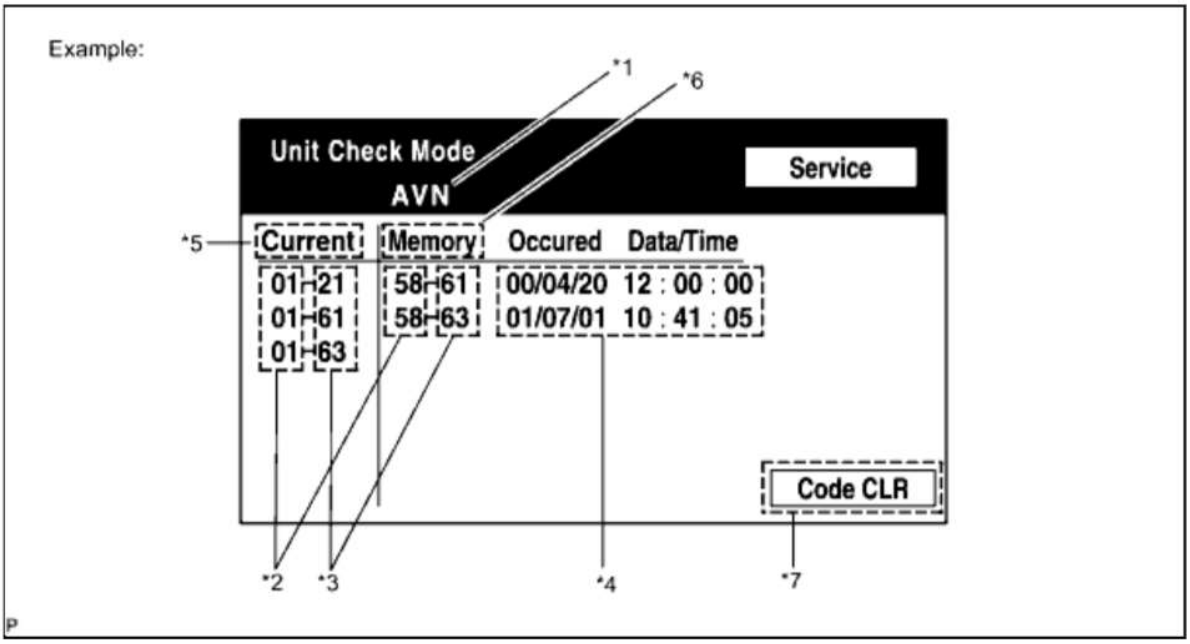
cardiagn.com



HINT:

Some items may be grayed out or not displayed, as the functions are different depending on the vehicle.

(3) Unit Check Mode Screen



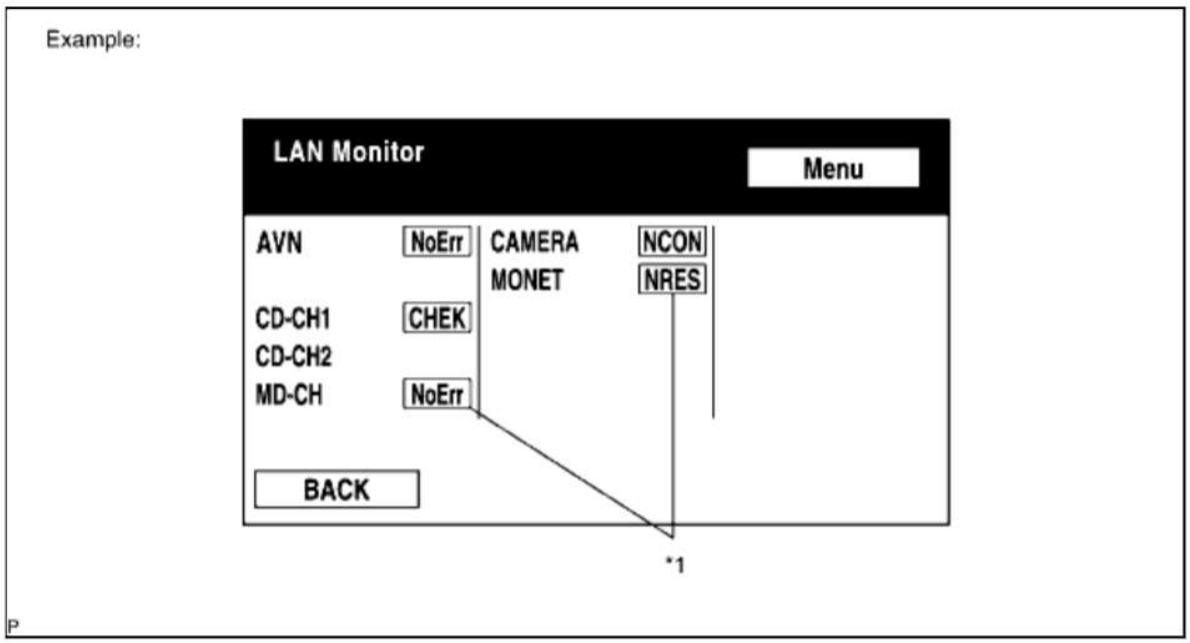
Screen Description

DISPLAY	CONTENT
*1: Device name	Target device
*2: Segment	Target device logical address
*3: DTC	DTC (Diagnostic Trouble Code)

cardiagn.com

DISPLAY	CONTENT
*4: Timestamp	Time and date of past DTCs are displayed (year is displayed in 2-digit format).
*5: Present Code	DTCs output at service check are displayed.
*6: Past Code	Diagnostic memory results and stored DTCs are displayed.
*7: Diagnosis Clear Switch	Pushing this switch for 3 seconds clears diagnostic memory data of target device (responses to diagnostic system check result and displayed data are cleared).

(4) LAN Monitor (Original) Screen



*1: Check Result

HINT:

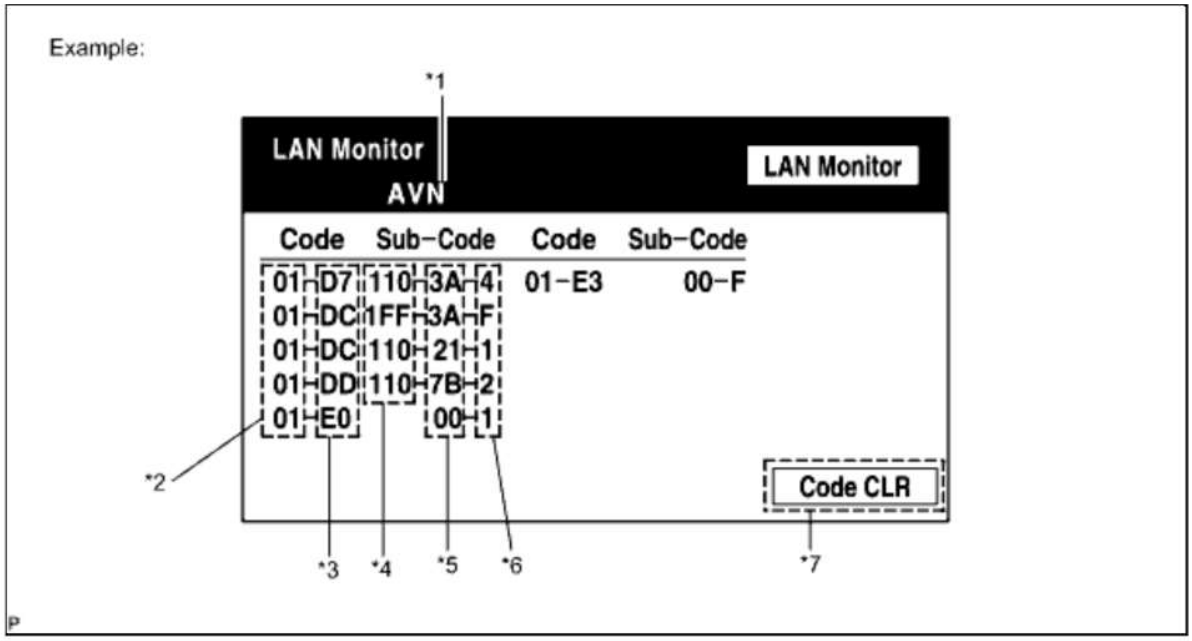
Check results of all the devices are displayed.

RESULT	MEANING	ACTION
No Err (OK)	There are no communication DTCs.	-
CHEK	Device responds with "check" type DTC.	Look up DTC in "Unit Check Mode".
NCON	Device was previously present, but does not respond in diagnostic mode.	1. Check power supply wire harness of device. 2. Check AVC-LAN of device.
Old	Device responds with "old" type DTC.	Look up DTC in "Unit Check Mode".

cardiagn.com

RESULT	MEANING	ACTION
NRES	Device responds in diagnostic mode, but gives no DTC information.	1. Check power supply wire harness of device. 2. Check AVC-LAN of device.

(5) LAN Monitor (Individual) Screen



Screen Description

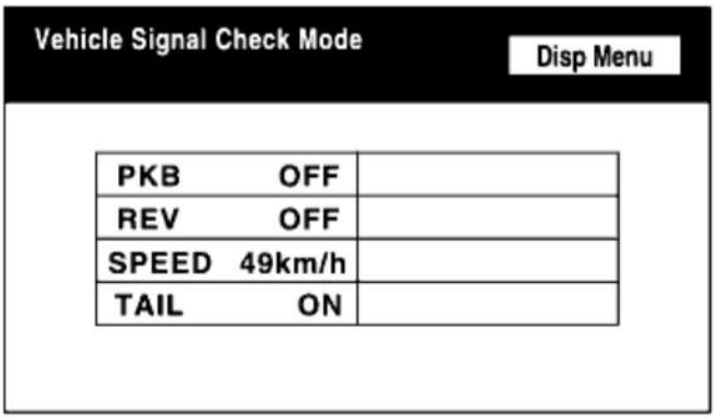
DISPLAY	CONTENT
*1: Device name	Target device
*2: Segment	Target logical address
*3: DTC	DTC (Diagnostic Trouble Code)
*4: Sub-code (device address)	Physical address stored with DTC (if there is no address, nothing is displayed).
*5: Connection check No.	Connection check number stored with DTC
*6: DTC occurrence	Number of times same DTC has been stored
*7: Diagnosis Clear Switch	Pushing this switch for 3 seconds clears diagnostic memory data of target device (responses to diagnostic system check result and displayed data are cleared).

(b) DISPLAY CHECK

(1) Vehicle Signal Check Mode Screen

cardiagn.com

Example:



Screen Description

NAME	CONTENT
Battery	Battery voltage is displayed.
PKB	Parking brake ON/OFF state is displayed.
REV	Reverse signal ON/OFF state is displayed.
IG	Engine switch ON/OFF state is displayed.
ADIM/TCAN	Brightness state DIM (with) / BRIGHT (without) is displayed.
TAIL	TAIL signal (Light control switch) ON/OFF state is displayed.
SPEED	Vehicle speed is displayed in km/h.

HINT:

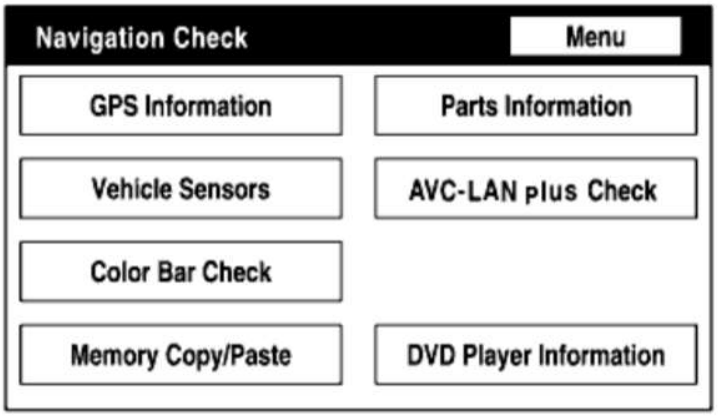
- Only items sending vehicle signals will be displayed.
- This screen is updated once per second when input signals to the vehicle are changed.

(c) NAVIGATION CHECK

(1) Navigation Check Screen

cardiagn.com

Example:

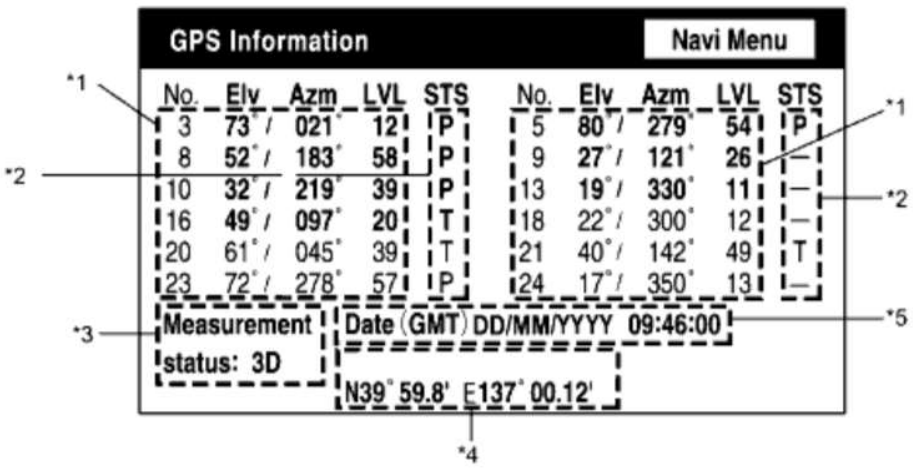


HINT:

Some items may be grayed out or not displayed, as the functions are different depending on the vehicle.

(2) GPS Information Screen

Example:



*1 : Satellite information

Information from a maximum of 12 satellites is displayed on the screen. This information includes the target GPS satellite number, elevation angle, direction, and signal level.

*2 : Receiving condition

DENSO Model

cardiagn.com

DISPLAY	CONTENT
T	System is receiving GPS signal, but is not using it for location.
P	System is using GPS signal for location.
-	System cannot receive GPS signal.

AISIN AW Model

DISPLAY	CONTENT
01H	System cannot receive a GPS signal.
02H	System is tracing a satellite.
03H	System is receiving a GPS signal, but is not using it for location.
04H	System is using the GPS signal for location.

*3: Measurement information

DISPLAY	CONTENT
2D	2-dimensional location method is being used.
3D	3-dimensional location method is being used.
NG	Location data cannot be used.
Error	Reception error has occurred.
-	Any other state.

*4: Position information

DISPLAY	CONTENT
Position	Latitude and longitude information on current position is displayed.

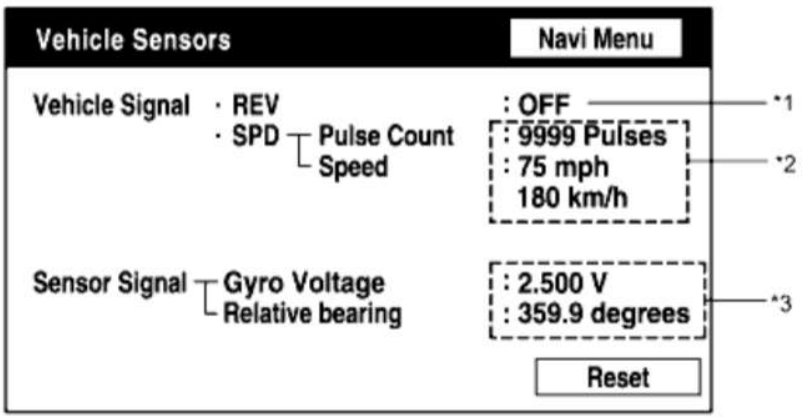
*5: Date information

DISPLAY	CONTENT
Date	Date/time information obtained from GPS signal is displayed in Greenwich mean time (GMT). Last 4 digits are displayed.

(3) Vehicle Sensors Screen

cardiagn.com

Example:



Vehicle Signal

DISPLAY	CONTENT
*1: REV	REV signal ON/OFF state is displayed.
*2: SPD	SPD signal condition is displayed.

Sensor Signal

DISPLAY	CONTENT
*3: Gyro sensor	Gyro sensor output condition is displayed (when vehicle is driven straight or is stationary, voltage is approximately 2.5 V).

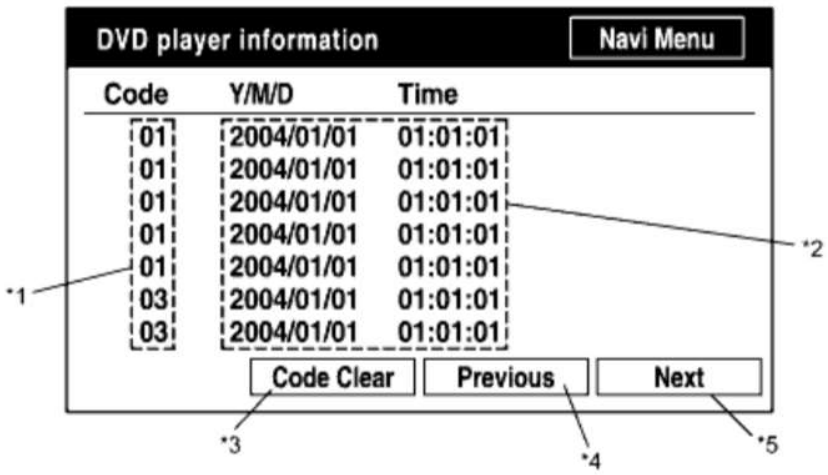
HINT:

Signals are updated once per second only when vehicle sensor signals are changed.

(4) DVD player information Screen

cardiagn.com

Example:



Screen Description

DISPLAY	CONTENTS
*1: Trouble code	Each code corresponding to malfunctions is displayed. For details, refer to "Trouble Code Description".
*2: Occurrence time	• Date (year, month, day) and time (hour, minute, second) when trouble code was stored are displayed as time stamp (Greenwich mean time). • Time data to be displayed is received from GPS receiver.
*3: Trouble code clear switch	All code data being displayed is cleared by pushing this switch for 3 seconds.
*4: Returning switch	Previous page is displayed. If current displayed page is first page, this switch cannot be operated.
*5: Proceeding switch	Next page is displayed. If current displayed page is last page, this switch cannot be operated.

Trouble Code Description

CODE	MALFUNCTION	COUNTERMEASURE
01	Cannot be recognized	Replace navigation receiver assembly.
03	Cannot be read	Follow inspection procedure for DTC 58-42 INFO .

HINT:

There is a DVD player check function in the navigation ECU.

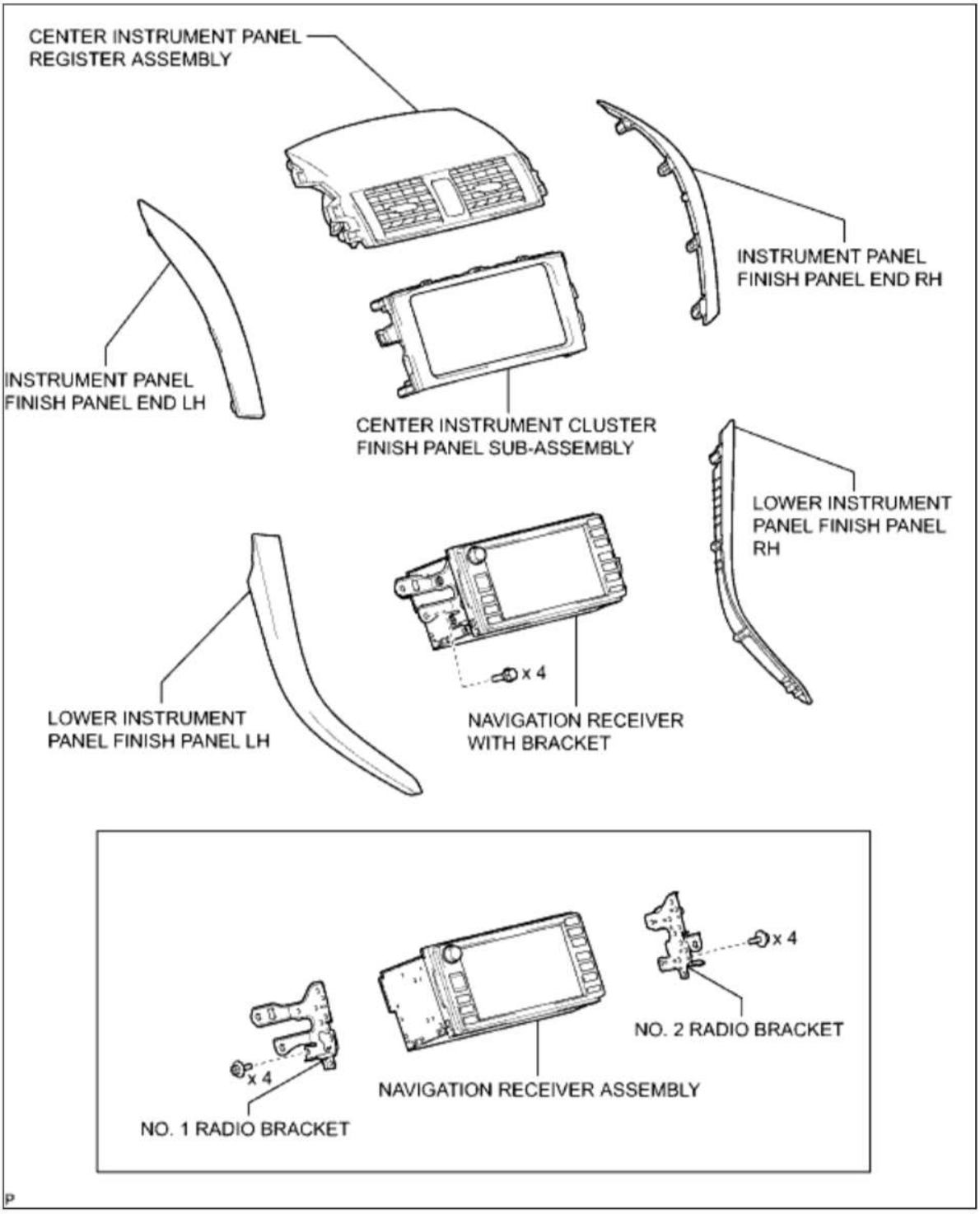
cardiagn.com

Last Modified: 3-10-2010	6.4 K	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM000002XBN006X
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION RECEIVER: COMPONENTS (2010 Corolla)		

COMPONENTS

ILLUSTRATION

cardiagn.com



cardiagn.com

Last Modified: 3-10-2010	6.4 A	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM000002XBO007X
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION RECEIVER: REMOVAL (2010 Corolla)		

REMOVAL

1. EJECT MAP DISC

(a) Turn the ignition switch to ON.

(b) Push the "OPEN" button.

(c) Push the "MAP" button to eject the map disc.

2. REMOVE LOWER INSTRUMENT PANEL FINISH PANEL LH INFO

3. REMOVE LOWER INSTRUMENT PANEL FINISH PANEL RH INFO

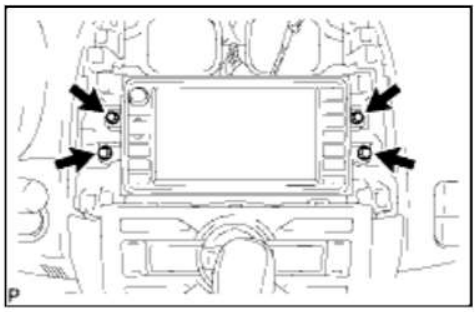
4. REMOVE INSTRUMENT PANEL FINISH PANEL END LH INFO

5. REMOVE INSTRUMENT PANEL FINISH PANEL END RH INFO

6. REMOVE CENTER INSTRUMENT PANEL REGISTER ASSEMBLY INFO

7. REMOVE CENTER INSTRUMENT CLUSTER FINISH PANEL SUB-ASSEMBLY INFO

8. REMOVE NAVIGATION RECEIVER WITH BRACKET



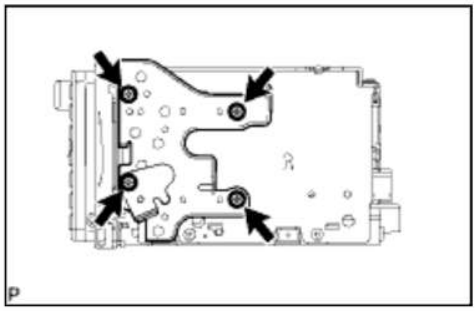
(a) Remove the 4 bolts.

(b) Disconnect each connector and remove the navigation receiver with bracket.

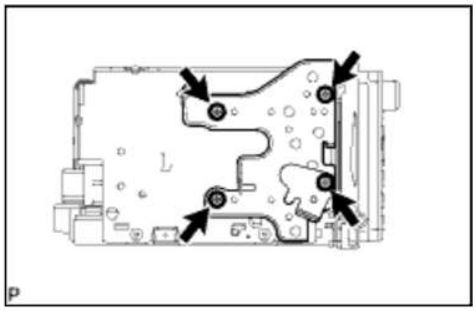
9. REMOVE NO. 2 RADIO BRACKET

(a) Remove the 4 screws and No. 2 radio bracket.

cardiagn.com



10. REMOVE NO. 1 RADIO BRACKET



(a) Remove the 4 screws and No. 1 radio bracket.

11. REMOVE NAVIGATION RECEIVER ASSEMBLY

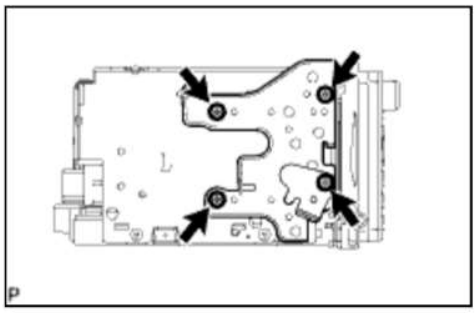
cardiagn.com

Last Modified: 3-10-2010	6.4 A	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM000002XBM007X
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION RECEIVER: INSTALLATION (2010 Corolla)		

INSTALLATION

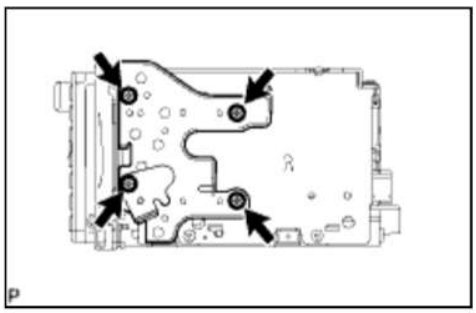
1. INSTALL NAVIGATION RECEIVER ASSEMBLY

2. INSTALL NO. 1 RADIO BRACKET



(a) Install the No. 1 radio bracket with the 4 screws.

3. INSTALL NO. 2 RADIO BRACKET



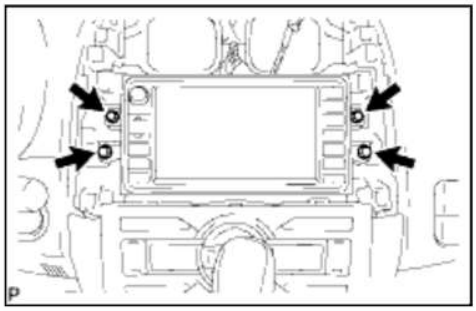
(a) Install the No. 2 radio bracket with the 4 screws.

4. INSTALL NAVIGATION RECEIVER WITH BRACKET

(a) Connect each connector.

(b) Install the navigation receiver with bracket with the 4 bolts.

cardiagn.com



5. INSTALL CENTER INSTRUMENT CLUSTER FINISH PANEL SUB-ASSEMBLY INFO

6. INSTALL CENTER INSTRUMENT PANEL REGISTER ASSEMBLY INFO

7. INSTALL INSTRUMENT PANEL FINISH PANEL END LH INFO

8. INSTALL INSTRUMENT PANEL FINISH PANEL END RH INFO

9. INSTALL LOWER INSTRUMENT PANEL FINISH PANEL LH INFO

10. INSTALL LOWER INSTRUMENT PANEL FINISH PANEL RH INFO

11. INSERT MAP DISC

cardiagn.com

Last Modified: 3-10-2010	6.4 L	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM000002YLR017X
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION SYSTEM: PRECAUTION (2010 Corolla)		

PRECAUTION

1. EXPRESSIONS OF IGNITION SWITCH

(a) The type of ignition switch used on this model differs according to the specifications of the vehicle. The expressions listed in the table below are used in this section.

SWITCH TYPE		IGNITION SWITCH (POSITION)	ENGINE SWITCH (CONDITION)
Expression	Ignition switch off	LOCK	Off
	Ignition switch ON	ON	On (IG)
	Ignition switch ACC	ACC	On (ACC)
	Engine start	START	Start

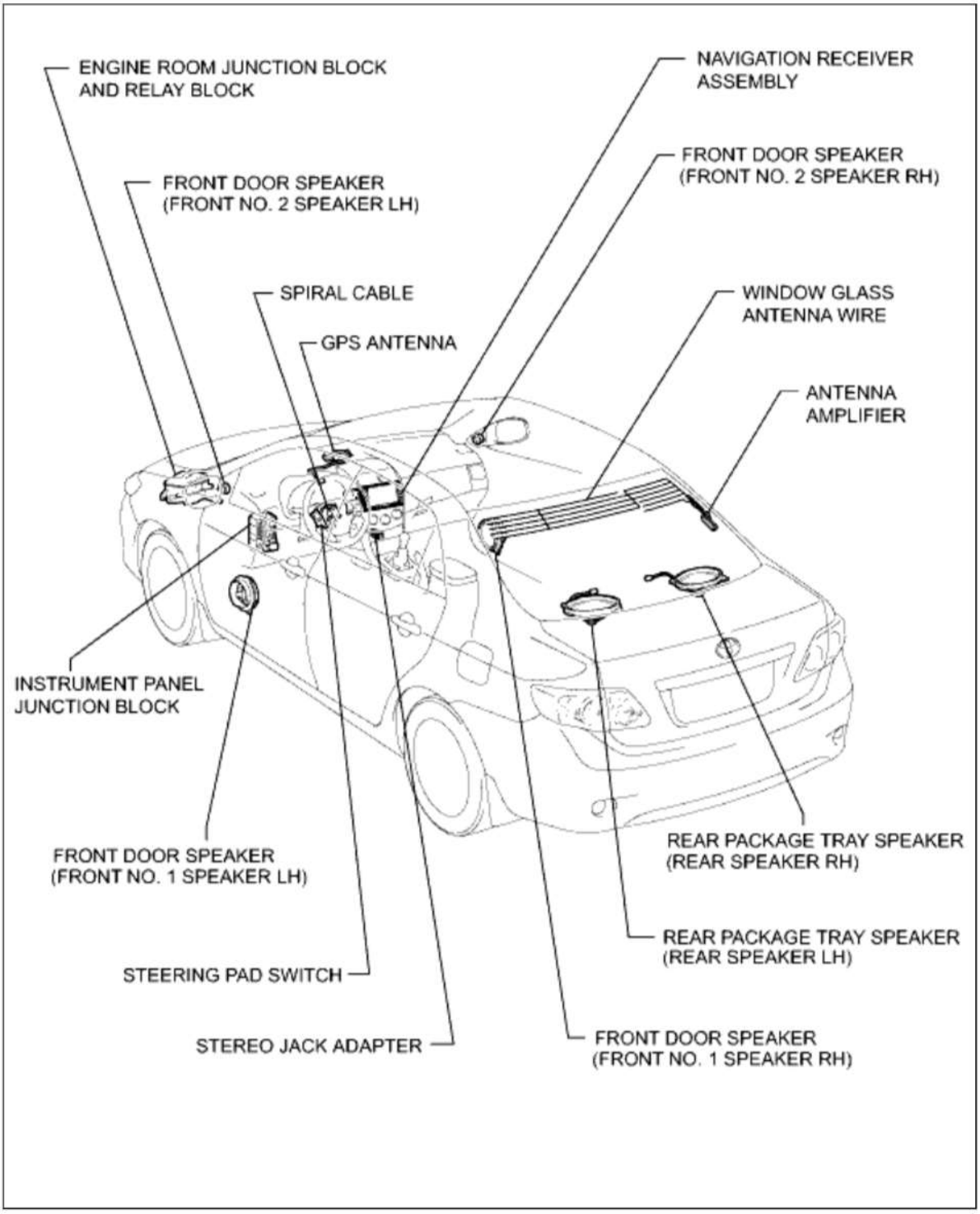
cardiagn.com

Last Modified: 3-10-2010	6.4 R	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM0000033SW00IX
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION SYSTEM: PARTS LOCATION (2010 Corolla)		

PARTS LOCATION

ILLUSTRATION

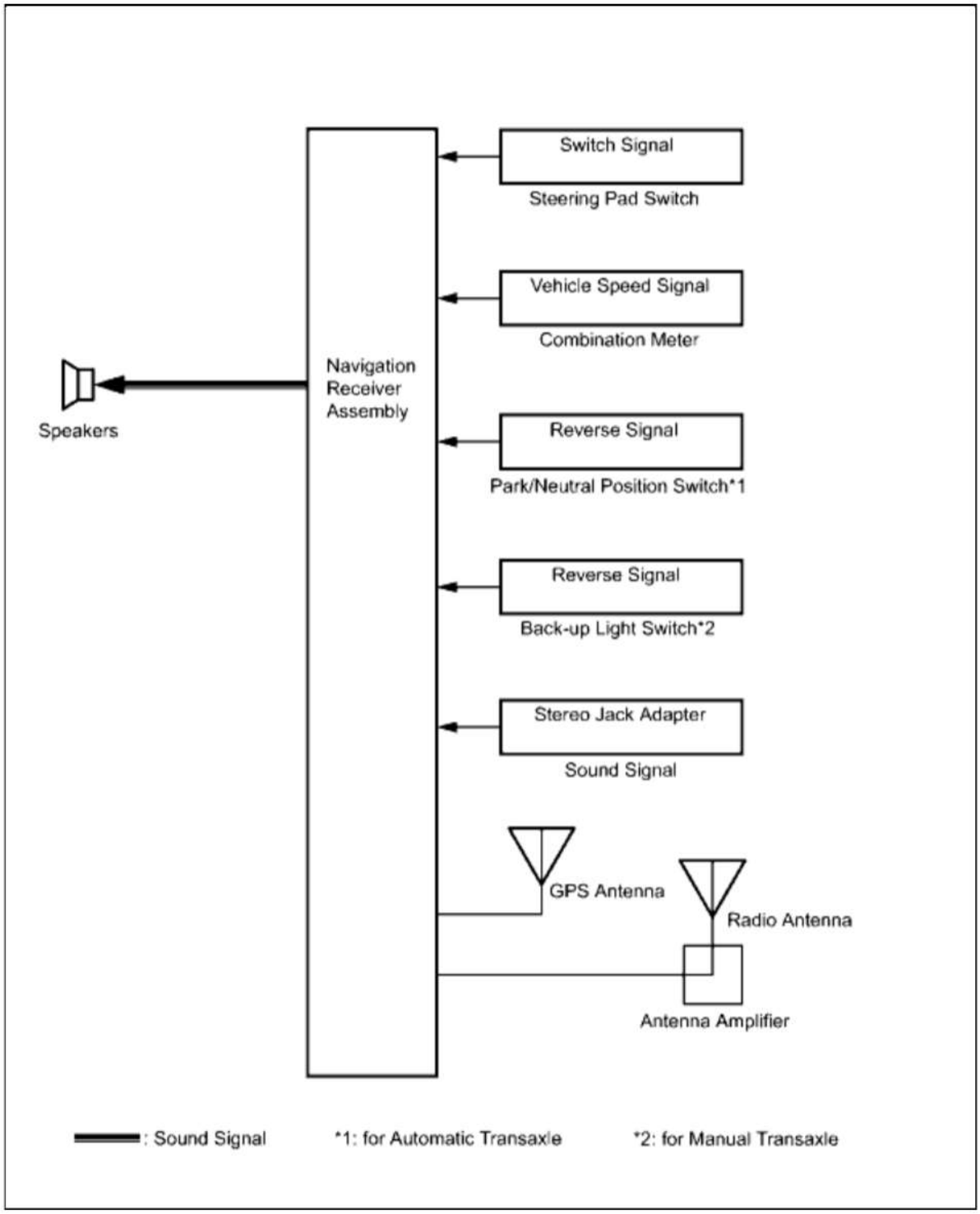
cardiagn.com



cardiagn.com

Last Modified: 3-10-2010	6.4 U	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM0000011BX02OX
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION SYSTEM: SYSTEM DIAGRAM (2010 Corolla)		

SYSTEM DIAGRAM



cardiagn.com

Last Modified: 3-10-2010	6.4 D	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM000003A3N00PX
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION SYSTEM: OPERATION CHECK (2010 Corolla)		

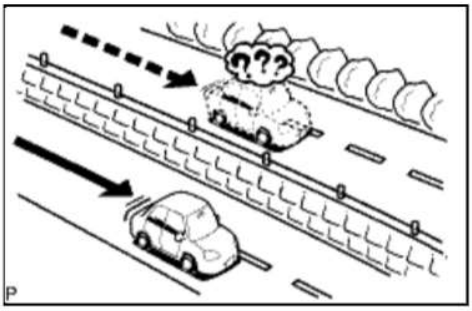
OPERATION CHECK

1. CHECK SYSTEM NORMAL CONDITION

(a) If the cause of a symptom is any of the following, the corresponding symptom is normal, it is not a malfunction.

SYMPTOM	ANSWER
A longer route than expected is chosen.	Depending on the road conditions, the navigation receiver assembly may determine that a longer route is quicker.
Even when distance priority is high, the shortest route is not shown.	Some paths may not be advised due to safety concerns.
When the vehicle is put into motion immediately after the engine starts, the navigation system deviates from the actual position.	If the vehicle starts before the navigation system activates, the system may not react.
When running on certain types of roads, especially new roads, the vehicle position deviates from the actual position.	When the vehicle is driving on new roads not available on the map disc, the system attempts to match it to another nearby road, causing the position mark to deviate.

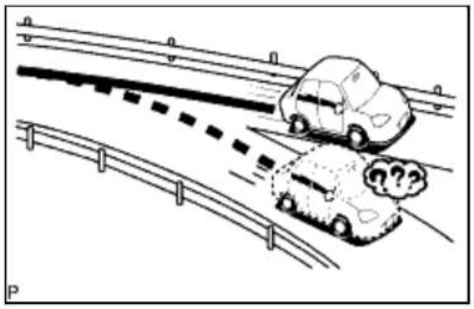
(b) The following symptoms are not a malfunction, but are caused by errors inherent in the GPS, gyro sensor, speed sensor, or navigation receiver assembly.

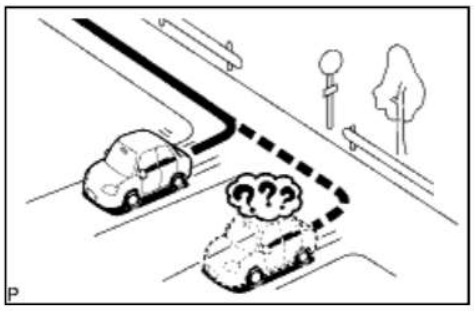


(1) The current position mark may be displayed on a nearby parallel road.

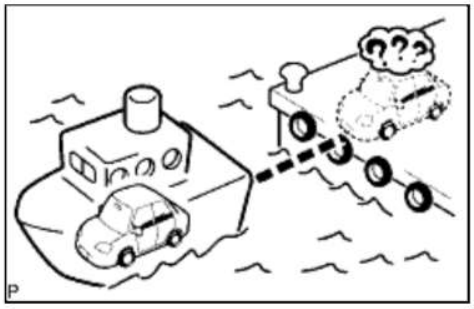
(2) Immediately after a fork in the road, the current vehicle position mark may be displayed on the wrong road.

cardiagn.com

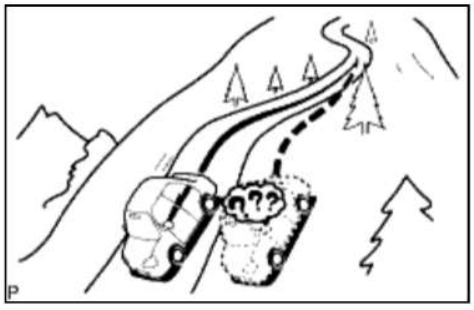




(3) When the vehicle turns right or left at an intersection, the current vehicle position mark may be displayed on a nearby parallel road.



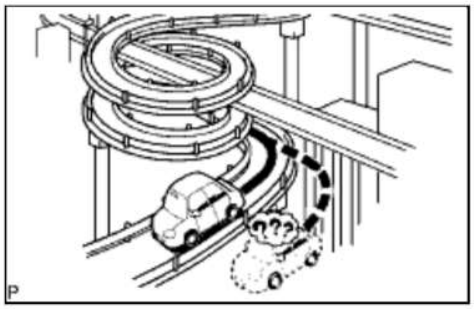
(4) When the vehicle is carried, such as on a ferry, and the vehicle itself is not running, the current vehicle position mark may be displayed in the position where the vehicle was until a measurement can be performed by GPS.

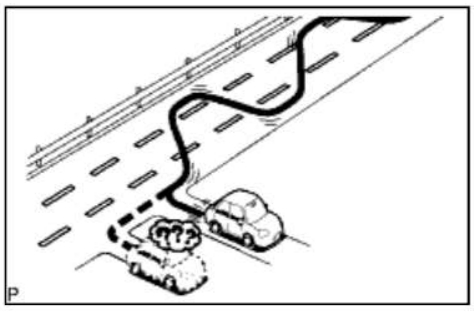


(5) When the vehicle is driven on a steep hill, the current vehicle position mark may deviate from the correct position.

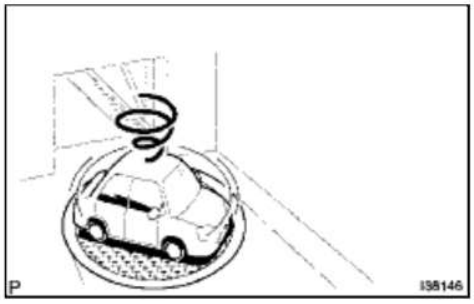
(6) When the vehicle makes a continuous turn of 360°, 720°, 1080°, etc., the current vehicle position mark may deviate from the correct position.

cardiagn.com





(7) When the vehicle moves erratically, such as constant lane changes, the current vehicle position mark may deviate from the correct position.



(8) When the ignition switch is turned to ACC or ON on a turntable while parking, the current vehicle position mark may not point in the correct direction. The same will occur when the vehicle starts to move.



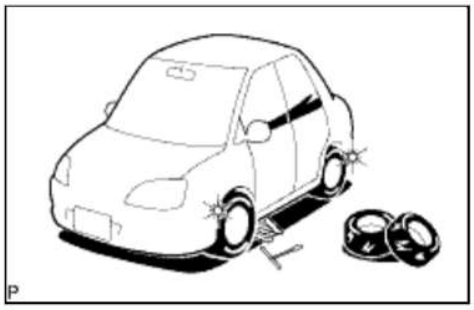
(9) When the vehicle is driven on a snowy road or a mountain path with tire chains installed or using a spare tire, the current vehicle position mark may deviate from the correct position.

(10) When a tire is changed, the current vehicle position mark may deviate from the correct position.

HINT:

- The diameter of the tire may change, causing a speed sensor error.
- Performing the "tire change" in calibration mode will allow

cardiagn.com



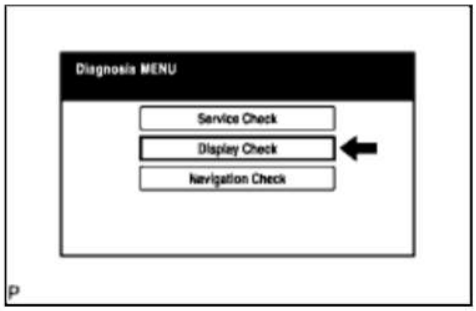
the system to correct the current vehicle position faster.

2. CHECK DISPLAY CHECK

HINT:

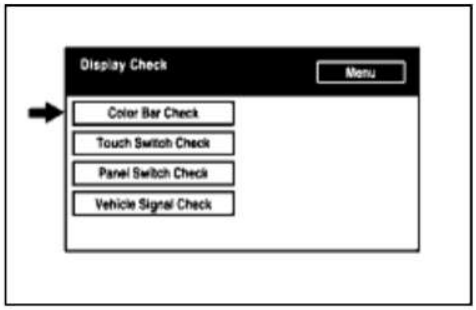
- This mode checks the color display on the multi-display.
- Illustrations may differ from the actual vehicle depending on the device settings and options. Therefore, some detailed areas may not be exactly the same as on the actual vehicle.

(a) Enter diagnostic mode INFO.



(b) Select "Display Check" from the "Diagnosis MENU" screen.

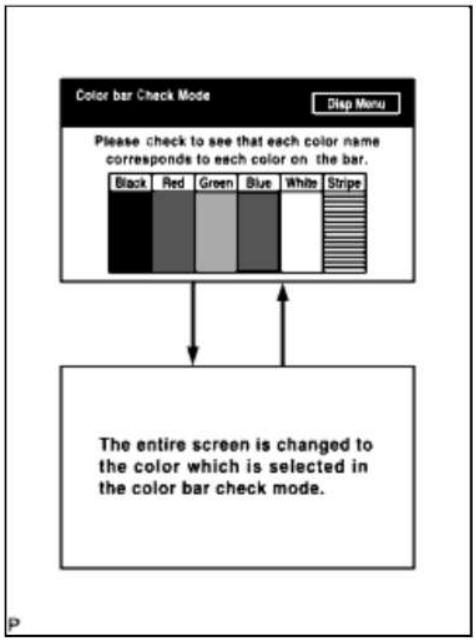
(c) Color Bar Check



(1) Select "Color Bar Check" from the "Display Check" screen.

(2) Select a color bar from the "Color Bar Check Mode" screen.

cardiagn.com

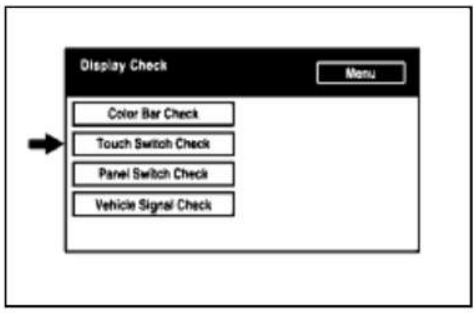


(3) Check the display color.

HINT:

- The entire screen turns to the color or stripe selected.
- Touch the display to return to the "Color Bar Check Mode" screen.

(d) Touch Switch Check



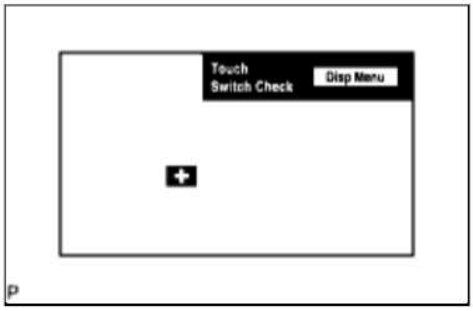
(1) Select "Touch Switch Check" from the "Display Check" screen.

(2) Touch the display anywhere in the open area to perform the check when the "Touch Switch Check" screen is displayed.

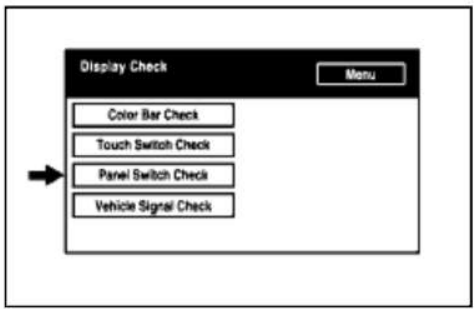
HINT:

A "+" mark is displayed where the display is touched.

cardiagn.com

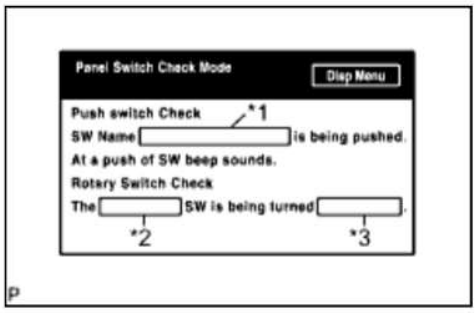


(e) Panel Switch Check



(1) Select "Panel Switch Check" from the "Display Check" screen.

(2) Operate each switch and check that the switch name and condition are correctly displayed.

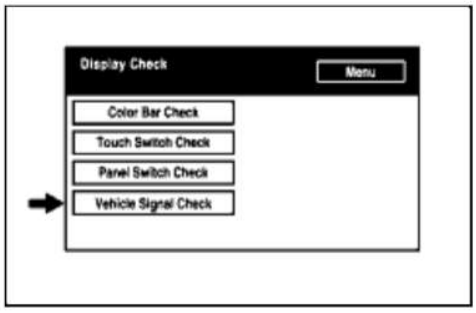


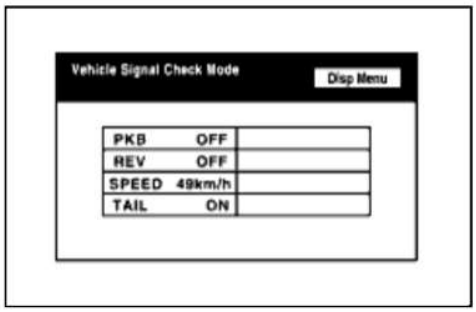
DISPLAY	CONTENT
*1: Pushed switch name	• Name of the pressed switch is displayed. • If more than one switch is pressed, "MULTIPLE" is displayed.
*2: Rotary switch name	Name of the rotary switch is displayed.
*3: Rotary switch direction	Direction of the rotary switch is displayed.

(f) Vehicle Signal Check

(1) Select "Vehicle Signal Check" from the "Display Check" screen.

cardiagn.com





(2) When the "Vehicle Signal Check Mode" screen is displayed, check all the vehicle signal conditions.

HINT:

- Only conditions having inputs are displayed.
- This screen is updated once per second when input signals to the vehicle are changed.
- For details of this function, refer to Diagnosis Display Detailed Description in the System Description INFO .

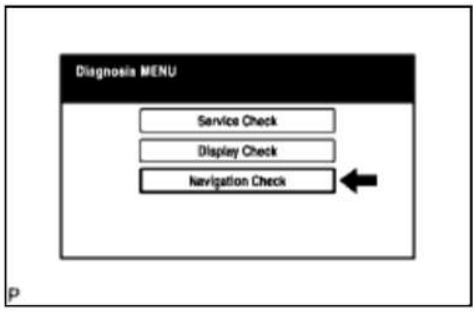
3. CHECK NAVIGATION CHECK

HINT:

- This mode displays GPS satellite information.
- Illustrations may differ from the actual vehicle depending on the device settings and options. Therefore, some detailed areas may not be exactly the same as on the actual vehicle.

(a) Enter diagnostic mode INFO .

(b) Navigation Check

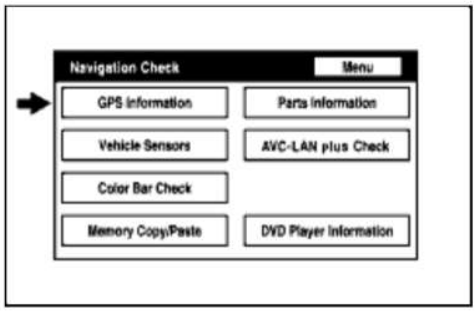


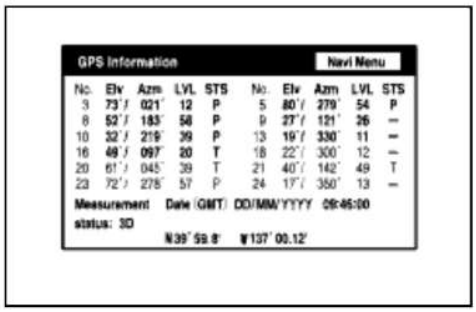
(1) Select "Navigation Check" from the "Diagnosis MENU" screen.

(c) GPS Information

(1) Select "GPS Information" from the "Navigation Check" screen.

cardiagn.com



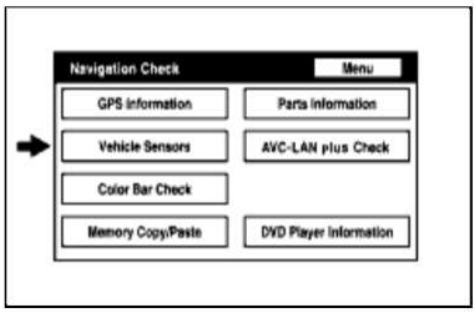


(2) When GPS information is displayed, check the GPS conditions.

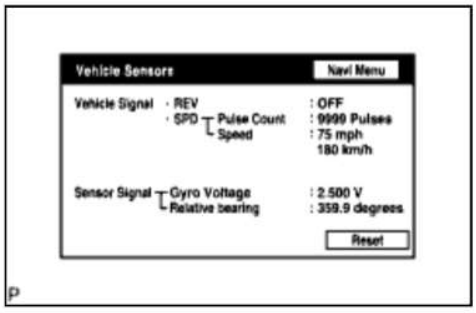
HINT:

- This screen is updated once per second when input signals to the vehicle are changed.
- For details of this function, refer to Diagnosis Display Detailed Description in the System Description INFO .

(d) Vehicle Sensors



(1) Select "Vehicle Sensors" from the "Navigation Check" screen.



(2) Check all the signals and sensors when vehicle signal information is displayed.

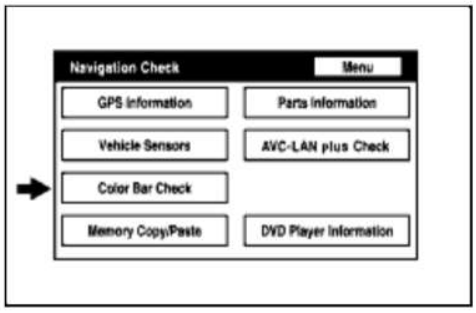
HINT:

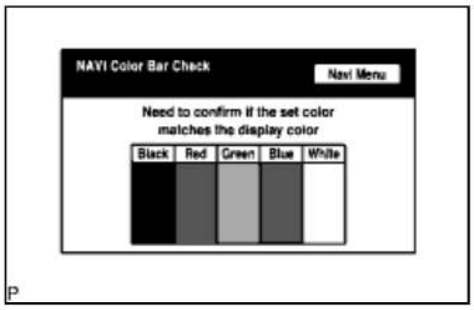
- This screen is updated once per second when input signals to the vehicle are changed.
- This screen displays vehicle signals input to the built-in navigation ECU.
- For details of this function, refer to Diagnosis Display Detailed Description in the System Description INFO .

(e) Color Bar Check

(1) Select "Color Bar Check" from the "Navigation Check" screen.

cardiagn.com

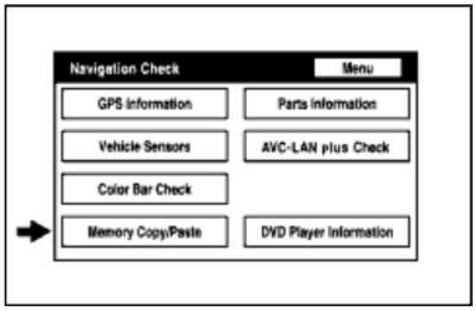




(2) Check each color of the color bar when the "NAVI Color Bar Check" screen is displayed.

HINT:

- Colors will not be displayed full-screen as in "Display Check Mode".
- This screen displays the built-in navigation ECU display color.

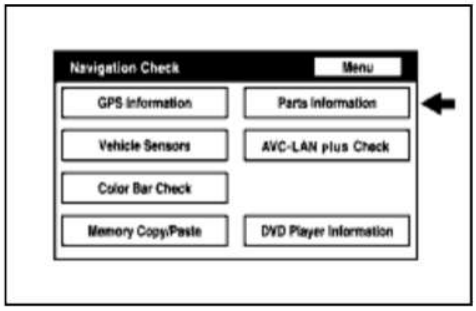


(f) Memory Copy/Paste

HINT:

This function cannot be used.

(g) Parts Information

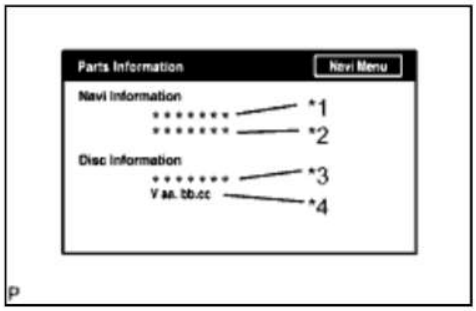


(1) Select "Parts Information" from the "Navigation Check" screen.

(2) Check the navigation and disc information when the "Parts Information" screen is displayed.

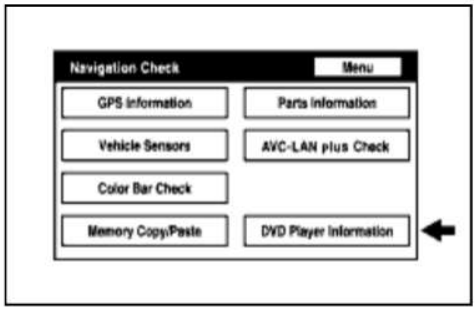
Screen Description

cardiagn.com

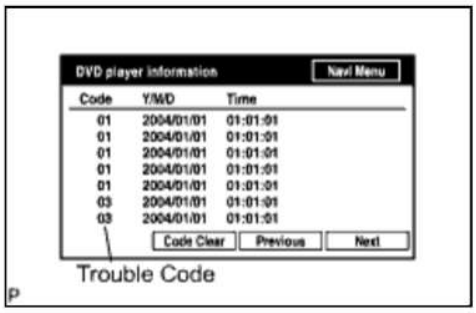


DISPLAY	CONTENT
*1: Navigation Manufacturer	Navigation receiver assembly manufacturer is displayed.
*2: Navigation Version	Navigation receiver assembly version is displayed.
*3: Disc Manufacturer	Map disc manufacturer is displayed.
*4: Disc Version	Map disc version is displayed.

(h) DVD Player Information



(1) Select "DVD Player Information" from the "Navigation Check" screen.



(2) Check for DTCs.

HINT:

- This is the DVD player check function in the navigation ECU.
- For details of this function, refer to Diagnosis Display Detailed Description in the System Description INFO .

cardiagn.com

Last Modified: 3-10-2010	6.4 D	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM0000011BN035X
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION SYSTEM: HOW TO PROCEED WITH TROUBLESHOOTING (2010 Corolla)		

HOW TO PROCEED WITH TROUBLESHOOTING

1.	**VEHICLE BROUGHT TO WORKSHOP**

NEXT

2.	**DIAGNOSTIC QUESTIONING AND SYMPTOM CONFIRMATION**

(a) Ask the customer about symptoms and confirm malfunctions.

THE SCREEN DISPLAYS NOTHING (GO TO STEP 8, AND PROCEED TO "BLACK SCREEN")

OTHER SYMPTOMS (GO TO STEP 3)

3.	**CONFIRM THE SYSTEM NORMAL CONDITION**

APPLICABLE (THIS IS NOT A MALFUNCTION)

NOT APPLICABLE (GO TO STEP 4)

4.	**CHECK FOR DTC**

HINT:

If the system cannot enter diagnostic mode, replace the navigation receiver assembly.

A CODE IS OUTPUT (GO TO STEP 5)

cardiagn.com

▶ A CODE IS NOT OUTPUT (GO TO STEP 8)

5.	CLEAR DTC

(a) Clear the DTCs and finish diagnostic mode.

HINT:

The currently output DTCs may not indicate actual malfunctions depending on the vehicle condition.

NEXT
▼

6.	RECHECK FOR DTC

HINT:

- Even if the malfunction symptom is not confirmed, check for diagnostic trouble codes. This is because the system stores past diagnostic trouble codes.
- Refer to the detailed description on the diagnostic screen as necessary INFO .
- Check the diagnostic trouble code and inspect the area the code indicates.

▶ A CODE IS OUTPUT (GO TO STEP 7)

▶ A CODE IS NOT OUTPUT (GO TO STEP 8)

7.	DIAGNOSTIC TROUBLE CODE CHART

(a) Find the output code in the Diagnostic Trouble Code Chart INFO .

NEXT ▶ GO TO STEP 10

8.	PROBLEM SYMPTOMS TABLE

(a) Find the applicable symptom in the Problem Symptoms Table INFO .

HINT:

cardiagn.com

If the symptom does not recur and no code is output, perform the symptom reproduction method INFO .

▶ THERE IS AN APPLICABLE SYMPTOM IN THE TABLE (GO TO STEP 10)

▶ THERE IS NO APPLICABLE SYMPTOM IN THE TABLE (GO TO STEP 9)

9.	CHECK THE ECU TERMINAL ARRANGEMENT BASED ON THE MALFUNCTION SYMPTOM

NEXT ▼

10.	CHECK THE CIRCUIT

(a) Adjust, repair, or replace as necessary.

NEXT ▼

11.	RECHECK FOR DIAGNOSTIC TROUBLE CODE

HINT:

After deleting the DTCs, recheck for diagnostic trouble codes.

NEXT ▼

12.	PERFORM CONFIRMATION TEST

NEXT ▶ END

cardiagn.com

Last Modified: 3-10-2010	6.4 T	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM0000011BR03TX
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION SYSTEM: PROBLEM SYMPTOMS TABLE (2010 Corolla)		

PROBLEM SYMPTOMS TABLE

HINT:

- Use the table below to help determine the cause of problem symptoms. If multiple suspected areas are listed, the potential causes of the symptoms are listed in order of probability in the "Suspected Area" column of the table. Check each symptom by checking the suspected areas in the order they are listed. Replace parts as necessary.
- Inspect the fuses and relays related to this system before inspecting the suspected areas below.

Display Function

SYMPTOM	SUSPECTED AREA	SEE PAGE
Pressing PWR switch does not turn on system.	Proceed to "Pressing Power Switch does not Turn on System"	INFO
	Navigation receiver assembly power source circuit	INFO
	Navigation receiver assembly	INFO
Black screen (No image appears on navigation/audio screen).	Proceed to "Black Screen"	INFO
	Illumination circuit	INFO
	Navigation receiver assembly	INFO
Illumination for panel switch does not come on with TAIL switch on.	Proceed to "Illumination for Panel Switch does not Come on with TAIL Switch ON"	INFO
	Illumination circuit	INFO
	Navigation receiver assembly	INFO
Display does not dim (Night Screen) with TAIL switch on.	Proceed to "Display does not Dim when Light Control Switch is Turned ON"	INFO
	Illumination circuit	INFO
	Navigation receiver assembly	INFO
Power does not turn off (The screen remains on).	Navigation receiver assembly power source circuit	INFO
	Navigation receiver assembly	INFO
Panel switches do not function.	Proceed to "Panel Switches do not Function"	INFO
	Steering pad switch circuit	INFO
	Navigation receiver assembly power source circuit	INFO

cardiagn.com

SYMPTOM	SUSPECTED AREA	SEE PAGE
	Navigation receiver assembly	INFO
Touch panel switch does not function.	Proceed to "Touch Panel Switch does not Function"	INFO
	Steering pad switch circuit	INFO
	Navigation receiver assembly power source circuit	INFO
	Navigation receiver assembly	INFO
Display panel does not open, tilt, or tilts improperly.	Proceed to "Display Panel does not Open, Tilt, or Tilts Improperly"	INFO
	Navigation receiver assembly power source circuit	INFO
	Navigation receiver assembly	INFO
Screen is distorted.	Navigation receiver assembly power source circuit	INFO
	Navigation receiver assembly	INFO
Screen flicker or color distortion.	Proceed to "Screen Flicker or Color Distortion"	INFO
	Navigation receiver assembly power source circuit	INFO
	Navigation receiver assembly	INFO
Navigation function switches can be operated while vehicle is running.	Proceed to "Vehicle Speed Signal Circuit between Navigation Receiver Assembly and Combination Meter"	INFO

Audio Function

SYMPTOM	SUSPECTED AREA	SEE PAGE
No sound can be heard from speakers (audio is mute).	Proceed to "No Sound can be Heard from Speakers"	INFO
	Speaker circuit	INFO
	Navigation receiver assembly	INFO
Radio broadcast cannot be received or poor reception.	Proceed to "Radio Broadcast cannot be Received or Poor Reception"	INFO
CD cannot be inserted/played or CD is ejected right after insertion.	Proceed to "CD cannot be Inserted / Played or CD is Ejected Right After Insertion"	INFO
CD cannot be ejected.	Proceed to "CD cannot be Ejected"	INFO
CD sound skips.	Proceed to "CD Sound Skips"	INFO
Abnormal noise occurs.	Proceed to "Noise Occurs"	INFO

cardiagn.com

SYMPTOM	SUSPECTED AREA	SEE PAGE
Poor sound quality in all modes (low volume).	Proceed to "Poor Sound Quality in All Modes (Low Volume)"	INFO
	Navigation receiver assembly power source circuit	INFO
	Navigation receiver assembly	INFO
External device sound cannot be heard or sound quality is bad (Stereo jack is used).	Navigation receiver assembly power source circuit	INFO
	Proceed to "Sound Signal Circuit between Navigation Receiver Assembly and Stereo Jack Adapter"	INFO
	Stereo jack adapter	INFO
	Navigation receiver assembly	INFO
ASL does not function.	Proceed to "Vehicle Speed Signal Circuit between Navigation Receiver Assembly and Combination Meter"	INFO

Navigation Function

SYMPTOM	SUSPECTED AREA	SEE PAGE
Map disc cannot be inserted.	Proceed to "Map Disc cannot be Inserted"	INFO
	Navigation receiver assembly power source circuit	INFO
	Navigation receiver assembly	INFO
Map disc cannot be ejected.	Navigation receiver assembly power source circuit	INFO
	Navigation receiver assembly	INFO
Vehicle position mark deviates.	Proceed to "Vehicle Position Mark Deviates Greatly"	INFO
	GPS antenna	INFO
	Navigation receiver assembly	INFO
Cursor or map rotates when vehicle is stopped.	Proceed to "Cursor or Map Rotates When Vehicle is Stopped"	INFO
	Navigation receiver assembly	INFO
Vehicle position mark is not updated.	Proceed to "Vehicle Position Mark is not Updated"	INFO
	Map disc	-
	Navigation receiver assembly	INFO

cardiagn.com

SYMPTOM	SUSPECTED AREA	SEE PAGE
Current position display does not appear.	Proceed to "Current Position Display does not Appear"	INFO
	Map disc	-
	GPS antenna	INFO
	Navigation receiver assembly	INFO
GPS mark is not displayed.	Proceed to "GPS Mark is not Displayed"	INFO
	GPS antenna	INFO
	Navigation receiver assembly	INFO
Voice guidance does not function.	Proceed to "Voice Guidance does not Function"	INFO
	Speaker circuit	INFO
	Map disc	-
	Navigation receiver assembly	INFO
Map display incomplete.	Proceed to "Map Display Incomplete"	INFO
	Map disc	-
	Navigation receiver assembly	INFO
Route cannot be calculated.	Proceed to "Route cannot be Calculated"	INFO
	Map disc	-
	Navigation receiver assembly	INFO
Speed signal does not change in the navigation check mode.	Proceed to "Vehicle Speed Signal Circuit between Navigation Receiver Assembly and Combination Meter"	INFO
Reverse signal does not change in the navigation check mode.	Reverse signal circuit	INFO

Steering Pad Switch Function

SYMPTOM	SUSPECTED AREA	SEE PAGE
The system cannot be operated by the steering pad switch.	Steering pad switch circuit	INFO
	Navigation receiver assembly	INFO
Illumination for steering pad switch does not come on with TAIL switch on.	Illumination circuit	INFO
	Navigation receiver assembly	INFO

cardiagn.com

Last Modified: 3-10-2010	6.4 D	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM0000011BU05OX
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION SYSTEM: DTC CHECK / CLEAR (2010 Corolla)		

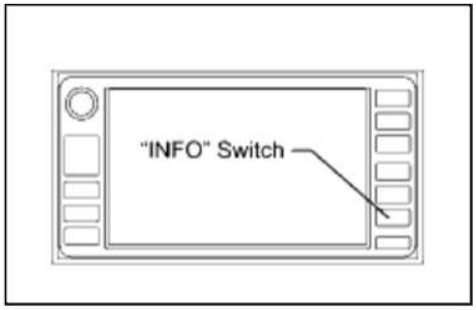
DTC CHECK / CLEAR

HINT:

- Illustrations may differ from the actual vehicle depending on the device settings and options. Therefore, some detailed areas may not be shown exactly the same as on the actual vehicle.
- After the ignition switch is turned to ON, check that the map is displayed before starting the diagnostic mode. Otherwise, some items cannot be checked.

1. START DIAGNOSTIC MODE

(a) There are 2 methods to start diagnostic mode. Start the mode by using one of them.



(b) Method 1

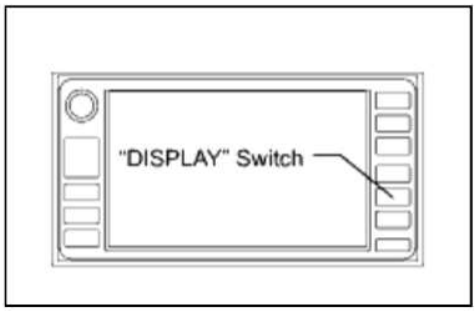
(1) Start the engine.

(2) While pressing and holding the "INFO" switch, operate the light control switch: OFF → Turn ON → Turn OFF → Turn ON → Turn OFF → Turn ON → Turn OFF.

(3) The diagnostic mode starts and the "System Check Mode" screen will be displayed. Service inspection starts automatically and the result will be displayed.

(c) Method 2

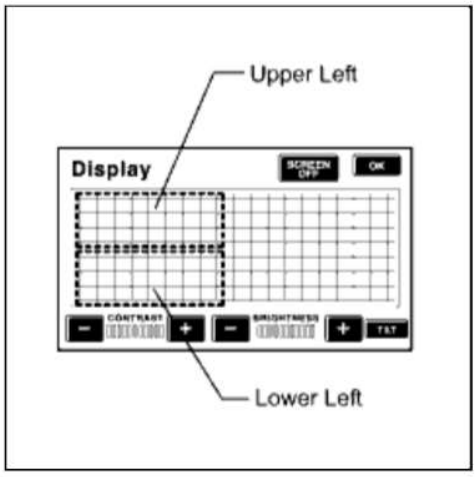
(1) Start the engine.



(2) Press the "DISPLAY" switch.

(3) From the display quality adjustment screen, touch the corners of the screen in the following order: upper left → lower left → upper left → lower left → upper left → lower left.

cardiagn.com



(4) The diagnostic mode starts and the "System Check Mode" screen will be displayed. Service inspection starts automatically and the result will be displayed.

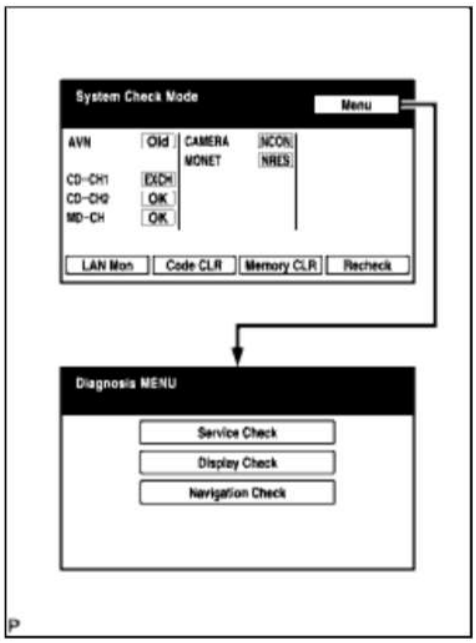
2. FINISH DIAGNOSTIC MODE

(a) There are 2 methods to end diagnostic mode. Use one of them.

(1) Turn the ignition switch off.

(2) Press and hold the "DISP" switch for 3 seconds.

3. DIAGNOSIS MENU



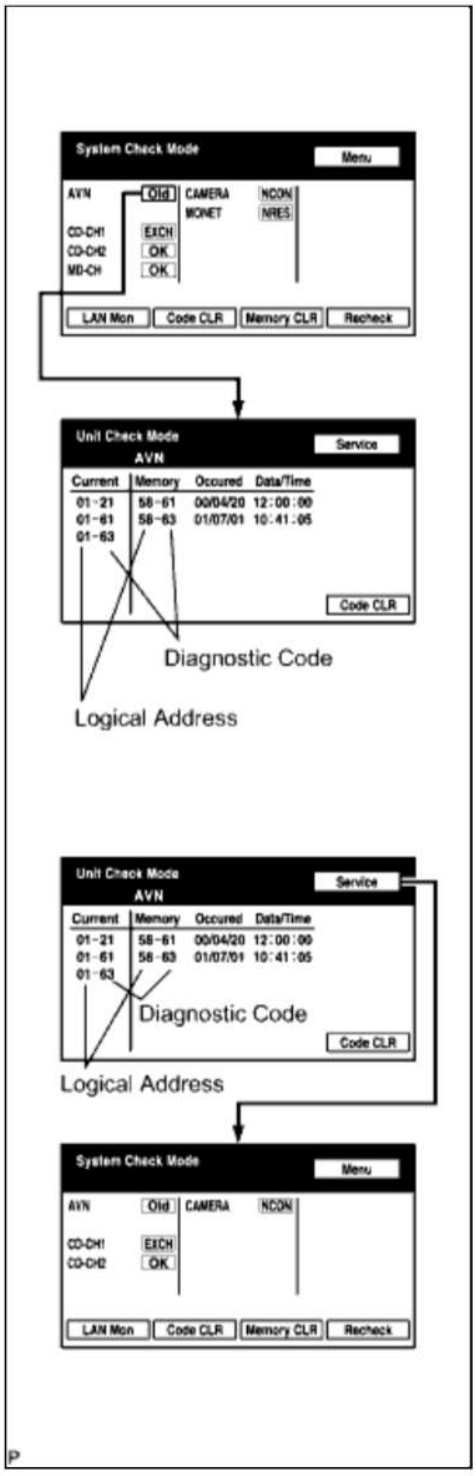
(a) The "Diagnosis MENU" screen will be displayed by pressing the "Menu" switch on the "System Check Mode" screen.

4. CHECK DTC

(a) Read the system check result.

(1) If the check result is "EXCH", "CHEK" or "Old", touch the displayed check result to view the results on the

cardiagn.com



"Unit Check Mode" screen and record them.

HINT:

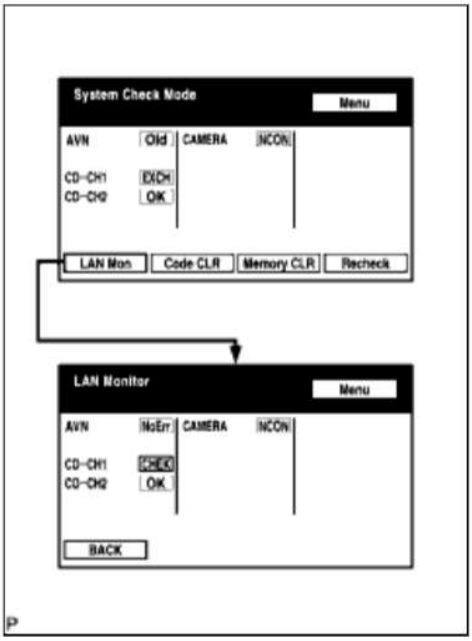
- If all check results are "OK", go to communication DTC check.
- If a device name is not known, its physical address is displayed.

HINT:

When proceeding to view the results of another device, press the "Service" switch to return to the "System Check Mode" screen. Repeat this step.

(b) Read the communication diagnostic check result.

cardiagn.com



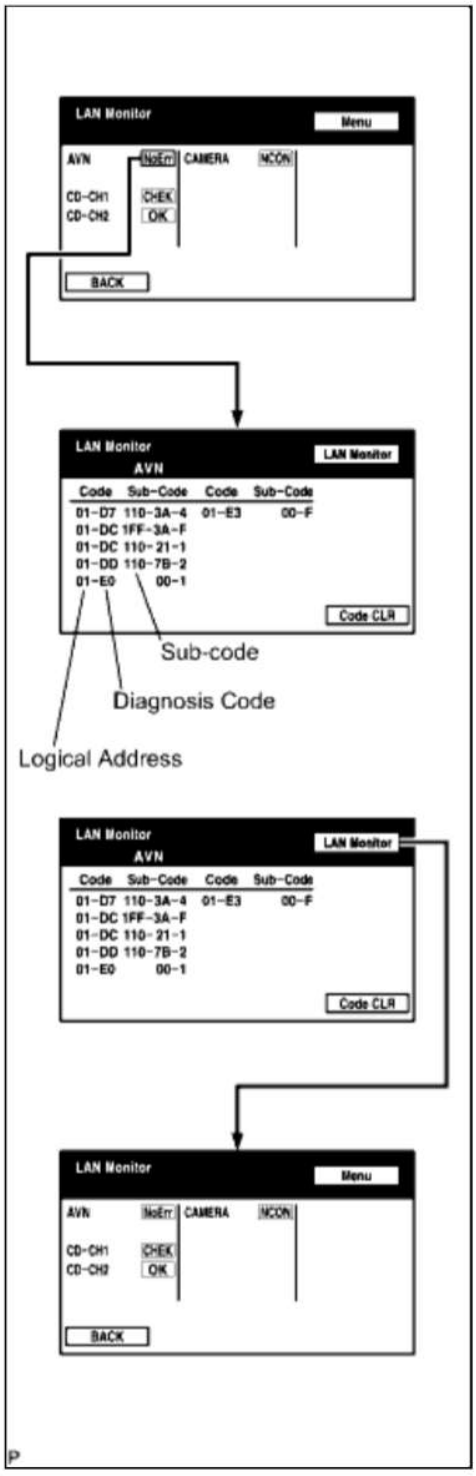
(1) Return to the "System Check Mode" screen, and press the "LAN Mon" switch to enter the "LAN Monitor" screen.

(2) If the check result is "CHEK" or "Old", touch the displayed check result to view the results on the individual communication diagnostic screen and record them.

HINT:

- If all check results are "No Err", the system judges that no DTC exists.
- The sub-code (relevant device) will be indicated by its physical address.
- When proceeding to view the results of another device, press the "Service" switch to return to the original "LAN Monitor" screen. Repeat this step.

cardiagn.com



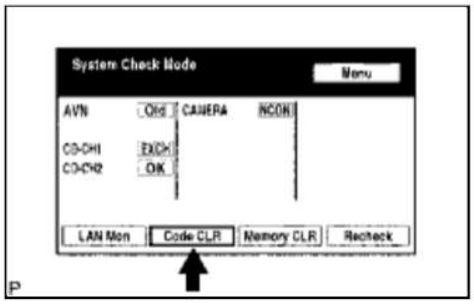
5. DTC CLEAR/RECHECK

(a) Clear DTC

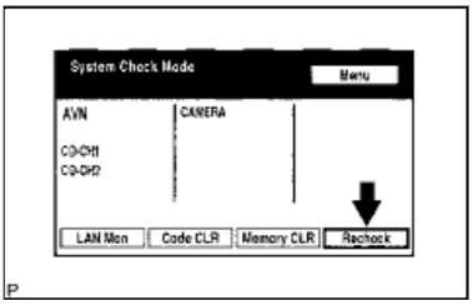
(1) Press the "Code CLR" switch for 3 seconds.

(2) The check results are cleared.

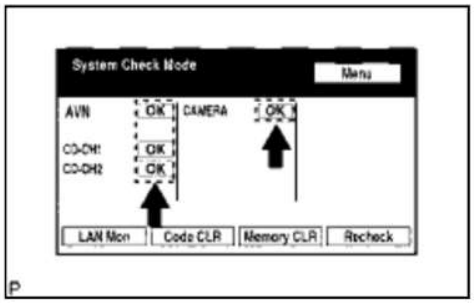
cardiagn.com



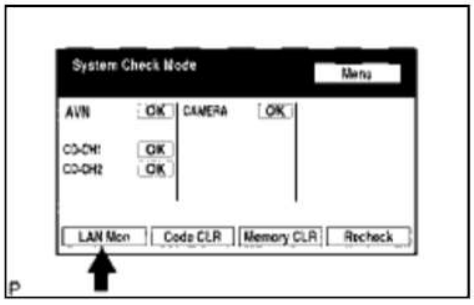
(b) Recheck



(1) Press the "Recheck" switch.



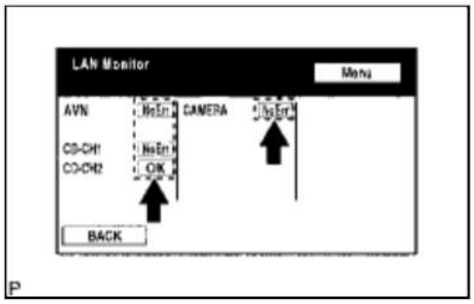
(2) Confirm that all diagnostic codes are "OK" when the check results are displayed. If a code other than "OK" is displayed, troubleshoot again.



(3) Press the "LAN Mon" switch to change to the "LAN Monitor" screen.

(4) Confirm that all diagnostic codes are "No Err". If a code other than "No Err" is displayed, troubleshoot again.

cardiagn.com

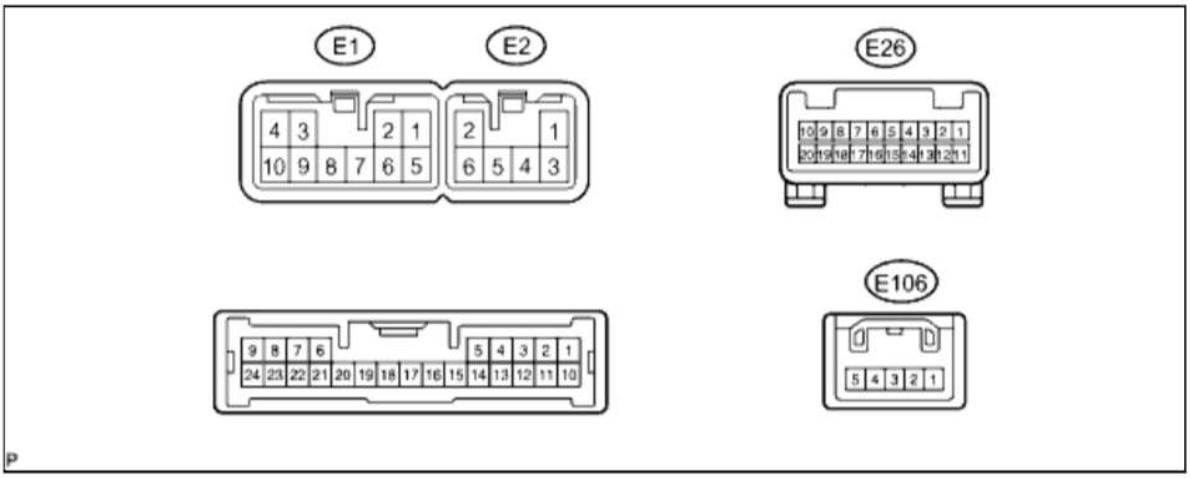


cardiagn.com

Last Modified: 3-10-2010	6.4 U	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM0000011BQ04UX
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION SYSTEM: TERMINALS OF ECU (2010 Corolla)		

TERMINALS OF ECU

1. NAVIGATION RECEIVER ASSEMBLY



TERMINAL NO. (SYMBOL)	WIRING COLOR	TERMINAL DESCRIPTION	CONDITION	SPECIFICATION
E106-1 (PKB) - E1-7 (E)	BE - BR	Parking brake signal	See "Vehicle Signal Check" INFO	-
E106-3 (SPD) - E1-7 (E)	V - BR	Speed signal from combination meter	See "Vehicle Signal Check" INFO	-
E106-5 (REV) - E1-7 (E)	R - BR	Reverse signal	See "Vehicle Signal Check" INFO	-
E1-1 (FR+) - E1-7 (E)	LG - BR	Sound signal (Front Right)	Audio system is playing	A waveform synchronized with sounds is output
E1-2 (FL+) - E1-7 (E)	P - BR	Sound signal (Front Left)	Audio system is playing	A waveform synchronized with sounds is output
E1-3 (ACC) - E1-7 (E)	GR - BR	Accessory (ON)	Ignition switch off → ACC	Below 1 V → 11 to 14 V
E1-4 (B) - E1-7 (E)	SB - BR	Battery	Always	11 to 14 V
E1-5 (FR-) - E1-7 (E)	L - BR	Sound signal (Front Right)	Audio system is playing	A waveform synchronized with sounds is output
E1-6 (FL-) - E1-7 (E)	V - BR	Sound signal (Front Left)	Audio system is playing	A waveform synchronized with sounds is output

cardiagn.com

TERMINAL NO. (SYMBOL)	WIRING COLOR	TERMINAL DESCRIPTION	CONDITION	SPECIFICATION
E1-7 (E) - Body ground	BR - Body ground	Ground	Always	Below 1 V
E1-8 (ANT) - E1-7 (E)	BE - BR	Power source of antenna	Radio switch ON and AM or FM	11 to 14 V
E1-10 (ILL+) - E1-7 (E)	G - BR	Illumination signal	Light control switch OFF → TAIL or HEAD	Below 1 V → 11 to 14 V
E2-1 (RR+) - E1-7 (E)	R - BR	Sound signal (Rear Right)	Audio system is playing	A waveform synchronized with sounds is output
E2-2 (RL+) - E1-7 (E)	B - BR	Sound signal (Rear Left)	Audio system is playing	A waveform synchronized with sounds is output
E2-3 (RR-) - E1-7 (E)	W - BR	Sound signal (Rear Right)	Audio system is playing	A waveform synchronized with sounds is output
E2-5 (ILL-) - E1-7 (E)	W - BR	Illumination signal	Light control switch OFF → TAIL or HEAD	Pulse generation
E2-6 (RL-) - E1-7 (E)	Y - BR	Sound signal (Rear Left)	Audio system is playing	A waveform synchronized with sounds is output
E26-6 (SWG) - Body ground*1	SB - Body ground	Steering pad switch ground	Always	Below 1 V
E26-7 (SW1) - E26-6 (SWG)*1	BE - SB	Steering pad switch signal	No switch is pushed → SEEK+ switch pushed → SEEK- switch pushed → VOL+ switch pushed → VOL- switch pushed	4.5 to 5.5 V → Below 0.5 V → 0.86 to 0.95 V → 1.91 to 2.01 V 3.23 to 3.57 V
E26-8 (SW2) - E26-6 (SWG)*1	P - SB	Steering pad switch signal	No switch is pushed → MODE switch pushed	4.5 to 5.5 V → Below 0.5 V

HINT:

***1: w/ Steering Pad Switch**

cardiagn.com

Last Modified: 3-10-2010	6.4 S	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM0000011BO03QX
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION SYSTEM: DIAGNOSTIC TROUBLE CODE CHART (2010 Corolla)		

DIAGNOSTIC TROUBLE CODE CHART

Communication Diagnosis

DTC CODE	DETECTION ITEM	TROUBLE AREA	SEE PAGE
01-21	ROM Error	Navigation receiver assembly	INFO
01-22	RAM Error	Navigation receiver assembly	INFO

SW

DTC CODE	DETECTION ITEM	TROUBLE AREA	SEE PAGE
21-10	Panel Switch Error	Navigation receiver assembly	INFO
21-11	Touch Switch Error	Navigation receiver assembly	INFO

SW with Name

DTC CODE	DETECTION ITEM	TROUBLE AREA	SEE PAGE
23-10	Panel Switch Error	Navigation receiver assembly	INFO
23-11	Touch Switch Error	Navigation receiver assembly	INFO

SW Converting

DTC CODE	DETECTION ITEM	TROUBLE AREA	SEE PAGE
24-10	Panel Switch Error	Navigation receiver assembly	INFO
24-11	Touch Switch Error	Navigation receiver assembly	INFO

Command SW

DTC CODE	DETECTION ITEM	TROUBLE AREA	SEE PAGE
25-10	Panel Switch Error	Navigation receiver assembly	INFO
25-11	Touch Switch Error	Navigation receiver assembly	INFO

Front Monitor

DTC CODE	DETECTION ITEM	TROUBLE AREA	SEE PAGE

cardiagn.com

DTC CODE	DETECTION ITEM	TROUBLE AREA	SEE PAGE
34-10	Error in Picture Circuit	Navigation receiver assembly	INFO
34-11	No Current in Back-light	Navigation receiver assembly	INFO
34-12	Excess Current in Back-light	Navigation receiver assembly	INFO

Navi

DTC CODE	DETECTION ITEM	TROUBLE AREA	SEE PAGE
58-10	Gyro Error	1. Gyro sensor 2. Navigation receiver assembly	INFO
58-11	GPS Receiver Error	Navigation receiver assembly	INFO
58-40	GPS Antenna Error	1. Wire harness 2. GPS antenna 3. Navigation receiver assembly	INFO
58-41	GPS Antenna Power Source Error	1. Wire harness 2. GPS antenna 3. Navigation receiver assembly	INFO
58-42	Map Disc Read Error	1. Map disc 2. Navigation receiver assembly	INFO
58-43	SPD Signal Error	1. Speed signal circuit 2. Navigation receiver assembly	INFO
58-44	Player Error	Navigation receiver assembly	INFO
58-45	High Temperature	Navigation receiver assembly	INFO

Radio Unit

DTC CODE	DETECTION ITEM	TROUBLE AREA	SEE PAGE
60-10	AM Tuner PLL does not Lock	Navigation receiver assembly	INFO
60-11	FM Tuner PLL does not Lock	Navigation receiver assembly	INFO
60-42	Tuner Power Source Error	Navigation receiver assembly	INFO
60-43	AM Tuner Error	Navigation receiver assembly	INFO
60-44	FM Tuner Error	Navigation receiver assembly	INFO
60-50	Malfunction in Internal IC	Navigation receiver assembly	INFO

CD Player

DTC CODE	DETECTION ITEM	TROUBLE AREA	SEE PAGE

cardiagn.com

DTC CODE	DETECTION ITEM	TROUBLE AREA	SEE PAGE
62-10	CD Player Mechanical Error	Navigation receiver assembly	INFO
62-11	CD Insertion and Ejection Error	Navigation receiver assembly	INFO
62-12	CD Reading Abnormal	Navigation receiver assembly	INFO
62-41	Wrong Disc	1. CD 2. Navigation receiver assembly	INFO
62-42	Disc cannot be Read	1. CD 2. Navigation receiver assembly	INFO
62-43	CD-ROM Abnormal	1. CD 2. Navigation receiver assembly	INFO
62-44	CD Abnormal	Navigation receiver assembly	INFO
62-45	Eject Error	Navigation receiver assembly	INFO
62-46	Scratched / Reversed Disc	1. CD 2. Navigation receiver assembly	INFO
62-47	High Temperature	Navigation receiver assembly	INFO
62-48	Excess Current	Navigation receiver assembly	INFO
62-50	Tray Insertion / Ejection Error	Navigation receiver assembly	INFO
62-51	Elevator Error	Navigation receiver assembly	INFO
62-52	Clamp Error	Navigation receiver assembly	INFO
62-78	DSP Error	Navigation receiver assembly	INFO
62-7D	Disc cannot be Played	1. CD 2. Navigation receiver assembly	INFO
62-7E	No Playable Files	1. CD 2. Navigation receiver assembly	INFO
62-7F	Copyright Protection Error	1. CD 2. Navigation receiver assembly	INFO

GPS

DTC CODE	DETECTION ITEM	TROUBLE AREA	SEE PAGE
80-10	Gyro Error	1. Gyro sensor 2. Navigation receiver assembly	INFO
80-11	GPS Receiver Error	Navigation receiver assembly	INFO
80-40	GPS Antenna Error	1. Wire harness 2. GPS antenna 3. Navigation receiver assembly	INFO

cardiagn.com

DTC CODE	DETECTION ITEM	TROUBLE AREA	SEE PAGE
80-41	GPS Antenna Power Source Error	1. Wire harness 2. GPS antenna 3. Navigation receiver assembly	INFO
80-42	Map Disc Read Error	1. Map disc 2. Navigation receiver assembly	INFO
80-43	SPD Signal Error	1. Speed signal circuit 2. Navigation receiver assembly	INFO
80-44	Player Error	Navigation receiver assembly	INFO
80-45	High Temperature	Navigation receiver assembly	INFO

cardiagn.com

Last Modified: 3-10-2010	6.4 C	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM00000182H05DX
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION SYSTEM: 01-21,01-22: ROM Error (2010 Corolla)		

DTC	**01-21**	**ROM Error**

DTC	**01-22**	**RAM Error**

DESCRIPTION

DTC NO.	DTC DETECTION CONDITION	TROUBLE AREA
01-21	A malfunction exists in ROM.	Navigation receiver assembly
01-22	A malfunction exists in RAM.	

INSPECTION PROCEDURE

HINT:

After the inspection is completed, clear the DTCs.

PROCEDURE

1.	**REPLACE NAVIGATION RECEIVER ASSEMBLY**

HINT:

Removal INFO

NEXT ▶ END

cardiagn.com

Last Modified: 3-10-2010	6.4 C	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM00000182P04VX
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION SYSTEM: 21-10,21-11,23-10,23-11,24-10,24-11,25-10,25-11: Panel Switch Error (2010 Corolla)		

DTC	**21-10**	**Panel Switch Error**

DTC	**21-11**	**Touch Switch Error**

DTC	**23-10**	**Panel Switch Error**

DTC	**23-11**	**Touch Switch Error**

DTC	**24-10**	**Panel Switch Error**

DTC	**24-11**	**Touch Switch Error**

DTC	**25-10**	**Panel Switch Error**

DTC	**25-11**	**Touch Switch Error**

DESCRIPTION

DTC NO.	DTC DETECTION CONDITION	TROUBLE AREA
21-10	The panel switch detection circuit has a problem.	Navigation receiver assembly
21-11	The touch panel switch has a problem.	
23-10	The panel switch detection circuit has a problem.	

cardiagn.com

DTC NO.	DTC DETECTION CONDITION	TROUBLE AREA
23-11	The touch panel switch has a problem.	
24-10	The panel switch detection circuit has a problem.	
24-11	The touch panel switch has a problem.	
25-10	The panel switch detection circuit has a problem.	
25-11	The touch panel switch has a problem.	

INSPECTION PROCEDURE

HINT:

After the inspection is completed, clear the DTCs.

PROCEDURE

1.	REPLACE NAVIGATION RECEIVER ASSEMBLY

HINT:

Removal INFO

NEXT END

cardiagn.com

Last Modified: 3-10-2010	6.4 C	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM0000182Q04RX
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION SYSTEM: 34-10-34-12: Error in Picture Circuit (2010 Corolla)		

DTC	**34-10**	**Error in Picture Circuit**

DTC	**34-11**	**No Current in Back-light**

DTC	**34-12**	**Excess Current in Back-light**

DESCRIPTION

DTC NO.	DTC DETECTION CONDITION	TROUBLE AREA
34-10	Error in power supply system for picture circuit	Navigation receiver assembly
34-11	Decline in power output from inverter circuit for back-light	
34-12	Excess power output from inverter circuit for back-light	

INSPECTION PROCEDURE

HINT:

After the inspection is completed, clear the DTCs.

PROCEDURE

1.	**REPLACE NAVIGATION RECEIVER ASSEMBLY**

HINT:

Removal INFO

NEXT ▶ END

cardiagn.com

Last Modified: 3-10-2010	6.4 C	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM00000182R04CX
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION SYSTEM: 58-10,80-10: Gyro Error (2010 Corolla)		

DTC	**58-10**	**Gyro Error**

DTC	**80-10**	**Gyro Error**

DESCRIPTION

DTC NO.	DTC DETECTION CONDITION	TROUBLE AREA
58-10	Ground short, power supply short, or open circuit in the gyro signal	• Gyro sensor • Navigation receiver assembly
80-10	Ground short, power supply short, or open circuit in the gyro signal	

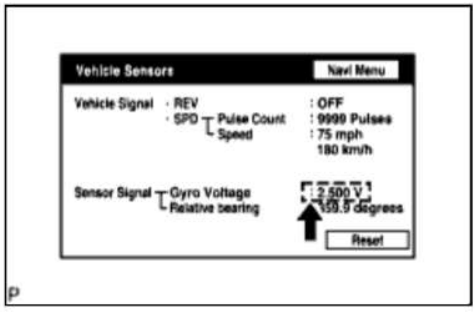
INSPECTION PROCEDURE

HINT:

After the inspection is completed, clear the DTCs.

PROCEDURE

1.	**CHECK VEHICLE SENSOR (NAVIGATION CHECK MODE)**



(a) Enter the "Navigation Check" mode (Vehicle Sensors) INFO .

(b) Check the gyro voltage.

cardiagn.com

Standard Voltage:
0.1 to 4.5 V

NG ▶ REPLACE NAVIGATION RECEIVER ASSEMBLY

OK ▼

2.	CLEAR DTC

(a) Clear the DTCs INFO.

NEXT ▼

3.	RECHECK FOR DTC

(a) Recheck for DTCs and check if the same trouble occurs again.

HINT:

If DTCs are detected frequently, replace the navigation receiver assembly.

OK:
Malfunction disappears.

NG ▶ REPLACE NAVIGATION RECEIVER ASSEMBLY

OK ▶ END

cardiagn.com

Last Modified: 3-10-2010	6.4 C	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM00000182S046X
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION SYSTEM: 58-11,80-11: GPS Receiver Error (2010 Corolla)		

DTC	**58-11**	**GPS Receiver Error**

DTC	**80-11**	**GPS Receiver Error**

DESCRIPTION

DTC NO.	DTC DETECTION CONDITION	TROUBLE AREA
58-11	• RTC, ROM, and RAM of the GPS receiver and TCXO error • GPS receiver is failed.	Navigation receiver assembly
80-11	• RTC, ROM, and RAM of the GPS receiver and TCXO error • GPS receiver is failed.	

INSPECTION PROCEDURE

HINT:

After the inspection is completed, clear the DTCs.

PROCEDURE

1.	**REPLACE NAVIGATION RECEIVER ASSEMBLY**

HINT:

Removal INFO

NEXT ▶ END

cardiagn.com

Last Modified: 3-10-2010	6.4 C	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM00000182T04LX
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION SYSTEM: 58-40,58-41,80-40,80-41: GPS Antenna Error (2010 Corolla)		

DTC	**58-40**	**GPS Antenna Error**

DTC	**58-41**	**GPS Antenna Power Source Error**

DTC	**80-40**	**GPS Antenna Error**

DTC	**80-41**	**GPS Antenna Power Source Error**

DESCRIPTION

DTC NO.	DTC DETECTION CONDITION	TROUBLE AREA
58-40	GPS antenna error	• Wire harness • GPS antenna • Navigation receiver assembly
58-41	Error of the power source to the GPS antenna	
80-40	GPS antenna error	
80-41	Error of the power source to the GPS antenna	

INSPECTION PROCEDURE

HINT:

After the inspection is completed, clear the DTCs.

PROCEDURE

1.	**CHECK HARNESS AND CONNECTOR (GPS ANTENNA - NAVIGATION RECEIVER ASSEMBLY)**

(a) Check that the GPS antenna cord is securely connected to the navigation receiver assembly connector.

cardiagn.com

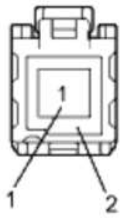
OK:
The cord is securely connected.

NG ▶ **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK ▼

2.	**INSPECT GPS ANTENNA**

Component without harness connected:
(GPS Antenna)



(a) Disconnect the GPS antenna connector.

(b) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
1 - 2	Always	50 to 500 Ω

NG ▶ **REPLACE GPS ANTENNA**

OK ▼

3.	**REPLACE NAVIGATION RECEIVER ASSEMBLY**

(a) Replace the navigation receiver assembly with a known good one and check if the same

cardiagn.com

problem occurs again.

(1) Clear the DTCs INFO .

(2) Recheck for DTCs and check if the same trouble occurs again.

OK:

Same problem does not occur.

NG ▶ **REPLACE GPS ANTENNA**

OK ▶ **END**

cardiagn.com

Last Modified: 3-10-2010	6.4 C	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM0000182U04FX
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION SYSTEM: 58-42,80-42: Map Disc Read Error (2010 Corolla)		

DTC	**58-42**	**Map Disc Read Error**

DTC	**80-42**	**Map Disc Read Error**

DESCRIPTION

DTC NO.	DTC DETECTION CONDITION	TROUBLE AREA
58-42	• Player error • Scratches or dirt on the disc • Access to an invalid address due to software error	• Map disc • Navigation receiver assembly
80-42	• Player error • Scratches or dirt on the disc • Access to an invalid address due to software error	

INSPECTION PROCEDURE

HINT:

After the inspection is completed, clear the DTCs.

PROCEDURE

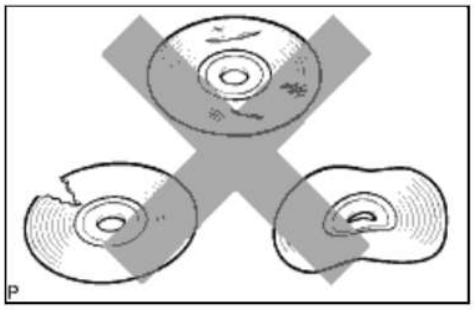
1.	**CHECK MAP DISC**

(a) Check that the map disc is not deformed or cracked.

OK:

No deformations or cracks on the map disc.

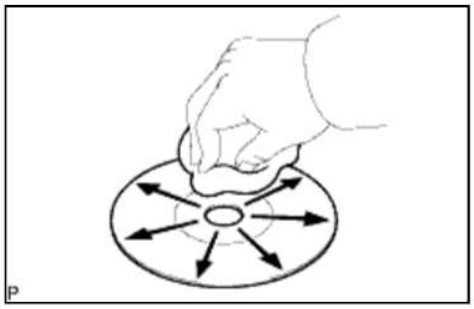
cardiagn.com



NG ▶ REPLACE MAP DISC

OK
▼

2.	DISC CLEANING



(a) Disc cleaning

(1) If dirt is on the disc surface, wipe it clean with a soft cloth from the inside to the outside in a radial direction.

NOTICE:

Do not use a conventional record cleaner or anti-static preservative.

NEXT
▼

3.	DTC CLEAR AND RECHECK

(a) Clear the DTCs INFO.

(b) Recheck for DTCs and check if the same trouble occurs again.

OK:

The same problem does not occur.

NG ▶ REPLACE MAP DISC

cardiagn.com

OK ▶ END

4.	REPLACE MAP DISC

(a) Replace the map disc.

(b) Clear the DTCs and recheck for DTCs.

(c) Check if the same trouble occurs again.

OK:

The same problem does not occur.

NG ▶ REPLACE NAVIGATION RECEIVER ASSEMBLY

OK ▶ END

cardiagn.com

Last Modified: 3-10-2010	6.4 C	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM00000182V04LX
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION SYSTEM: 58-43,80-43: SPD Signal Error (2010 Corolla)		

DTC	**58-43**	**SPD Signal Error**

DTC	**80-43**	**SPD Signal Error**

DESCRIPTION

DTC NO.	DTC DETECTION CONDITION	TROUBLE AREA
58-43	A difference between the GPS speed and SPD pulse is detected.	• Speed signal circuit • Navigation receiver assembly
80-43	A difference between the GPS speed and SPD pulse is detected.	

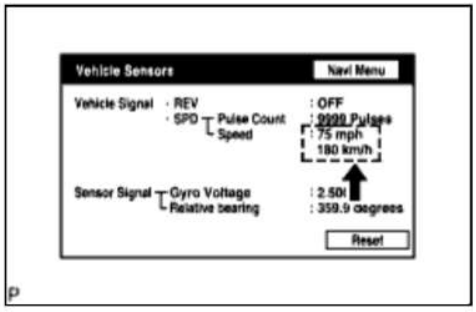
INSPECTION PROCEDURE

HINT:

After the inspection is completed, clear the DTCs.

PROCEDURE

1.	**CHECK VEHICLE SENSOR (NAVIGATION CHECK MODE)**



(a) Enter the "Navigation Check" mode (Vehicle Sensors) INFO .

(b) While driving the vehicle, compare the "SPD" indicator to the reading on the

cardiagn.com

speedometer. Check if these readings are almost equal.

OK:

The readings are almost equal.

NG ▶ **PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE**

OK ▶ **REPLACE NAVIGATION RECEIVER ASSEMBLY**

2.	**PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE**

Refer to "Speed signal does not change in the navigation check mode" in the Problem Symptoms Table INFO .

NEXT ▶ **END**

cardiagn.com

Last Modified: 3-10-2010	6.4 C	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM00000182W04AX
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION SYSTEM: 58-44,80-44: Player Error (2010 Corolla)		

DTC	**58-44**	**Player Error**

DTC	**80-44**	**Player Error**

DESCRIPTION

DTC NO.	DTC DETECTION CONDITION	TROUBLE AREA
58-44	Map player error is detected.	Navigation receiver assembly
80-44	Map player error is detected.	

INSPECTION PROCEDURE

HINT:

After the inspection is completed, clear the DTCs.

PROCEDURE

1.	**CHECK NAVIGATION RECEIVER ASSEMBLY**

(a) Check if a disc can be inserted or ejected normally.

OK:
A disc can be inserted or ejected normally.

NG ▶ **REPLACE NAVIGATION RECEIVER ASSEMBLY**

OK
▼

cardiagn.com

2.	**DTC CLEAR AND RECHECK**

(a) Clear the DTCs INFO.

(b) Recheck for DTCs and check if the same trouble occurs again.

OK:
The same problem does not occur.

NG ▶ **REPLACE NAVIGATION RECEIVER ASSEMBLY**

OK ▶ **END**

cardiagn.com

Last Modified: 3-10-2010	6.4 C	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM00000182X044X
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION SYSTEM: 58-45,80-45: High Temperature (2010 Corolla)		

DTC	**58-45**	**High Temperature**

DTC	**80-45**	**High Temperature**

DESCRIPTION

DTC NO.	DTC DETECTION CONDITION	TROUBLE AREA
58-45	Map disc player temperature is high (Over 80°C (176°F)).	Navigation receiver assembly
80-45	Map disc player temperature is high (Over 80°C (176°F)).	

INSPECTION PROCEDURE

HINT:

After the inspection is completed, clear the DTCs.

PROCEDURE

1.	**CHECK NAVIGATION RECEIVER ASSEMBLY**

(a) Park the vehicle in a cool place.

(b) Operate the navigation receiver assembly after it has sufficiently cooled down. Check if the malfunction occurs.

OK:

The same problem does not occur.

NG ▶ **REPLACE NAVIGATION RECEIVER ASSEMBLY**

OK ▶ **END**

cardiagn.com

Last Modified: 3-10-2010	6.4 C	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM00000200N02IX
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION SYSTEM: 60-10,60-11: AM Tuner PLL does not Lock (2010 Corolla)		

DTC	**60-10**	**AM Tuner PLL does not Lock**

DTC	**60-11**	**FM Tuner PLL does not Lock**

DESCRIPTION

DTC NO.	DTC DETECTION CONDITION	TROUBLE AREA
60-10	AM tuner PLL (phase locked loop) synchronization is impossible.	Navigation receiver assembly
60-11	FM tuner PLL (phase locked loop) synchronization is impossible.	

INSPECTION PROCEDURE

HINT:

After the inspection is completed, clear the DTCs.

PROCEDURE

1.	**REPLACE NAVIGATION RECEIVER ASSEMBLY**

HINT:

Removal INFO

NEXT ▶ END

cardiagn.com

Last Modified: 3-10-2010	6.4 C	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM00000200Q02OX
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION SYSTEM: 60-42-60-44,60-50: Tuner Power Source Error (2010 Corolla)		

DTC	**60-42**	**Tuner Power Source Error**

DTC	**60-43**	**AM Tuner Error**

DTC	**60-44**	**FM Tuner Error**

DTC	**60-50**	**Malfunction in Internal IC**

DESCRIPTION

DTC NO.	DTC DETECTION CONDITION	TROUBLE AREA
60-42	The power source of the tuner is abnormal.	Navigation receiver assembly
60-43	The AM tuner is abnormal.	
60-44	The FM tuner is abnormal.	
60-50	A problem occurs in the IC inside the tuner unit and radio reception is not normal.	

INSPECTION PROCEDURE

HINT:

After the inspection is completed, clear the DTCs.

PROCEDURE

1.	**CLEAR DTC**

(a) Clear the DTCs INFO.

cardiagn.com

NEXT

2.	**RECHECK FOR DTC**

(a) Recheck for DTCs and check if the same trouble occurs again.

HINT:

If DTCs are detected frequently, replace the navigation receiver assembly.

OK:
Malfunction disappears.

NG ▶ **REPLACE NAVIGATION RECEIVER ASSEMBLY**

OK ▶ **END**

cardiagn.com

Last Modified: 3-10-2010	6.4 C	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM0000020NC01KX
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION SYSTEM: 62-10-62-12: CD Player Mechanical Error (2010 Corolla)		

DTC	**62-10**	**CD Player Mechanical Error**

DTC	**62-11**	**CD Insertion and Ejection Error**

DTC	**62-12**	**CD Reading Abnormal**

DESCRIPTION

DTC NO.	DTC DETECTION CONDITION	TROUBLE AREA
62-10	A mechanical error in the CD player is detected while the CD is not being inserted or ejected.	Navigation receiver assembly
62-11	CD insertion or ejection is failed.	
62-12	CD read problem occurs.	

INSPECTION PROCEDURE

HINT:

After the inspection is completed, clear the DTCs.

PROCEDURE

1.	**REPLACE NAVIGATION RECEIVER ASSEMBLY**

HINT:

Removal INFO

NEXT ▶ END

cardiagn.com

Last Modified: 3-10-2010	6.4 C	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM0000020NE01SX
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION SYSTEM: 62-41,62-42: Wrong Disc (2010 Corolla)		

DTC	**62-41**	**Wrong Disc**

DTC	**62-42**	**Disc cannot be Read**

DESCRIPTION

DTC NO.	DTC DETECTION CONDITION	TROUBLE AREA
62-41	An unsuitable disc is inserted.	• CD • Navigation receiver assembly
62-42	The disc cannot be read.	

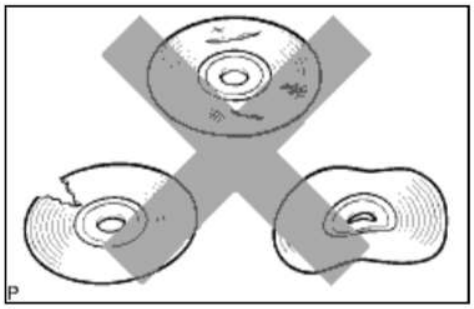
INSPECTION PROCEDURE

HINT:

After the inspection is completed, clear the DTCs.

PROCEDURE

1.	**CHECK DISC**



(a) Check that the disc is not deformed or cracked.

OK:

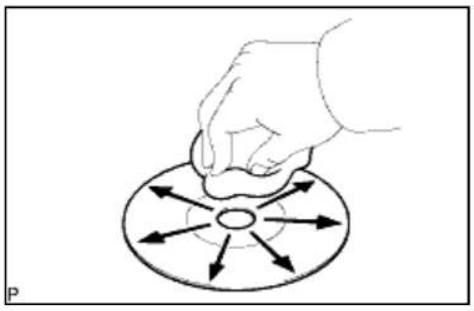
No deformation or cracks on the disc.

NG ▶ **CHANGE DISC**

cardiagn.com

OK

2.	DISC CLEANING



(a) Disc cleaning

(1) If dirt is on the disc surface, wipe it clean with a soft cloth from the inside to the outside in a radial direction.

NOTICE:

Do not use a conventional record cleaner or anti-static preservative.

NEXT

3.	CLEAR DTC

(a) Clear the DTCs INFO.

NEXT

4.	RECHECK FOR DTC

(a) Recheck for DTCs and check if the same trouble occurs again.

OK:

The same trouble does not occur.

NG ▶ **REPLACE DISC WITH ANOTHER AND RECHECK**

OK ▶ **END**

cardiagn.com

5.	**REPLACE DISC WITH ANOTHER AND RECHECK**

(a) Replace the disc with another and recheck.

(1) Replace the disc with another normal one.

(2) Clear the DTCs [INFO] .

(3) Recheck for DTCs and check if the same trouble occurs again.

OK:

The same trouble does not occur.

NG ▶ **REPLACE NAVIGATION RECEIVER ASSEMBLY**

OK ▶ **END**

cardiagn.com

Last Modified: 3-10-2010	6.4 C	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM0000020NF01NX
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION SYSTEM: 62-43: CD-ROM Abnormal (2010 Corolla)		

DTC	**62-43**	**CD-ROM Abnormal**

DESCRIPTION

DTC NO.	DTC DETECTION CONDITION	TROUBLE AREA
62-43	CD-ROM operation is abnormal.	• CD • Navigation receiver assembly

INSPECTION PROCEDURE

HINT:

After the inspection is completed, clear the DTCs.

PROCEDURE

1.	**CHECK IF A PROPER CD IS INSERTED**

(a) Make sure that the CD is a audio CD or a CD with an MP3 file, and that it is not deformed, flawed, stained, deteriorated, or otherwise defective.

OK:

The CD is normal.

HINT:

- Translucent or uniquely-shaped CDs cannot be played.
- For details on playable CDs, refer to the Owner's Manual.

NG ▶ **DISC IS FAULTY**

OK ▼

cardiagn.com

2.	**CHANGE DISC**

(a) Replace the disc with another and recheck.

(1) Replace the disc with a known good one.

(2) Clear the DTCs [INFO] .

(3) Recheck for DTCs and check if the same trouble occurs again.

OK:

The same trouble does not occur.

NG ▶ **REPLACE NAVIGATION RECEIVER ASSEMBLY**

OK ▶ **END**

cardiagn.com

Last Modified: 3-10-2010	6.4 C	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM0000020NA01NX
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION SYSTEM: 62-44,62-48,62-50: CD Abnormal (2010 Corolla)		

DTC	**62-44**	**CD Abnormal**

DTC	**62-48**	**Excess Current**

DTC	**62-50**	**Tray Insertion / Ejection Error**

DESCRIPTION

DTC NO.	DTC DETECTION CONDITION	TROUBLE AREA
62-44	Operation error in the CD mechanism	Navigation receiver assembly
62-48	Excess current is present in the CD player.	
62-50	Malfunction in insertion/ejection system	

INSPECTION PROCEDURE

HINT:

After the inspection is completed, clear the DTCs.

PROCEDURE

1.	**CLEAR DTC**

(a) Clear the DTCs INFO.

NEXT

cardiagn.com

2.	**RECHECK FOR DTC**

(a) Recheck for DTCs and check if the same trouble occurs again.

HINT:

If DTCs are detected frequently, replace the navigation receiver assembly.

OK:
The same trouble does not occur.

NG ▶ **REPLACE NAVIGATION RECEIVER ASSEMBLY**

OK ▶ **END**

cardiagn.com

Last Modified: 3-10-2010	6.4 C	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM0000020EU028X
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION SYSTEM: 62-45,62-51,62-52: Eject Error (2010 Corolla)		

DTC	**62-45**	**Eject Error**

DTC	**62-51**	**Elevator Error**

DTC	**62-52**	**Clamp Error**

DESCRIPTION

DTC NO.	DTC DETECTING CONDITION	TROUBLE AREA
62-45	Disc cannot be ejected.	Navigation receiver assembly
62-51	A mechanical error occurs during elevator operation.	
62-52	An error occurs in CD player clamp.	

INSPECTION PROCEDURE

HINT:

After the inspection is completed, clear the DTCs.

PROCEDURE

1.	**CHECK NAVIGATION RECEIVER ASSEMBLY**

(a) Check if a disc can be changed, inserted or ejected normally.

OK:

The disc can be changed, inserted or ejected normally.

NG ▶ **REPLACE NAVIGATION RECEIVER ASSEMBLY**

OK ▶ **END**

cardiagn.com

cardiagn.com

Last Modified: 3-10-2010	6.4 C	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM0000020S102CX
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION SYSTEM: 62-46: Scratched / Reversed Disc (2010 Corolla)		

DTC	**62-46**	**Scratched / Reversed Disc**

DESCRIPTION

DTC NO.	DTC DETECTING CONDITION	TROUBLE AREA
62-46	Scratches or dirt is found on CD surface or CD is inserted upside down.	• CD • Navigation receiver assembly

INSPECTION PROCEDURE

HINT:

After the inspection is completed, clear the DTCs.

PROCEDURE

1.	**CHECK THAT DISC IS INSERTED PROPERLY**

(a) Check whether or not the disc is inserted upside down.

OK:

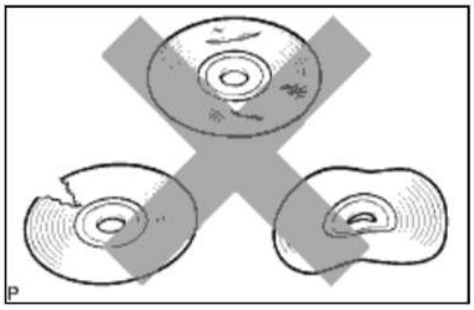
The disc is properly inserted.

NG ▶ **REINSERT DISC**

OK ▼

2.	**CHECK DISC**

cardiagn.com



(a) Check that the disc is not deformed or cracked.

OK:

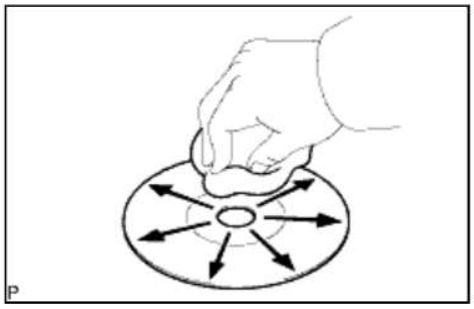
No deformation or cracks on the disc.

NG ▶ **CHANGE DISC**

OK

▼

3.	DISC CLEANING



(a) Disc cleaning

(1) If dirt is on the disc surface, wipe it clean with a soft cloth from the inside to the outside in a radial direction.

NOTICE:

Do not use a conventional record cleaner or anti-static preservative.

NEXT

▼

4.	CLEAR DTC

(a) Clear the DTCs INFO .

NEXT

▼

cardiagn.com

5.	RECHECK FOR DTC

(a) Recheck for DTCs and check if the same trouble occurs again.

OK:
The same trouble does not occur.

NG ▶ REPLACE DISC WITH ANOTHER AND RECHECK

OK ▶ END

6.	REPLACE DISC WITH ANOTHER AND RECHECK

(a) Replace the disc with another and recheck.

(1) Replace the disc with another normal one.

(2) Clear the DTCs [INFO].

(3) Recheck for DTCs and check if the same trouble occurs again.

OK:
The same trouble does not occur.

NG ▶ REPLACE NAVIGATION RECEIVER ASSEMBLY

OK ▶ END

cardiagn.com

Last Modified: 3-10-2010	6.4 C	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM0000020NG01KX
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION SYSTEM: 62-47: High Temperature (2010 Corolla)		

DTC	**62-47**	**High Temperature**

DESCRIPTION

DTC NO.	DTC DETECTION CONDITION	TROUBLE AREA
62-47	Sensor detects that CD unit temperature is high (over 80°C (176°F)).	Navigation receiver assembly

INSPECTION PROCEDURE

HINT:

After the inspection is completed, clear the DTCs.

PROCEDURE

1.	**CHECK NAVIGATION RECEIVER ASSEMBLY**

(a) Park the vehicle in a cool place.

(b) Operate the navigation receiver assembly after it has sufficiently cooled down. Check that the malfunction does not recur.

OK:

The malfunction does not recur.

NG ▶ **REPLACE NAVIGATION RECEIVER ASSEMBLY**

OK ▶ **END**

cardiagn.com

Last Modified: 3-10-2010	6.4 C	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM0000020NH01RX
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION SYSTEM: 62-78: DSP Error (2010 Corolla)		

DTC	**62-78**	**DSP Error**

DESCRIPTION

DTC NO.	DTC DETECTION CONDITION	TROUBLE AREA
62-78	An error occurs during the decode process (MP3/WMA).	Navigation receiver assembly

INSPECTION PROCEDURE

HINT:

After the inspection is completed, clear the DTCs.

NOTICE:

- This code may be output even if there is no malfunction.
- If this code is output frequently, replace the navigation receiver assembly.

PROCEDURE

1.	**CLEAR DTC**

(a) Clear the DTCs INFO.

NEXT

2.	**RECHECK FOR DTC**

(a) Recheck for DTCs and check if the same trouble occurs again.

OK:

The same trouble does not occur.

cardiagn.com

NG ▶ REPLACE NAVIGATION RECEIVER ASSEMBLY

OK ▶ END

cardiagn.com

Last Modified: 3-10-2010	6.4 C	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM0000020S2025X
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION SYSTEM: 62-7D-62-7F: Disc cannot be Played (2010 Corolla)		

DTC	**62-7D**	**Disc cannot be Played**

DTC	**62-7E**	**No Playable Files**

DTC	**62-7F**	**Copyright Protection Error**

DESCRIPTION

DTC NO.	DTC DETECTION CONDITION	TROUBLE AREA
62-7D	• An incompatible MP3/WMA file is used. • Although the file has an extension of ".mp3" or ".wma", the header information cannot be read.	• CD • Navigation receiver assembly
62-7E	• A disc with no music data is used. • Playable files are not on the disc (MP3/WMA).	
62-7F	A copy-protected file, which cannot be played, is used.	

INSPECTION PROCEDURE

HINT:

After the inspection is completed, clear the DTCs.

PROCEDURE

1.	**CHANGE DISC**

(a) Insert a disc with a playable file and check if the disc can be played correctly.

HINT:

cardiagn.com

For details on playable files and discs, refer to the Owner's Manual.

OK:
The disc can be played correctly.

NG ▶ **REPLACE NAVIGATION RECEIVER ASSEMBLY**

OK ▶ **END**

cardiagn.com

Last Modified: 3-10-2010	6.4 J	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM000000NL505PX
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION SYSTEM: Noise Occurs (2010 Corolla)		

Noise Occurs

INSPECTION PROCEDURE

PROCEDURE

1.	**NOISE CONDITION**

(a) Check from which direction the noise comes (front left or right, rear left or right).

(1) Check from which direction the noise comes.

OK:

The location of the noise source can be determined.

NG ▶ **CHECK NOISE CONDITIONS**

OK ▼

2.	**CHECK SPEAKERS**

(a) Check the installation conditions of the speaker units that are located near the noise source and that there are no cracks, scratches, deformation, or other malfunctions.

Result:

RESULT	PROCEED TO
A speaker is installed incorrectly	A
Foreign objects are in the speaker	B
A speaker cone paper is broken	C
No malfunction is found	D

cardiagn.com

C ▶ **REPLACE SPEAKER**

B ▶ **REMOVE FOREIGN OBJECT**

A ▶ **REINSTALL SPEAKER**

D ▼

3.	**CHECK NOISE CONDITIONS**

(a) Check the noise condition.

HINT:

The radio has a noise prevention function to reduce noise when listening to the radio. If a loud noise occurs, check whether the ground at the antenna mounting base and the noise prevention unit are installed and wired correctly.

CONDITION UNDER WHICH NOISE OCCURS	NOISE SOURCE
Noise increases when the accelerator pedal is depressed, but stops when the engine is stopped.	Generator
Noise occurs during A/C or heater operation.	Blower motor
Noise occurs when the horn switch is pressed and released or when pressed and held.	Horn
Noise occurs synchronously with the blink of the turn signal.	Flasher
Noise occurs during window washer operation.	Washer
Noise occurs during wiper operation.	Wiper
Noise occurs when the brake pedal is depressed.	Stop light switch
Others	Static electricity

HINT:

- In the chart's left column, find the situation that matches the customer's complaint. Then, in the right column, find the part that is causing the noise. Check the noise filter on or for the part.
- To save time and avoid a misdiagnosis, first make sure that the noise is not coming from outside the vehicle.
- Noise should be removed in descending order of loudness.
- Setting the radio to a frequency where no signal is received may make recognition of the noise

cardiagn.com

problem easier.

OK:

The noise source cannot be determined.

NG ▶ **REPAIR OR REPLACE NOISE SOURCE**

OK ▶ **PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE**



cardiagn.com

Last Modified: 3-10-2010	6.4 J	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM000001WU402FX
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION SYSTEM: Pressing Power Switch does not Turn on System (2010 Corolla)		

Pressing Power Switch does not Turn on System

INSPECTION PROCEDURE

PROCEDURE

1.	**CHECK CABIN**

(a) Check that conditions in the cabin are not likely to cause condensation.

HINT:

This problem occurs when the cabin is humid and the temperature rapidly changes. This condition may produce condensation, resulting in a short circuit.

OK:
Condensation is not likely to occur.

NG ▶ **DRY CABIN AND RECHECK CONDITIONS**

OK ▶ **PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE**

cardiagn.com

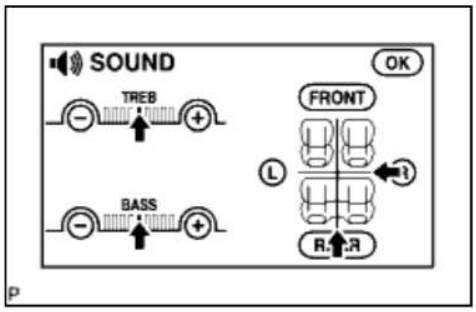
Last Modified: 3-10-2010	6.4 J	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM0000020N801LX
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION SYSTEM: No Sound can be Heard from Speakers (2010 Corolla)		

No Sound can be Heard from Speakers

INSPECTION PROCEDURE

PROCEDURE

1.	**CHECK AUDIO SETTINGS**



(a) Enter the sound adjustment screen by pressing the "SOUND" switch on the AUDIO display.

(b) Set volume, fader, and balance to the initial values and check that sound is normal.

OK:

Audio system returns to normal.

HINT:

Sound quality adjustment items vary depending on the type of the amplifier.

NG ▶ **PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE**

OK ▶ **END**

cardiagn.com

Last Modified: 3-10-2010	6.4 J	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM0000020N501MX
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION SYSTEM: CD cannot be Ejected (2010 Corolla)		

CD cannot be Ejected

INSPECTION PROCEDURE

PROCEDURE

1.	**CHECK OPERATION**

(a) Press the disc eject switch of the radio receiver for 5 seconds or more and check that the CD is ejected.

OK:

The CD is ejected.

NG ▶ **REPLACE NAVIGATION RECEIVER ASSEMBLY**

OK ▼

2.	**REPLACE CD WITH ANOTHER AND RECHECK**

(a) Insert another CD and check if it can be ejected.

OK:

The CD can be ejected.

NG ▶ **REPLACE NAVIGATION RECEIVER ASSEMBLY**

OK ▶ **CD IS FAULTY**

cardiagn.com

Last Modified: 3-10-2010	6.4 J	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM0000020N401PX
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION SYSTEM: CD cannot be Inserted / Played or CD is Ejected Right After Insertion (2010 Corolla)		

CD cannot be Inserted / Played or CD is Ejected Right After Insertion

INSPECTION PROCEDURE

PROCEDURE

1.	**CHECK IF A PROPER CD IS INSERTED**

(a) Make sure that the CD is an audio CD or a CD with an MP3 or WMA file, and that it is not deformed, flawed, stained, burred, or otherwise defective.

OK:

The CD is normal.

HINT:

- Translucent or uniquely-shaped CDs cannot be played.
- Commercial audio CDs can be played.
- CD-DA files on CD-ROMs, CD-Rs, and CD-RWs can be played.
- MP3 and WMA files on CD-ROMs, CD-Rs and CD-RWs can be played.
- For details on playable CDs, refer to the Owner's Manual.

NG ▶ **CD IS FAULTY**

OK ▼

2.	**CHECK THAT CD IS INSERTED PROPERLY**

(a) Check whether or not the CD is inserted upside down.

OK:

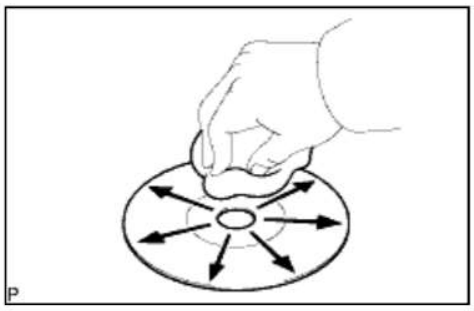
CD is properly inserted.

NG ▶ **SET CD PROPERLY**

cardiagn.com

OK

3.	CHECK CD



(a) Clean the disc by wiping it with a soft cloth from the inside to the outside in a radial direction.

NOTICE:

Do not use a conventional record cleaner or anti-static preservative.

NG ▶ **REPLACE CD WITH ANOTHER AND RECHECK**

OK ▶ **CD WAS DIRTY**

4.	REPLACE CD WITH ANOTHER AND RECHECK

(a) Replace the CD with a known good one and check that the same trouble does not occur.

OK:

The same trouble does not occur.

NG ▶ **REPLACE NAVIGATION RECEIVER ASSEMBLY**

OK ▶ **CD IS FAULTY**

cardiagn.com

Last Modified: 3-10-2010	6.4 J	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM0000012CN04NX
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION SYSTEM: Radio Broadcast cannot be Received or Poor Reception (2010 Corolla)		

Radio Broadcast cannot be Received or Poor Reception

INSPECTION PROCEDURE

PROCEDURE

1.	**CHECK NAVIGATION RECEIVER ASSEMBLY**

(a) Check the radio automatic station search function.

(1) Check the radio automatic station search function by activating it.

OK:

The radio automatic station search function works properly.

NG ▶ **CHECK OPTIONAL COMPONENTS**

OK ▶ **REPLACE NAVIGATION RECEIVER ASSEMBLY**

2.	**CHECK OPTIONAL COMPONENTS**

(a) Check optional components (sun-shade film, telephone antenna, etc.).

(1) Check if any optional components that may decrease reception capacity, such as sunshade film or a telephone antenna, are installed.

OK:

Optional components are installed.

NOTICE:

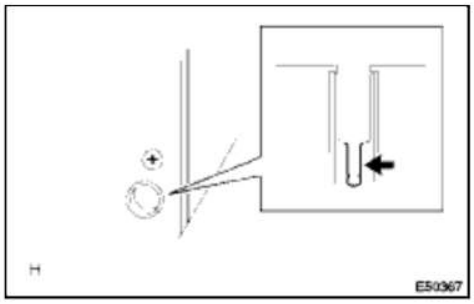
Do not remove any optional components installed by the customer without his or her consent.

NG ▶ **CHECK NAVIGATION RECEIVER ASSEMBLY**

OK ▶ **REMOVE OPTIONAL COMPONENTS AND CHECK AGAIN (SEE NOTICE ABOVE)**

cardiagn.com

3.	CHECK NAVIGATION RECEIVER ASSEMBLY



(a) Preparation for check

(1) Remove the antenna plug from the navigation receiver assembly.

(b) Check for noise

(1) Turn the ignition switch to ACC with the navigation receiver assembly connector connected.

(2) Turn the radio on and tune into AM mode.

(3) Place a screwdriver, thin wire, or other metal object on the navigation receiver assembly antenna jack and check that noise can be heard from the speaker.

OK:

Noise occurs.

NG ▶ **REPLACE NAVIGATION RECEIVER ASSEMBLY**

OK ▼

4.	CHECK GLASS ANTENNA

(a) Check for continuity of the antenna.

HINT:

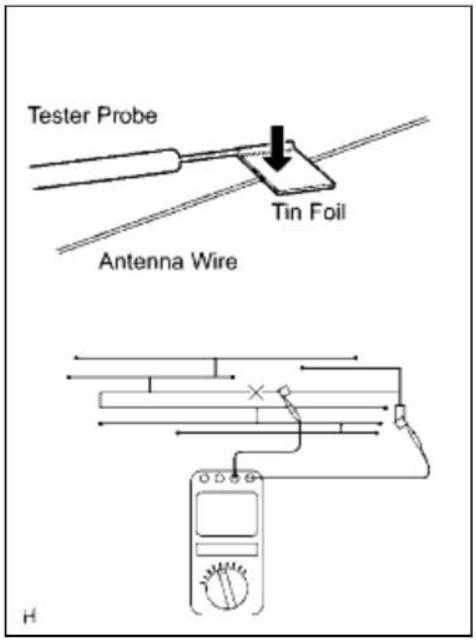
Check for continuity at the center of each antenna wire as shown in the illustration.

NOTICE:

When cleaning the glass, wipe it in the direction of the wire with a soft dry cloth. Take care not to damage the wire. Do not use detergents or glass cleaners with abrasive ingredients. When measuring resistance, wrap a piece of tin foil around the tip of the negative probe and press the foil against the wire with your finger, as shown in the illustration.

OK:

cardiagn.com



There is continuity in the antenna.

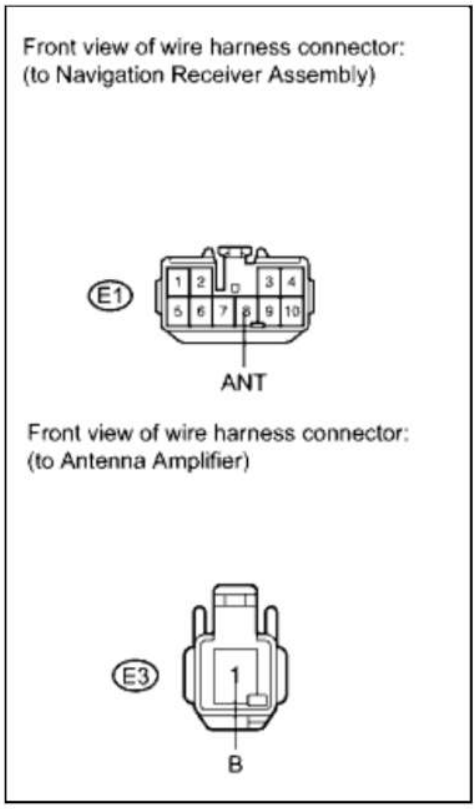
NG ▶ **REPAIR GLASS ANTENNA**

OK ▼

5.	**CHECK HARNESS AND CONNECTOR (NAVIGATION RECEIVER ASSEMBLY - ANTENNA AMPLIFIER)**

(a) Disconnect navigation receiver assembly connector.

cardiagn.com



(b) Disconnect antenna amplifier connector.

(c) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
E1-8 (ANT) - E3-1 (B)	Always	Below 1 Ω
E1-8 (ANT) - Body ground	Always	10 kΩ or higher

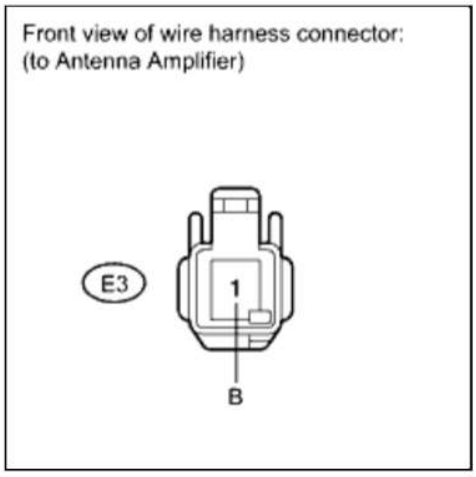
NG ▶ **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK ▼

6.	**INSPECT NAVIGATION RECEIVER ASSEMBLY**

(a) Reconnect navigation receiver assembly connector.

cardiagn.com



(b) Measure the voltage according to the value(s) in the table below.

Standard Voltage:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
E3-1 (B) - Body ground	Ignition switch ON Radio switch ON	11 to 14 V

NG ▶ **REPLACE NAVIGATION RECEIVER ASSEMBLY**

OK ▼

7.	**CHECK ANTENNA CORD**

(a) Remove the antenna plug of the navigation receiver assembly and antenna.

(b) Measure the resistance between the antenna and navigation receiver assembly to check for an open circuit in the antenna cord.

Standard Resistance:
Below 1 Ω

(c) Measure the resistance between the antenna cord and body ground to check for a short circuit in the antenna cord.

Standard Resistance:
10 kΩ or higher

NG ▶ **REPLACE ANTENNA CORD**

cardiagn.com

OK

8.	**REPLACE ANTENNA AMPLIFIER**

(a) Replace the antenna amplifier and check if radio broadcasts can be received normally INFO .

OK:

Radio broadcasts can be received.

NG ▶ **REPLACE NAVIGATION RECEIVER ASSEMBLY**

OK ▶ **NORMAL OPERATION**

cardiagn.com

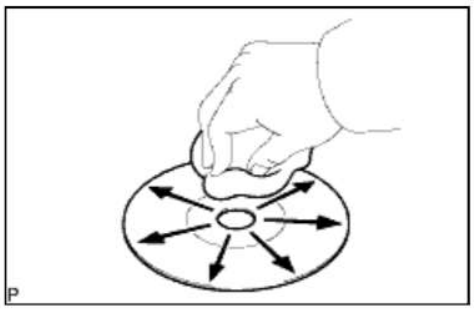
Last Modified: 3-10-2010	6.4 J	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM0000020N301PX
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION SYSTEM: CD Sound Skips (2010 Corolla)		

CD Sound Skips

INSPECTION PROCEDURE

PROCEDURE

1.	**CHECK CD**



(a) Check the CD.

OK:

The CD is clean.

HINT:

If dirt is on the CD surface, wipe it clean with a soft cloth from the inside to the outside in a radial direction.

NOTICE:

Do not use a conventional record cleaner or anti-static preservative.

NG ▶ **CLEAN CD**

OK ▼

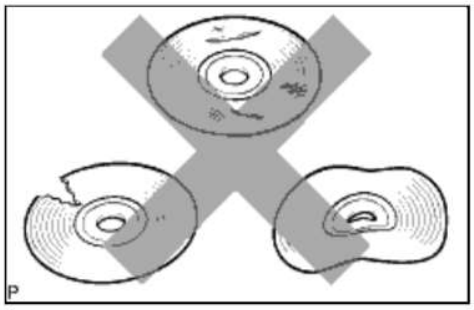
2.	**CHECK CD**

(a) Check that the CD is not deformed or cracked.

OK:

No deformation or cracks on the CD.

cardiagn.com



NG ▶ CD IS FAULTY

OK ▼

3.	CHECK OPERATION OF ANOTHER CD

(a) Check using another CD.

(1) Check if the problem recurs using another CD.

OK:
The problem does not occur.

NG ▶ CHECK NAVIGATION RECEIVER ASSEMBLY

OK ▶ CD IS FAULTY

4.	CHECK NAVIGATION RECEIVER ASSEMBLY

(a) Check the navigation receiver assembly installation condition.

(1) Check that the navigation receiver assembly is properly installed.

OK:
The navigation receiver assembly is properly installed.

NG ▶ REINSTALL NAVIGATION RECEIVER ASSEMBLY

OK ▶ REPLACE NAVIGATION RECEIVER ASSEMBLY

cardiagn.com

Last Modified: 3-10-2010	6.4 J	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM000000PNJ031X
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION SYSTEM: Illumination for Panel Switch does not Come on with Tail Switch ON (2010 Corolla)		

Illumination for Panel Switch does not Come on with Tail Switch ON

INSPECTION PROCEDURE

PROCEDURE

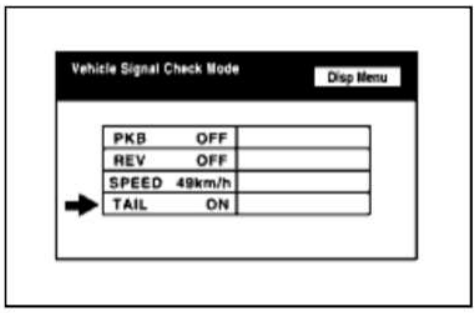
1.	**CHECK VEHICLE SIGNAL (DISPLAY CHECK MODE)**

(a) Enter the "Display Check" mode (Vehicle Signal Check Mode) INFO .

(b) Check that the display changes between ON and OFF according to the light control switch operation.

OK:

LIGHT CONTROL SWITCH	DISPLAY
TAIL or ON	ON
OFF	OFF



HINT:

This display is updated once per second. As a result, it is normal for the display to lag behind the actual switch operation.

NG ▶ **PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE**

OK ▶ **REPLACE NAVIGATION**

cardiagn.com

RECEIVER ASSEMBLY



cardiagn.com

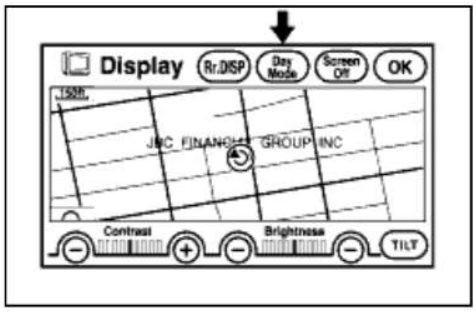
Last Modified: 3-10-2010	6.4 J	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM000000PNK036X
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION SYSTEM: Display does not Dim when Light Control Switch is Turned ON (2010 Corolla)		

Display does not Dim when Light Control Switch is Turned ON

INSPECTION PROCEDURE

PROCEDURE

1.	**CHECK IMAGE QUALITY SETTING**



(a) Enter the display adjustment screen by pressing the "DISP" switch.

(b) Turn the light control switch to the TAIL position.

(c) Check if "DAY MODE" on the display adjustment is ON.

OK:
"DAY MODE" is ON.

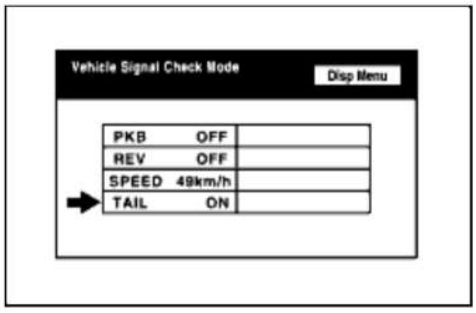
NG ▶ **CHECK VEHICLE SIGNAL (DISPLAY CHECK MODE)**

OK ▶ **TURN "DAY MODE" SETTING OFF**

2.	**CHECK VEHICLE SIGNAL (DISPLAY CHECK MODE)**

(a) Enter the "Display Check" mode (Vehicle Signal Check) INFO .

cardiagn.com



(b) Check that the display changes between ON and OFF according to the light control switch operation.

OK:

LIGHT CONTROL SWITCH	DISPLAY
TAIL or ON	ON
OFF	OFF

HINT:

The display is updated once per second. It is normal for the display to lag behind the actual switch operation.

NG ▶ **PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE**

OK ▶ **REPLACE NAVIGATION RECEIVER ASSEMBLY**

cardiagn.com

Last Modified: 3-10-2010	6.4 J	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM000000PN8037X
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION SYSTEM: Panel Switches do not Function (2010 Corolla)		

Panel Switches do not Function

INSPECTION PROCEDURE

PROCEDURE

1.	**CHECK PANEL SWITCH**

(a) Check for foreign matter around the switches that might prevent operation.

OK:

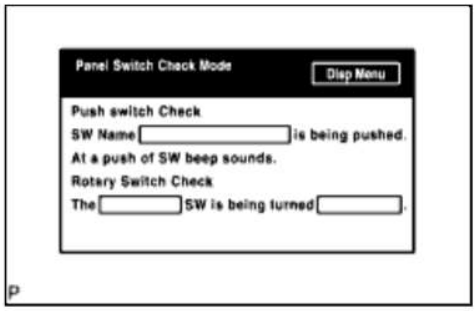
No foreign matter is found.

NG ▶ **REMOVE ANY FOREIGN MATTER FOUND**

OK ▼

2.	**CHECK PANEL SWITCH (DISPLAY CHECK MODE)**

(a) Enter the "Display Check" mode (Panel Switch Check) INFO .



(b) Operate the abnormal switch and check if the switch name and status are correctly displayed.

OK:

The switch name and status are correctly displayed as operated.

NG ▶ **PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN**

cardiagn.com

PROBLEM SYMPTOMS TABLE

OK ▶ REPLACE NAVIGATION RECEIVER ASSEMBLY



cardiagn.com

Last Modified: 3-10-2010	6.4 J	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM000000PNL031X
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION SYSTEM: Touch Panel Switch does not Function (2010 Corolla)		

Touch Panel Switch does not Function

INSPECTION PROCEDURE

PROCEDURE

1.	**CHECK TOUCH PANEL**

(a) Check for foreign matter on the display.

OK:

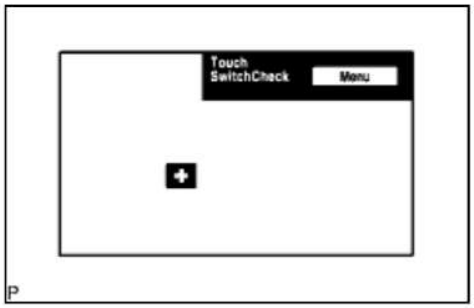
The display is clean.

NG ▶ **CLEAN DISPLAY AND RECHECK TOUCH PANEL**

OK
▼

2.	**CHECK TOUCH SWITCH (DISPLAY CHECK MODE)**

(a) Enter the "Display Check" mode (Touch Switch Check) INFO .



(b) Touch the display in the area where the switch malfunction occurs.

OK:

A "+" mark appears at the touched position.

NG ▶ **PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM**

cardiagn.com

SYMPTOMS TABLE

OK ▶ REPLACE NAVIGATION RECEIVER ASSEMBLY



cardiagn.com

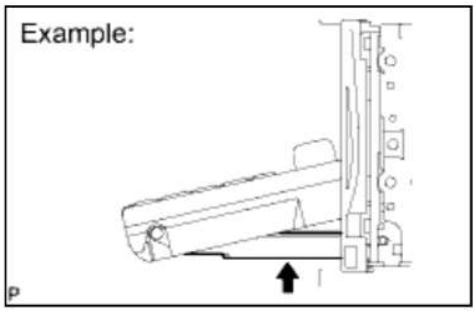
Last Modified: 3-10-2010	6.4 J	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM0000020N701WX
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION SYSTEM: Display Panel does not Open, Tilt or Tilts Improperly (2010 Corolla)		

Display Panel does not Open, Tilt or Tilts Improperly

INSPECTION PROCEDURE

PROCEDURE

1.	**CHECK NAVIGATION RECEIVER ASSEMBLY**



(a) Check for foreign matter or obstructions caught in the moving parts of the panel.

OK:

No obstruction or foreign matter found.

NG ▶ **REMOVE ANY OBSTRUCTION OR FOREIGN MATTER FOUND**

OK ▼

2.	**CHECK OPERATION**

(a) Check if the navigation and audio systems function properly.

OK:

Navigation and audio systems function properly.

NG ▶ **PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE**

OK ▶ **REPLACE NAVIGATION RECEIVER ASSEMBLY**

cardiagn.com

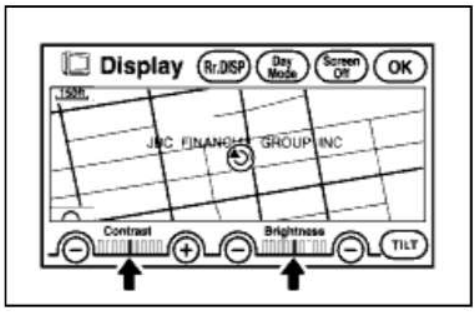
Last Modified: 3-10-2010	6.4 J	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM000000POJ04IX
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION SYSTEM: Screen Flicker or Color Distortion (2010 Corolla)		

Screen Flicker or Color Distortion

INSPECTION PROCEDURE

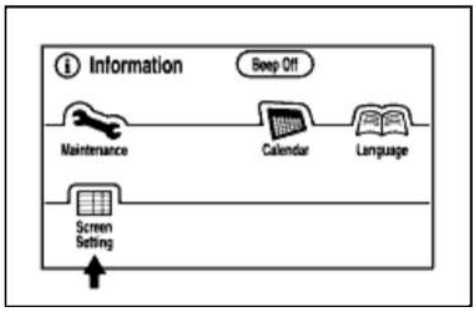
PROCEDURE

1.	**CHECK DISPLAY SETTING**



(a) Enter the display adjustment screen by pressing the "DISPLAY" switch.

(b) Reset display settings (contrast, brightness) and check that the screen appears normal.



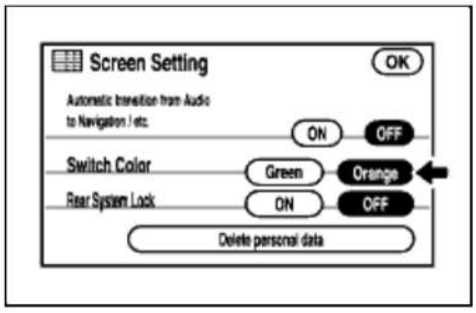
(c) Press the "INFO" switch and then select "Screen Setting."

(d) Set "Switch Color" to "Orange" (initial setting) and check if the display returns to normal.

OK:

The display returns to normal.

cardiagn.com



NG ▶ CHECK CABIN

OK ▶ END

2.	CHECK CABIN

(a) Check that the cabin temperature is higher than -20°C (-4°F).

OK:

The cabin temperature is higher than -20°C (-4°F).

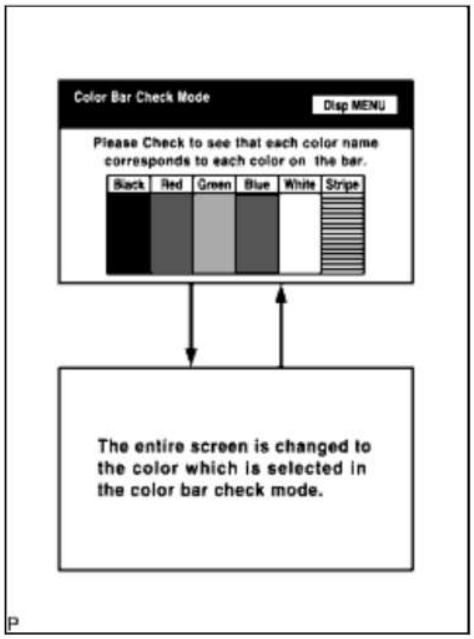
NG ▶ HEAT CABIN AND RECHECK TEMPERATURE

OK ▼

3.	CHECK COLOR BAR (DISPLAY CHECK MODE)

(a) Enter the "Display Check" mode (Color Bar Check) INFO .

cardiagn.com



(b) Check that the color bars match the displayed names.

OK:

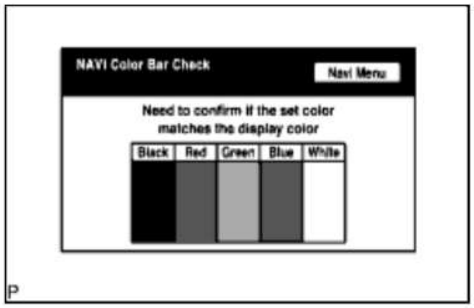
Color bars match the displayed names.

NG ▶ REPLACE NAVIGATION RECEIVER ASSEMBLY

OK ▼

4.	CHECK NAVI COLOR BAR (NAVIGATION CHECK MODE)

(a) Enter the "Navigation Check" mode (NAVI Color Bar Check) INFO .



(b) Check that the color bars match the displayed names.

OK:

Color bars match the displayed names.

NG ▶ REPLACE NAVIGATION RECEIVER ASSEMBLY

OK ▶ PROCEED TO

cardiagn.com

NEXT
CIRCUIT
INSPECTION
SHOWN IN
PROBLEM
SYMPTOMS
TABLE



cardiagn.com

Last Modified: 3-10-2010	6.4 J	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM0000020N901MX
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION SYSTEM: Poor Sound Quality in All Modes (Low Volume) (2010 Corolla)		

Poor Sound Quality in All Modes (Low Volume)

INSPECTION PROCEDURE

PROCEDURE

1.	**CHECK AUDIO SETTINGS**

(a) Set "BASS" and "TREB" to the initial values and check that sound is normal.

OK:

Malfunction disappears.

NG ▶ **COMPARE WITH ANOTHER VEHICLE OF SAME MODEL**

OK ▶ **END**

2.	**COMPARE WITH ANOTHER VEHICLE OF SAME MODEL**

(a) Compare with another vehicle of the same model.

(1) Compare with another vehicle of the same model which does not have trouble to see if there is any difference in the sound quality.

OK:

No difference is found.

NG ▶ **PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE**

OK ▶ **END**

cardiagn.com

Last Modified: 3-10-2010	6.4 J	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM000000PN703ZX
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION SYSTEM: Map Disc cannot be Inserted (2010 Corolla)		

Map Disc cannot be Inserted

INSPECTION PROCEDURE

PROCEDURE

1.	**CHECK NAVIGATION RECEIVER ASSEMBLY**

(a) Check if a disc is inserted into the MAP disc slot.

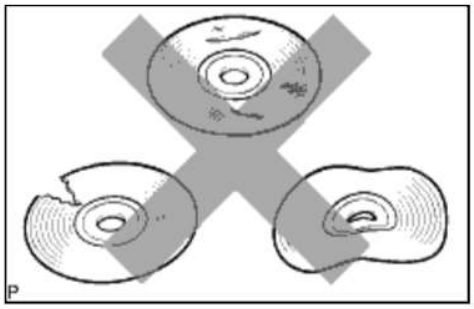
(1) Check if "DISC IN" comes on.

OK:
"DISC IN" comes on.

NG ▶ **EJECT DISC**

OK ▼

2.	**CHECK MAP DISC**



(a) Check that the map disc is not deformed or cracked.

OK:
No deformations or cracks on the map disc.

NG ▶ **REPLACE MAP DISC**

OK ▶ **PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN**

cardiagn.com

PROBLEM SYMPTOMS TABLE



cardiagn.com

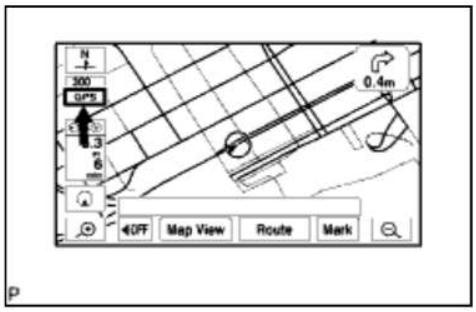
Last Modified: 3-10-2010	6.4 J	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM000000POE04EX
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION SYSTEM: Vehicle Position Mark Deviates Greatly (2010 Corolla)		

Vehicle Position Mark Deviates Greatly

INSPECTION PROCEDURE

PROCEDURE

1.	**CHECK GPS MARK**



(a) Check that the GPS mark is displayed.

OK:

GPS mark is displayed.

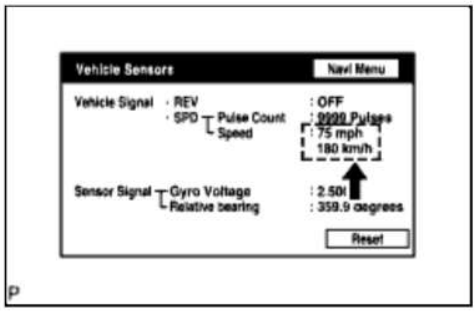
NG ▶ **PROCEED TO "GPS MARK IS NOT DISPLAYED" IN PROBLEM SYMPTOMS TABLE**

OK ▼

2.	**CHECK VEHICLE SENSOR (NAVIGATION CHECK MODE)**

(a) Enter the "Navigation Check" mode (Vehicle Sensors) INFO .

cardiagn.com



(b) While driving the vehicle, compare the "Speed" indicator to the reading on the speedometer. Check that these readings are almost equal.

OK:

The readings are almost equal.

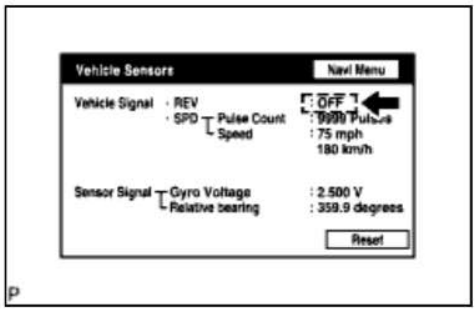
NG ▶ **PROCEED TO "SPEED SIGNAL DOES NOT CHANGE IN NAVIGATION CHECK MODE" IN PROBLEM SYMPTOMS TABLE**

OK ▼

3.	CHECK VEHICLE SENSOR (NAVIGATION CHECK MODE)

(a) Check that the display changes between ON and OFF according to the shift lever operation.

OK:



SHIFT LEVER POSITION	DISPLAY
Except Reverse	OFF
Reverse	ON

HINT:

The display is updated once per second. It is normal for the display to lag behind the actual switch operation.

NG ▶ **PROCEED TO "REVERSE SIGNAL DOES NOT CHANGE IN NAVIGATION CHECK MODE" IN PROBLEM SYMPTOMS TABLE**

OK ▶ **PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE**

cardiagn.com

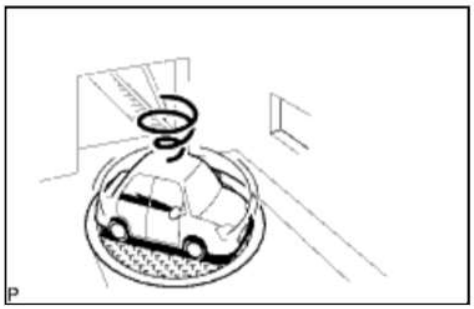
Last Modified: 3-10-2010	6.4 J	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM000000POD02ZX
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION SYSTEM: Cursor or Map Rotates when Vehicle Stopped (2010 Corolla)		

Cursor or Map Rotates when Vehicle Stopped

INSPECTION PROCEDURE

PROCEDURE

1.	**CHECK CONDITION**



(a) Check with the customer if the vehicle has been turned by a turntable.

OK:

Vehicle has not been turned by turntable.

HINT:

If the vehicle is turned on a turntable with the ignition switch ON, the system may store the angular velocity. As a result, the vehicle position cursor may deviate.

NG ▶ **TURN IGNITION SWITCH TO ON WHEN VEHICLE IS COMPLETELY STOPPED**

OK ▶ **PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE**

cardiagn.com

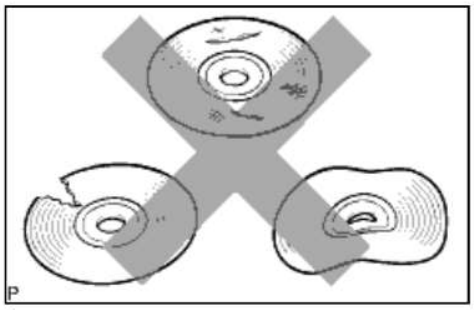
Last Modified: 3-10-2010	6.4 J	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM000000POC04CX
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION SYSTEM: Vehicle Position Mark is not Updated (2010 Corolla)		

Vehicle Position Mark is not Updated

INSPECTION PROCEDURE

PROCEDURE

1.	**CHECK MAP DISC**



(a) Check that the map disc is not deformed or cracked.

OK:

No deformations or cracks on the map disc.

NG ▶ **REPLACE MAP DISC**

OK ▼

2.	**CHECK NAVIGATION DISPLAY**

(a) Check if touch scrolling can be performed on the map display.

OK:

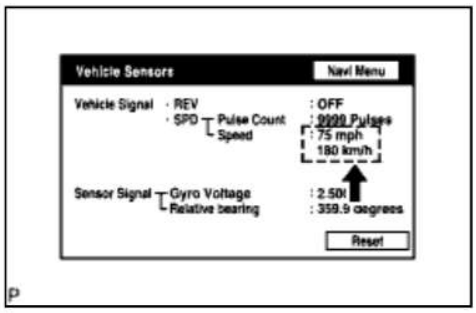
Touch scrolling can be performed.

NG ▶ **PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE**

cardiagn.com

OK

3.	CHECK VEHICLE SENSOR (NAVIGATION CHECK MODE)



(a) Enter the "Navigation Check" mode (Vehicle Sensors) INFO .

(b) While driving the vehicle, compare the "Speed" indicator to the reading on the speedometer. Check if these readings are almost equal.

OK:

The readings are almost equal.

NG ▶ **PROCEED TO "SPEED SIGNAL DOES NOT CHANGE IN NAVIGATION CHECK MODE" IN PROBLEM SYMPTOMS TABLE**

OK ▶ **PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE**

cardiagn.com

Last Modified: 3-10-2010	6.4 J	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM000000POF045X
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION SYSTEM: Current Position Display does not Appear (2010 Corolla)		

Current Position Display does not Appear

INSPECTION PROCEDURE

PROCEDURE

1.	**CHECK NAVIGATION RECEIVER ASSEMBLY**

(a) Check if a map disc is inserted into the map disc slot.

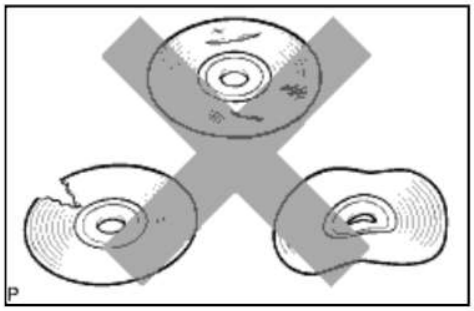
OK:

A map disc is inserted.

NG ▶ **INSERT MAP DISC IN MAP SIDE SLOT**

OK ▼

2.	**CHECK MAP DISC**



(a) Check that the map disc is not deformed or cracked.

OK:

No deformations or cracks on the map disc.

NG ▶ **REPLACE MAP DISC**

OK ▶ **PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE**

cardiagn.com

Last Modified: 3-10-2010	6.4 J	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM000000PN604FX
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION SYSTEM: GPS Mark is not Displayed (2010 Corolla)		

GPS Mark is not Displayed

INSPECTION PROCEDURE

PROCEDURE

1.	**CHECK CABIN**

(a) Check the cabin for any object that might interrupt radio reception on the instrument panel. If such an object exists, remove it and check if the GPS mark reappears.

HINT:

The GPS uses extremely faint radio waves originating from satellites. If the signal is interrupted by obstructions or other radio waves, the GPS may not be able to properly receive the signal.

OK:
The mark appears.

NG ▶ **CHECK SURROUNDINGS**

OK ▶ **NORMAL OPERATION**

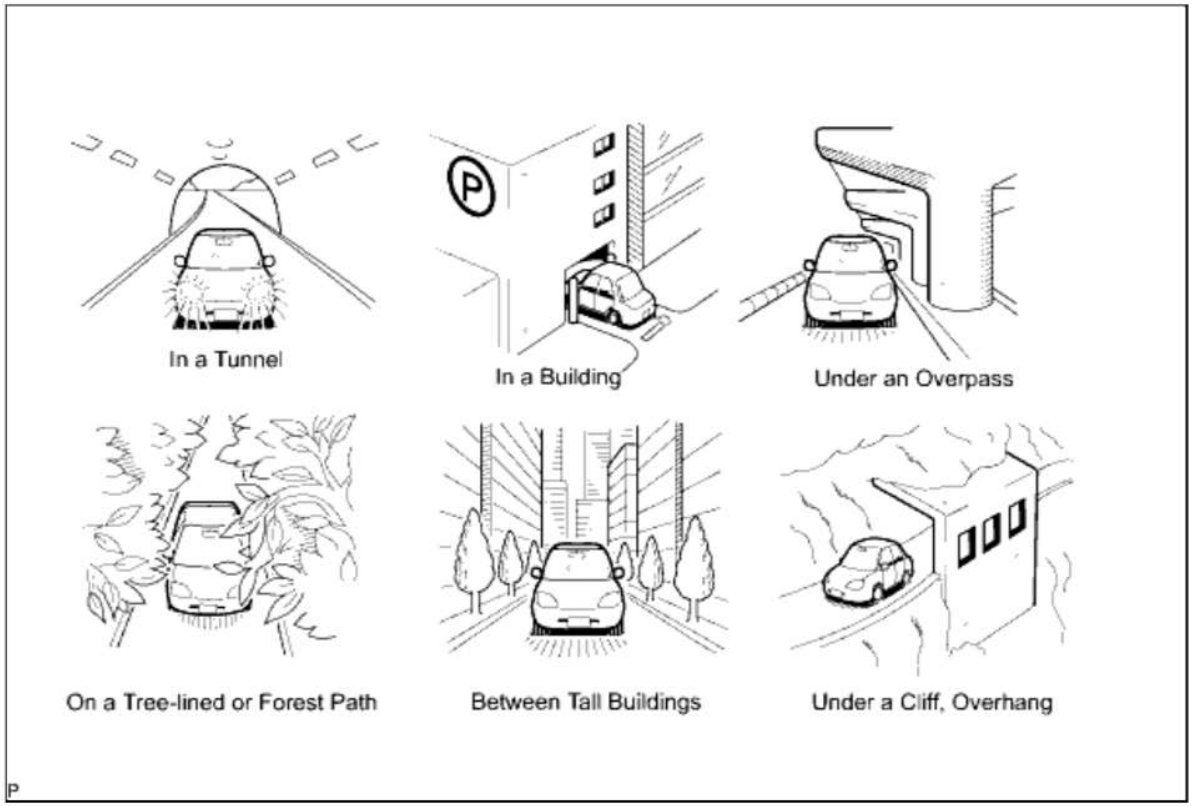
2.	**CHECK SURROUNDINGS**

(a) Check if the vehicle is in a location where GPS signal reception is poor. If the vehicle is in such a place, move the vehicle and check if the GPS mark reappears.

HINT:

The GPS uses 24 satellites in 6 orbits. At any point in time, 4 satellites should be able to pinpoint your vehicle's location. However, GPS signals may not reach the vehicle due to influence from the surroundings, vehicle direction, and time. For examples, see the illustration.

cardiagn.com



OK:

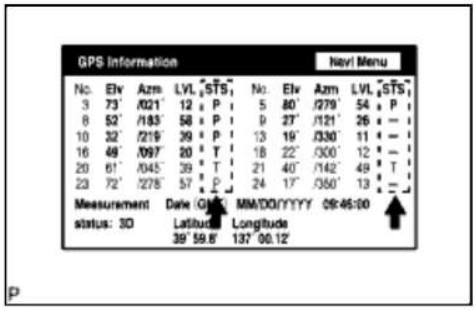
The GPS mark is displayed.

NG ▶ **CHECK GPS INFORMATION (NAVIGATION CHECK MODE)**

OK ▶ **SYSTEM RETURNS TO NORMAL**

3.	CHECK GPS INFORMATION (NAVIGATION CHECK MODE)

(a) Enter the "Navigation Check" mode (GPS Information) INFO .



(b) Check how many of the following codes appear in the "STS" column.

For DENSO Made:

T, P

For AISIN AW Made:

08H, 04H

OK:

At least 3 codes appear.

NG ▶ **PROCEED TO**

cardiagn.com

NEXT
CIRCUIT
INSPECTION
SHOWN IN
PROBLEM
SYMPTOMS
TABLE

OK ▶ REPLACE
NAVIGATION
RECEIVER
ASSEMBLY



cardiagn.com

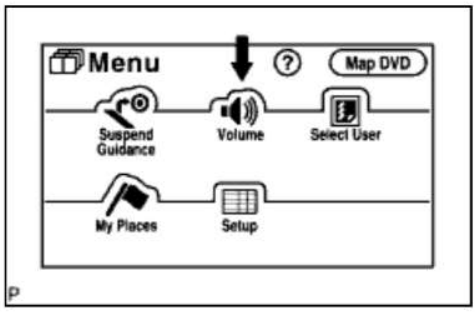
Last Modified: 3-10-2010	6.4 J	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM000000PNM02XX
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION SYSTEM: Voice Guidance does not Function (2010 Corolla)		

Voice Guidance does not Function

INSPECTION PROCEDURE

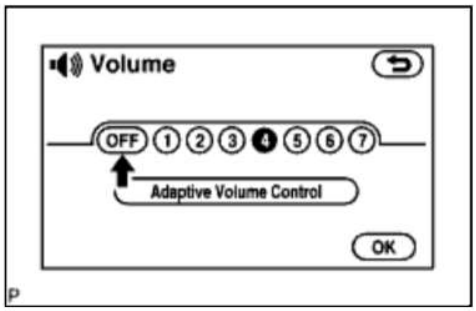
PROCEDURE

1.	**CHECK NAVIGATION SETTING**



(a) Enter the "Menu" screen by pressing the "MENU" switch.

(b) Select "Volume".



(c) Check that "OFF" is not selected.

OK:

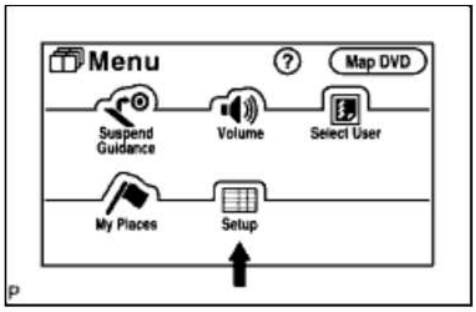
"OFF" is not selected.

NG ▶ **TURN AUTO VOICE GUIDANCE "ON"**

OK ▼

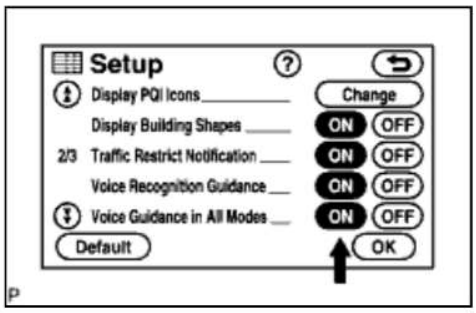
cardiagn.com

2.	CHECK NAVIGATION SETTING



(a) Enter the "Menu" screen by pressing the "MENU" switch.

(b) Select "Set up".



(c) Check that "Voice Guidance in All Modes" is not OFF.

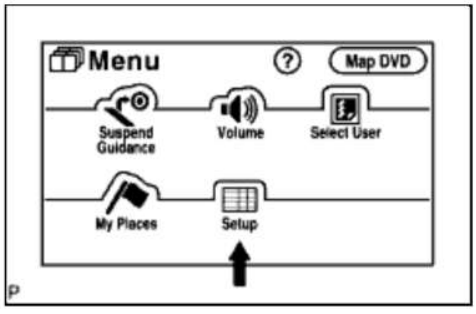
OK:

Voice guidance in all modes is not OFF.

NG ▶ **TURN VOICE GUIDANCE IN ALL MODES "ON"**

OK ▼

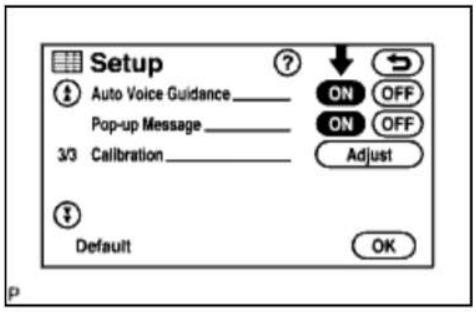
3.	CHECK NAVIGATION SETTING



(a) Enter the "Menu" screen by pressing the "MENU" switch.

(b) Select "Setup".

cardiagn.com



(c) Check that "Auto Voice Guidance" is not OFF.

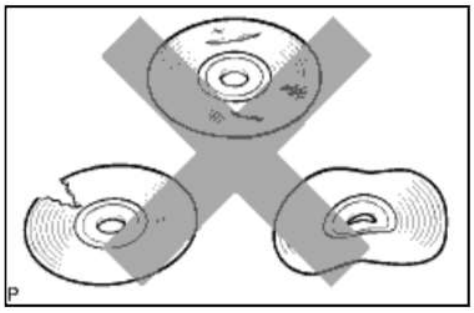
OK:

Auto voice guidance is not OFF.

NG ▶ **REPLACE NAVIGATION RECEIVER ASSEMBLY**

OK ▼

4.	CHECK MAP DISC



(a) Check that the map disc is not deformed or cracked.

OK:

No deformations or cracks on the map disc.

NG ▶ **REPLACE MAP DISC**

OK ▼

5.	CHECK NAVIGATION RECEIVER ASSEMBLY

(a) Check that audio sound can be heard from the driver side speaker.

OK:

Audio sound can be heard.

NG ▶ **PROCEED TO NEXT CIRCUIT INSPECTION SHOWN**

cardiagn.com

IN PROBLEM SYMPTOMS TABLE

OK ▶ REPLACE NAVIGATION RECEIVER ASSEMBLY



cardiagn.com

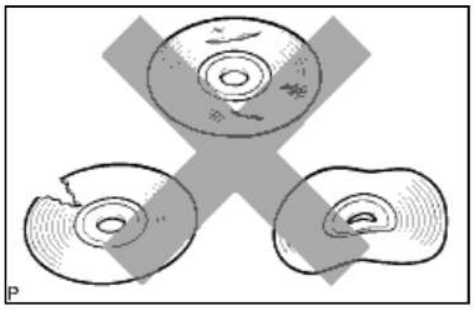
Last Modified: 3-10-2010	6.4 J	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM000000POG048X
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION SYSTEM: Map Display Incomplete (2010 Corolla)		

Map Display Incomplete

INSPECTION PROCEDURE

PROCEDURE

1.	**CHECK MAP DISC**



(a) Check that the map disc is not deformed or cracked.

OK:

No deformations or cracks on the map disc.

NG ▶ **REPLACE MAP DISC**

OK ▼

2.	**CHECK NAVIGATION DISPLAY**

(a) Check that displays other than the navigation display are complete.

OK:

No other incomplete displays are found.

NG ▶ **REPLACE NAVIGATION RECEIVER ASSEMBLY**

OK ▶ **PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE**

cardiagn.com



cardiagn.com

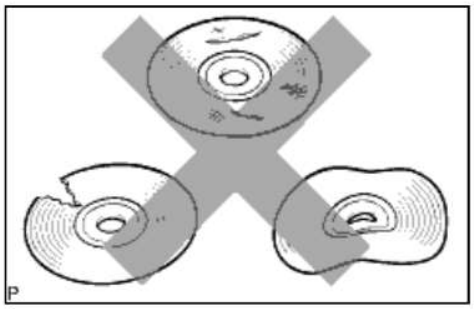
Last Modified: 3-10-2010	6.4 J	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM000000PNN048X
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION SYSTEM: Route cannot be Calculated (2010 Corolla)		

Route cannot be Calculated

INSPECTION PROCEDURE

PROCEDURE

1.	**CHECK MAP DISC**



(a) Check that the map disc is not deformed or cracked.

OK:

No deformations or cracks on the map disc.

NG ▶ **REPLACE MAP DISC**

OK ▼

2.	**SET DESTINATION**

(a) Set another destination and check if the system can calculate the route correctly.

OK:

Route can be correctly calculated.

NG ▶ **PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE**

OK ▶ **NORMAL OPERATION**

cardiagn.com



cardiagn.com

Last Modified: 3-10-2010	6.4 J	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM0000020RR01QX
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION SYSTEM: Black Screen (2010 Corolla)		

Black Screen

INSPECTION PROCEDURE

PROCEDURE

1.	**CHECK DISPLAY SETTING**

(a) Check that the display is not in "Screen OFF" mode.

OK:
The display setting is not in "Screen OFF" mode.

NG ▶ **CHANGE SCREEN TO "SCREEN ON" MODE**

OK ▼

2.	**CHECK IMAGE QUALITY SETTING**

(a) Check that the screen color quality can be set.

OK:
Setting is possible.

NG ▶ **CHECK CABIN**

OK ▶ **PRESS PANEL SWITCH "DISPLAY" AND SET SCREEN COLOR QUALITY TO NORMAL**

3.	**CHECK CABIN**

(a) Check that condensation is not likely to occur in the cabin, and that the temperature is not high or extremely low in the cabin.

cardiagn.com

HINT:

- A humid cabin and a rapid change in temperature may lead to condensation. Condensation in the cabin may cause a short circuit.
- The appropriate cabin temperature is 20 to 30°C (68 to 86°F).

OK:
Condensation is not likely and temperature is not high or extremely low.

NG ▶ **SET CABIN TO APPROPRIATE TEMPERATURE**

OK ▶ **PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE**



cardiagn.com

Last Modified: 3-10-2010	6.4 J	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM000002NNE03FX
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION SYSTEM: Vehicle Speed Signal Circuit between Navigation Receiver Assembly and Combination Meter (2010 Corolla)		

Vehicle Speed Signal Circuit between Navigation Receiver Assembly and Combination Meter

DESCRIPTION

Navigation function:

The navigation receiver assembly receives a vehicle speed signal from the combination meter and information about the GPS antenna, and then adjusts vehicle position.

ASL function:

The circuit is necessary for the ASL (Automatic Sound Levelizer) built into the radio receiver. Speed signals are received from the combination meter and used for the ASL. The ASL function automatically adjusts the sound volume in order to maintain clear audio sound even when vehicle noise increases (as vehicle noise increases, the volume is turned up etc.).

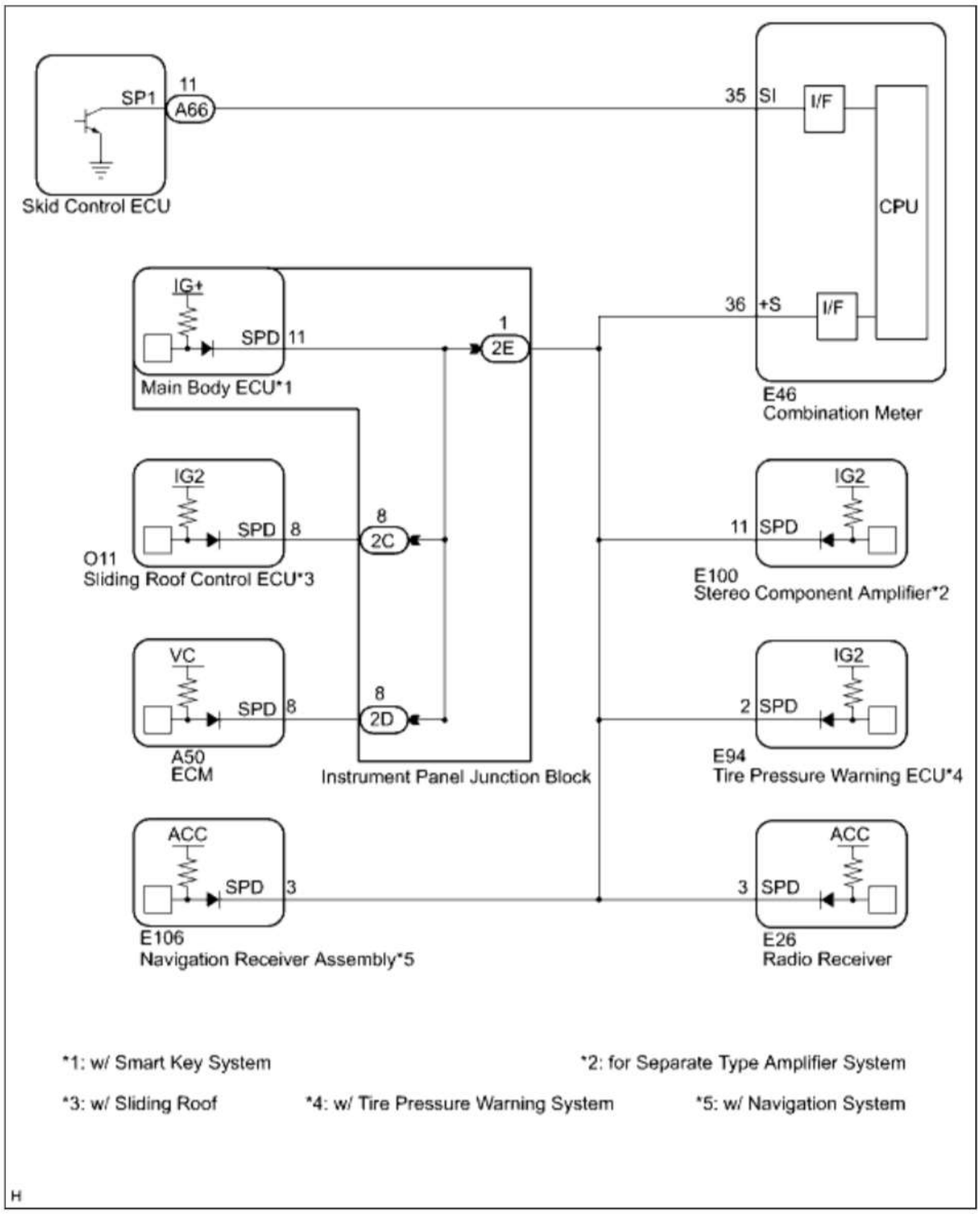
HINT:

- A voltage of 12 V or 5 V is output from each ECU and then input to the combination meter. The signal is changed to a pulse signal at the transistor in the combination meter. Each ECU controls the respective system based on the pulse signal.
- If a short occurs in any of the ECUs or in the wire harness connected to an ECU, all systems in the diagram will not operate normally.

WIRING DIAGRAM

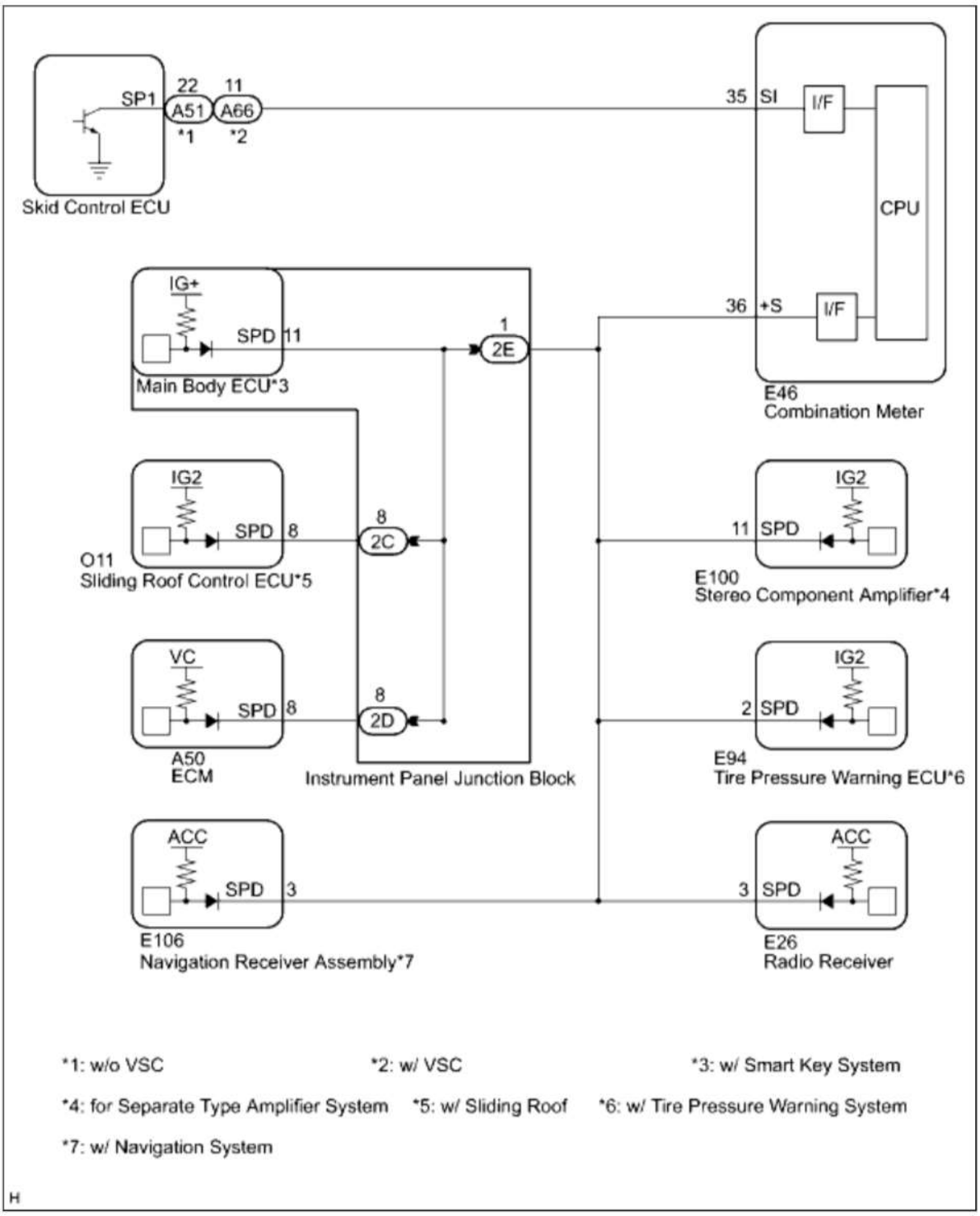
1. except TMC Made 2AZ-FE:

cardiagn.com



2. except TMC Made 2ZR-FE:

cardiagn.com

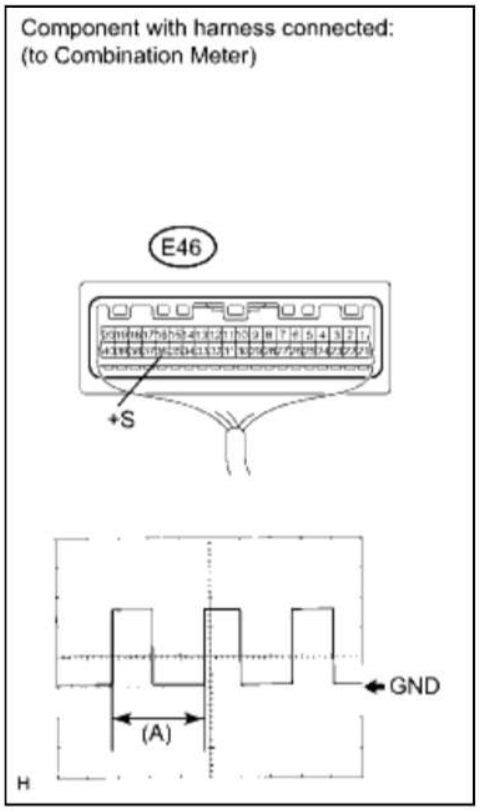


INSPECTION PROCEDURE

PROCEDURE

1.	INSPECT COMBINATION METER (OUTPUT WAVEFORM)

cardiagn.com



(a) Check the output waveform.

(1) Remove the combination meter with the connector still connected.

(2) Connect an oscilloscope to terminal E46-36 (+S) and body ground.

(3) Turn the ignition switch to ON.

(4) Turn a drive wheel slowly.

(5) Check the signal waveform according to the condition(s) in the table below.

ITEM	CONDITION
Tool setting	5 V/DIV., 20 ms./DIV.
Vehicle condition	Driving at approx. 20 km/h (12 mph)

OK:

The waveform is displayed as shown in the illustration.

HINT:

When the system is functioning normally, one wheel revolution generates 4 pulses. As the vehicle speed increases, the width indicated by (A) in the illustration narrows.

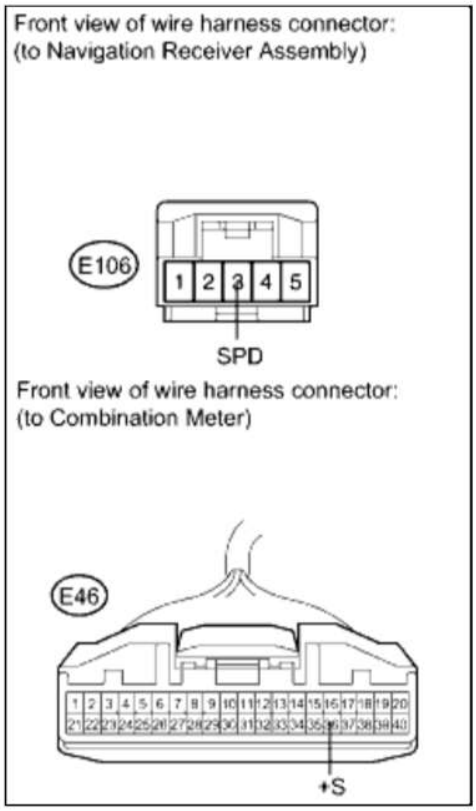
NG ▶ **GO TO METER / GAUGE SYSTEM**

OK ▼

2.	**CHECK HARNESS AND CONNECTOR (NAVIGATION RECEIVER ASSEMBLY - COMBINATION METER)**

(a) Disconnect the navigation receiver assembly connector and combination meter connector.

cardiagn.com



(b) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
E106-3 (SPD) - E46-36 (+S)	Always	Below 1 Ω

NG ▶ **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK ▶ **REPLACE NAVIGATION RECEIVER ASSEMBLY**

cardiagn.com

Last Modified: 3-10-2010	6.4 J	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM0000011FP05EX
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION SYSTEM: Steering Pad Switch Circuit (2010 Corolla)		

Steering Pad Switch Circuit

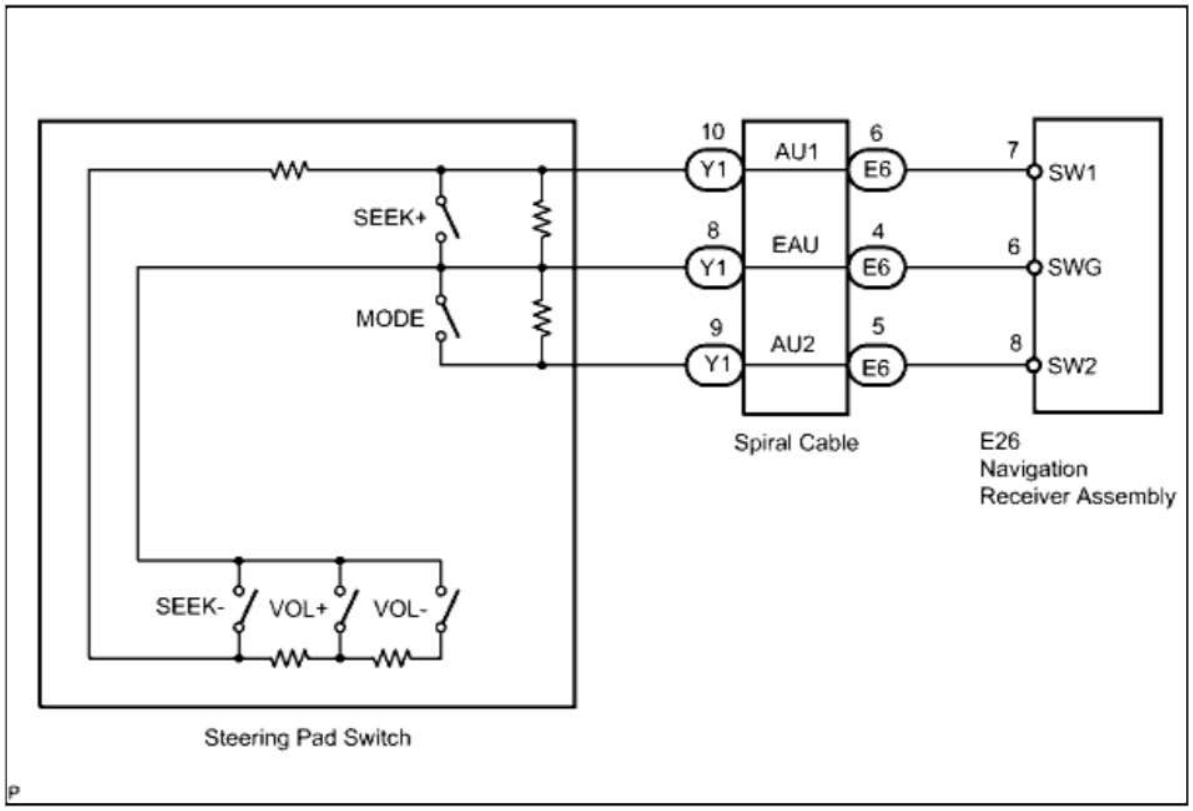
DESCRIPTION

This circuit sends an operation signal from the steering pad switch to the navigation receiver assembly.

If there is an open in the circuit, the navigation system cannot be operated using the steering pad switch.

If there is a short in the circuit, the resulting condition is the same as that when the switch were continuously pressed. Therefore, the navigation receiver assembly cannot be operated using the steering pad switch, and the navigation receiver assembly itself cannot function.

WIRING DIAGRAM



INSPECTION PROCEDURE

NOTICE:

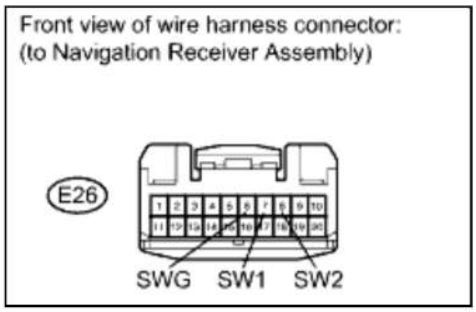
The vehicle is equipped with an SRS (Supplemental Restraint System). Before servicing (including removal or installation of parts), be sure to read the precautionary notice for the Supplemental Restraint

cardiagn.com

System INFO .

PROCEDURE

1.	INSPECT NAVIGATION RECEIVER ASSEMBLY



(a) Disconnect the navigation receiver assembly connector.

(b) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

TESTER CONNECTION	SWITCH CONDITION	SPECIFIED CONDITION
E26-7 (SW1) - E26-6 (SWG)	No switch is pushed	95 to105 kΩ
E26-7 (SW1) - E26-6 (SWG)	SEEK+ switch: pushed	Below 2.5 Ω
E26-7 (SW1) - E26-6 (SWG)	SEEK- switch: pushed	313.5 to 346.5 Ω
E26-7 (SW1) - E26-6 (SWG)	VOL+ switch: pushed	959.5 to 1060.5 Ω
E26-7 (SW1) - E26-6 (SWG)	VOL- switch: pushed	3049.5 to 3370.5 Ω
E26-8 (SW2) - E26-6 (SWG)	No switch is pushed	95 to 105 kΩ
E26-8 (SW2) - E26-6 (SWG)	MODE switch: pushed	Below 2.5 Ω

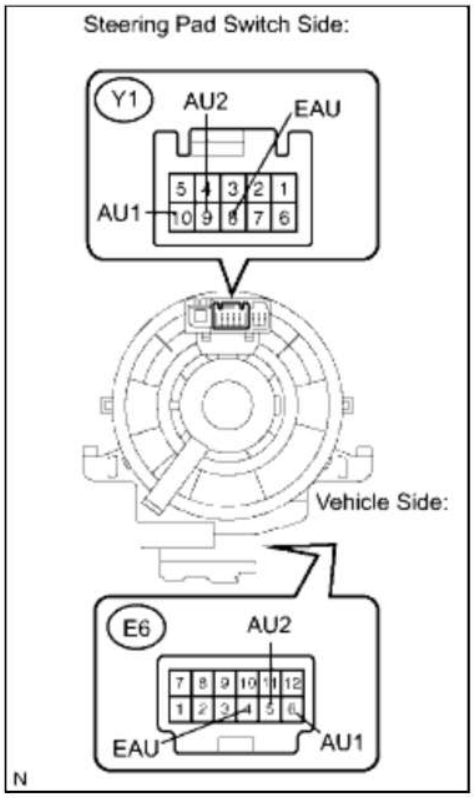
NG ▶ **INSPECT SPIRAL CABLE**

OK ▶ **PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE**

2.	INSPECT SPIRAL CABLE

(a) Disconnect the steering pad switch assembly and spiral cable connectors.

cardiagn.com



(b) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
Y1-8 (EAU) - E6-4 (EAU)	Center	Below 1 Ω
	2.5 rotations to the left	
	2.5 rotations to the right	
Y1-10 (AU1) - E6-6 (AU1)	Center	Below 1 Ω
	2.5 rotations to the left	
	2.5 rotations to the right	
Y1-9 (AU2) - E6-5 (AU2)	Center	Below 1 Ω
	2.5 rotations to the left	
	2.5 rotations to the right	

NOTICE:

The spiral cable is an important part of the SRS airbag system. Incorrect removal or installation of the spiral cable may cause airbag deployment. Be sure to read the page shown in the brackets.

HINT:

- Removal INFO
- Installation INFO

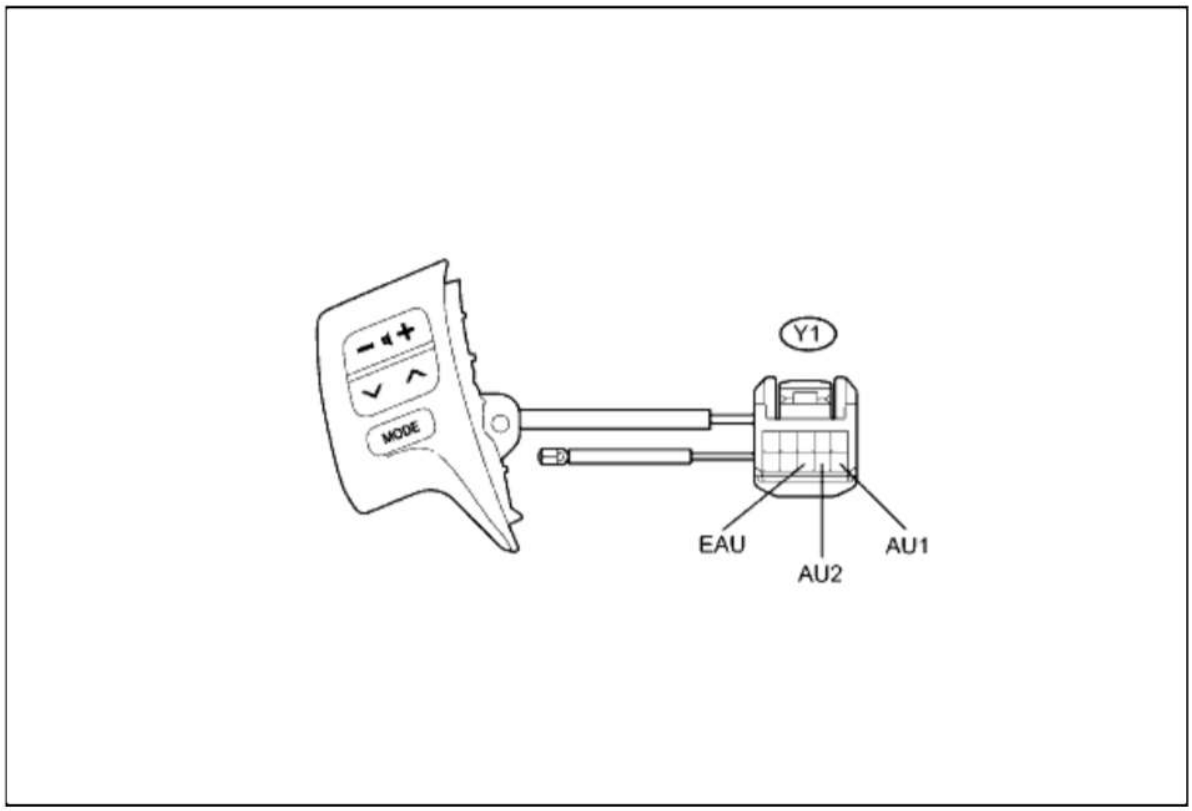
cardiagn.com

NG ▶ REPLACE SPIRAL CABLE

OK ▼

3.	INSPECT STEERING PAD SWITCH ASSEMBLY

(a) Disconnect the steering pad switch assembly connector.



(b) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

TESTER CONNECTION	SWITCH CONDITION	SPECIFIED CONDITION
Y1-10 (AU1) - Y1-8 (EAU)	No switch is pushed	95 to105 kΩ
Y1-10 (AU1) - Y1-8 (EAU)	SEEK+ switch: pushed	Below 2.5 Ω
Y1-10 (AU1) - Y1-8 (EAU)	SEEK- switch: pushed	313.5 to 346.5 Ω
Y1-10 (AU1) - Y1-8 (EAU)	VOL+ switch: pushed	959.5 to 1060.5 Ω

cardiagn.com

TESTER CONNECTION	SWITCH CONDITION	SPECIFIED CONDITION
Y1-10 (AU1) - Y1-8 (EAU)	VOL- switch: pushed	3049.5 to 3370.5 Ω
Y1-9 (AU2) - Y1-8 (EAU)	No switch is pushed	95 to 105 kΩ
Y1-9 (AU2) - Y1-8 (EAU)	MODE switch: pushed	Below 2.5 Ω

NG ▶ **REPLACE STEERING PAD SWITCH ASSEMBLY**

OK ▶ **REPAIR OR REPLACE HARNESS OR CONNECTOR (NAVIGATION RECEIVER ASSEMBLY - SPIRAL CABLE)**

cardiagn.com

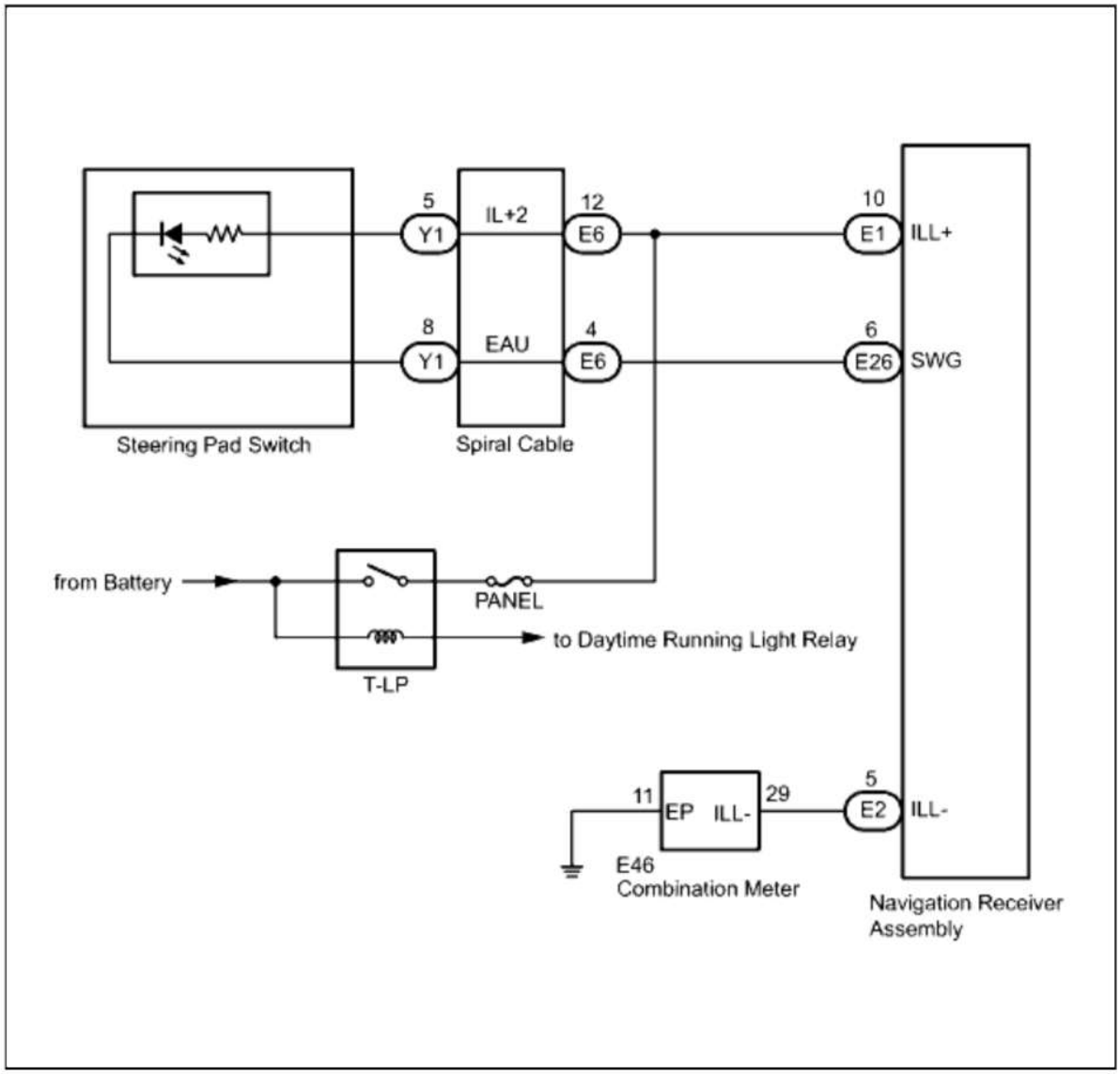
Last Modified: 3-10-2010	6.4 J	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM0000011EZ05NX
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION SYSTEM: Illumination Circuit (2010 Corolla)		

Illumination Circuit

DESCRIPTION

Power is supplied to the navigation receiver assembly and steering pad switch illumination when the light control switch is in the TAIL or HEAD position.

WIRING DIAGRAM



cardiagn.com

INSPECTION PROCEDURE

NOTICE:

The vehicle is equipped with an SRS (Supplemental Restraint System). Before servicing (including removal or installation of parts), be sure to read the precautionary notice for the Supplemental Restraint System INFO .

PROCEDURE

1.	**CHECK ILLUMINATION**

(a) Check if the illumination for the navigation receiver assembly, steering pad switch, glove box or others (hazard switch, transmission control switch, etc.) comes on when the light control switch is turned to the HEAD or TAIL position.

Result:

RESULT	PROCEED TO
Illumination comes on for all components except steering pad switch.	A
Illumination comes on for all components except navigation receiver assembly.	B
No illumination comes on (radio receiver, hazard switch, glove box, etc.).	C
Illumination comes on only for steering pad switch.	D

D ▶ **GO TO METER / GAUGE SYSTEM**

C ▶ **GO TO LIGHTING SYSTEM**

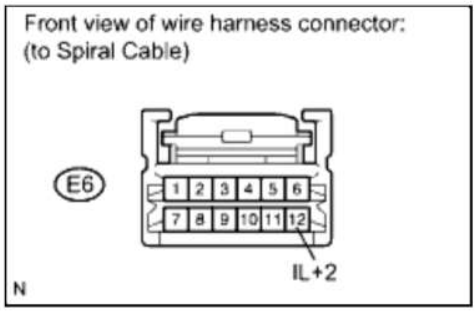
B ▶ **CHECK HARNESS AND CONNECTOR (BATTERY - NAVIGATION RECEIVER ASSEMBLY)**

A ▼

2.	**CHECK HARNESS AND CONNECTOR (BATTERY - SPIRAL CABLE)**

(a) Disconnect the spiral cable connector.

cardiagn.com



(b) Measure the voltage according to the value(s) in the table below.

Standard Voltage:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
E6-12 (IL+2) - Body ground	Light control switch in TAIL or HEAD	11 to 14 V

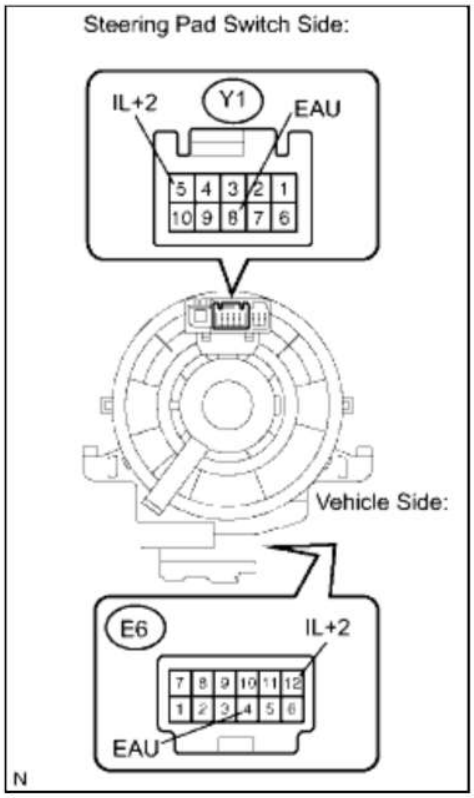
NG ▶ **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK ▼

3.	**INSPECT SPIRAL CABLE**

(a) Disconnect the steering pad switch and spiral cable connectors.

cardiagn.com



(b) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
Y1-8 (EAU) - E6-4 (EAU)	Center	Below 1 Ω
	2.5 rotations to the left	
	2.5 rotations to the right	
Y1-5 (IL+2) - E6-12 (IL+2)	Center	Below 1 Ω
	2.5 rotations to the left	
	2.5 rotations to the right	

NOTICE:

The spiral cable is an important part of the SRS airbag system. Incorrect removal or installation of the spiral cable may cause airbag deployment. Be sure to read the page shown in the brackets.

HINT:

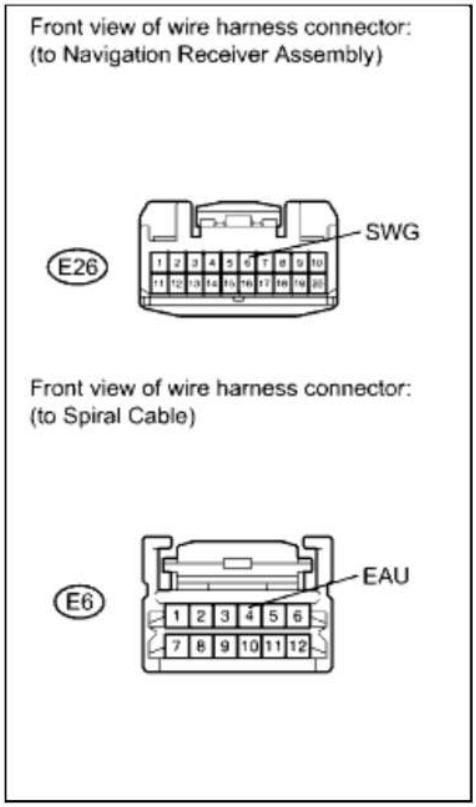
- Removal INFO
- Installation INFO

NG ▶ REPLACE SPIRAL CABLE

cardiagn.com

OK

4.	**CHECK HARNESS AND CONNECTOR (SPIRAL CABLE - NAVIGATION RECEIVER ASSEMBLY)**



(a) Disconnect the connectors from the navigation receiver assembly and spiral cable.

(b) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
E26-6 (SWG) - E6-4 (EAU)	Always	Below 1 Ω
E26-6 (SWG) - Body ground	Always	10 kΩ or higher

NG ▶ **REPAIR OR REPLACE HARNESS OR CONNECTOR**

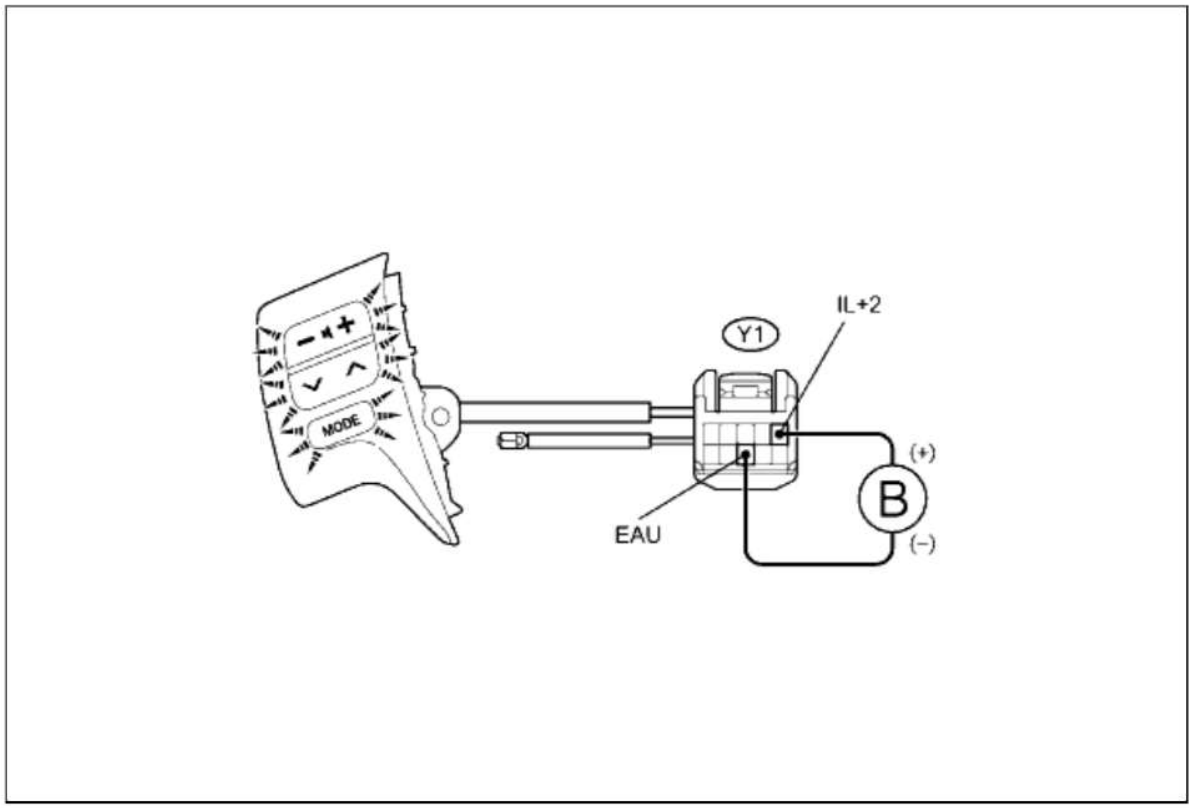
OK

cardiagn.com

5.	INSPECT STEERING PAD SWITCH ASSEMBLY

(a) Disconnect the steering pad switch assembly connector.

(b) Connect a positive (+) lead to terminal IL+2 and a negative (-) lead to terminal EAU of the steering pad switch connector.



(c) Check if the illumination for the steering pad switch comes on.

OK:

Illumination for the steering pad switch assembly comes on.

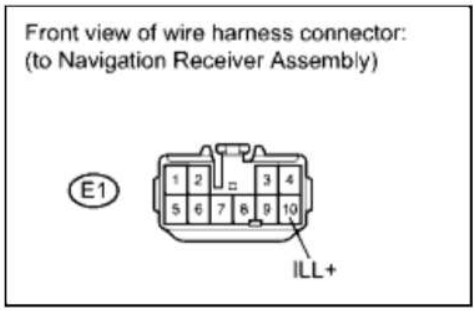
NG ▶ REPLACE STEERING PAD SWITCH ASSEMBLY

OK ▶ PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE

6.	CHECK HARNESS AND CONNECTOR (BATTERY - NAVIGATION RECEIVER ASSEMBLY)

(a) Disconnect the navigation receiver assembly

cardiagn.com



connector.

(b) Measure the voltage according to the value(s) in the table below.

Standard Voltage:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
E1-10 (ILL+) - Body ground	Light control switch in TAIL or HEAD	11 to 14 V

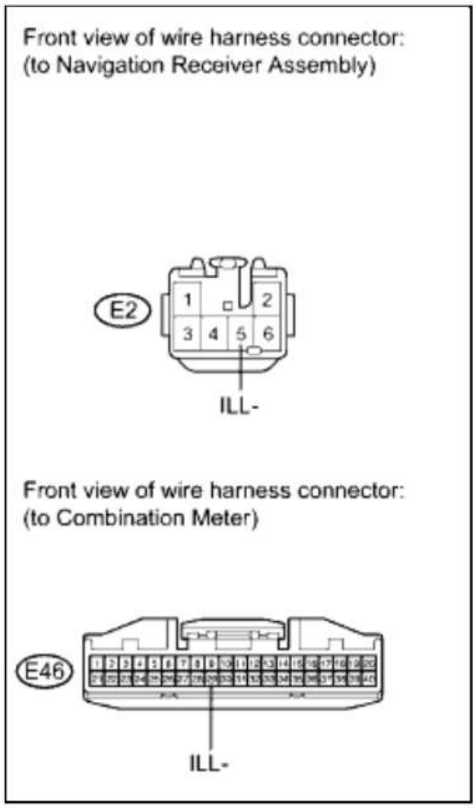
NG ▶ **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK ▼

7.	**CHECK HARNESS AND CONNECTOR (NAVIGATION RECEIVER ASSEMBLY - COMBINATION METER)**

(a) Disconnect the navigation receiver assembly connector.

cardiagn.com



(b) Disconnect the combination meter connector.

(c) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
E2-5 (ILL-) - E46-29 (ILL-)	Always	Below 1 Ω
E2-5 (ILL-) - Body ground	Always	10 kΩ or higher

NG ▶ **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK ▶ **PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE**

cardiagn.com

Last Modified: 3-10-2010	6.4 J	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM0000012CL03ZX
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION SYSTEM: Speaker Circuit (2010 Corolla)		

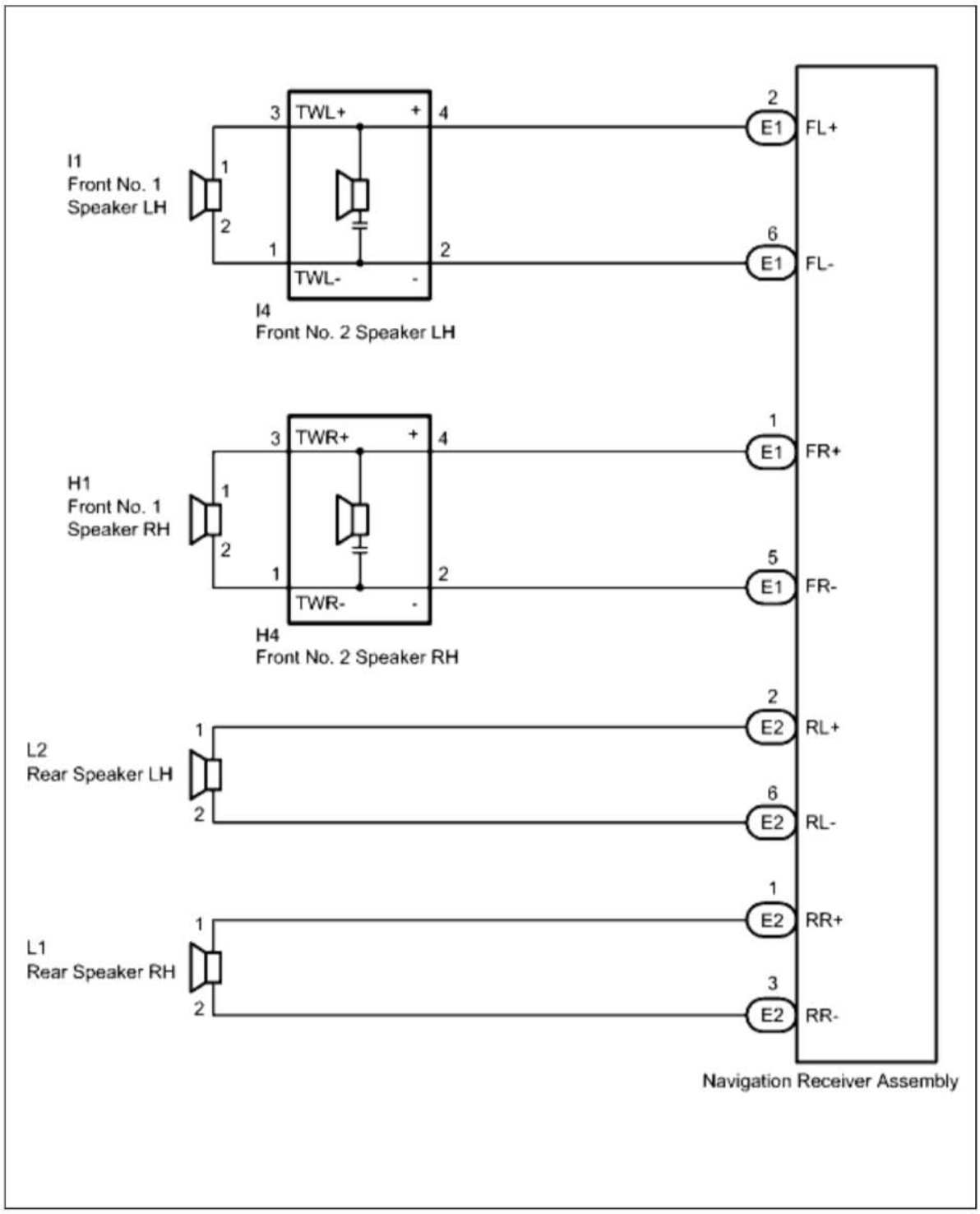
Speaker Circuit

DESCRIPTION

When the vehicle has a built-in type amplifier, a sound signal is sent from the navigation receiver assembly to the speakers through this circuit.

WIRING DIAGRAM

cardiagn.com



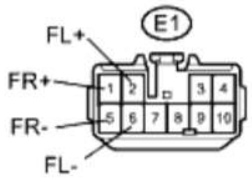
INSPECTION PROCEDURE

PROCEDURE

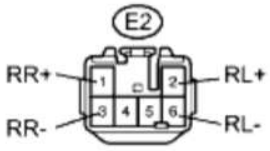
1.	CHECK HARNESS AND CONNECTOR

cardiagn.com

Front view of wire harness connector:
(to Navigation Receiver Assembly)



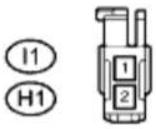
Front view of wire harness connector:
(to Navigation Receiver Assembly)



Front view of wire harness connector:
(to Front No. 2 Speaker)



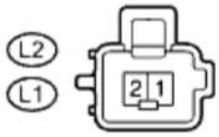
Front view of wire harness connector:
(to Front No. 1 Speaker)



N

(a) Disconnect the connectors shown in the illustration from the navigation receiver assembly and speakers.

Front view of wire harness connector:
(to Rear Speaker)



(b) Measure the resistance between each of the front No. 2 speakers and the navigation receiver assembly to check for an open circuit in the wire harness.

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
E1-2 (FL+) - I4-4 (+)	Always	Below 1 Ω
E1-6 (FL-) - I4-2 (-)	Always	Below 1 Ω

cardiagn.com

E1-1 (FR+) - H4-4 (+)	Always	Below 1 Ω
E1-5 (FR-) - H4-2 (-)	Always	Below 1 Ω

(c) Measure the resistance between each of the front No. 2 speakers and each of the front No. 1 speakers to check for an open circuit in the wire harness.

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
I1-1 - I4-3 (TWL+)	Always	Below 1 Ω
I1-2 - I4-1 (TWL-)	Always	Below 1 Ω
H1-1 - H4-3 (TWR+)	Always	Below 1 Ω
H1-2 - H4-1 (TWR-)	Always	Below 1 Ω

(d) Measure the resistance between each of the rear speakers and the navigation receiver assembly to check for an open circuit in the wire harness.

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
E2-2 (RL+) - L2-1	Always	Below 1 Ω
E2-6 (RL-) - L2-2	Always	Below 1 Ω
E2-1 (RR+) - L1-1	Always	Below 1 Ω
E2-3 (RR-) - L1-1	Always	Below 1 Ω

(e) Measure the resistance between each speaker and body ground to check for a short circuit in the wire harness.

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
E1-2 (FL+) - Body ground	Always	10 kΩ or higher
E1-6 (FL-) - Body ground	Always	10 kΩ or higher
E1-1 (FR+) - Body ground	Always	10 kΩ or higher
E1-5 (FR-) - Body ground	Always	10 kΩ or higher
E2-2 (RL+) - Body ground	Always	10 kΩ or higher
E2-6 (RL-) - Body ground	Always	10 kΩ or higher
E2-1 (RR+) - Body ground	Always	10 kΩ or higher
E2-3 (RR-) - Body ground	Always	10 kΩ or higher

cardiagn.com

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
I4-3 (TWL+) - Body ground	Always	10 kΩ or higher
I4-1 (TWL-) - Body ground	Always	10 kΩ or higher
H4-3 (TWR+) - Body ground	Always	10 kΩ or higher
H4-1 (TWR-) - Body ground	Always	10 kΩ or higher

NG ▶ **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK ▼

2.	**INSPECT FRONT NO. 1 SPEAKER**

(a) Resistance check

(1) Measure the resistance between the terminals of the speaker.

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
I1-1 - I1-2	Always	3.2 to 4.8 Ω
H1-1 - H1-2	Always	3.2 to 4.8 Ω

NG ▶ **REPLACE FRONT NO. 1 SPEAKER**

OK ▼

3.	**INSPECT FRONT NO. 2 SPEAKER**

(a) Check that the malfunction disappears when another speaker in good condition is installed.

OK:

Malfunction disappears.

HINT:

cardiagn.com

- Connect all the connectors to the front No. 2 speaker.
- When there is a possibility that either the right or left front speaker is defective, inspect by interchanging the right one with the left one.
- Perform the above inspection on both LH and RH sides.

NG ▶ **REPLACE FRONT NO. 2 SPEAKER**

OK ▼

4.	INSPECT REAR SPEAKER

(a) Resistance check

(1) Measure the resistance between the terminals of the speaker.

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
L2-1 - L2-2	Always	Approximately 4 Ω
L1-1 - L1-2	Always	Approximately 4 Ω

NG ▶ **REPLACE REAR SPEAKER**

OK ▶ **PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE**

cardiagn.com

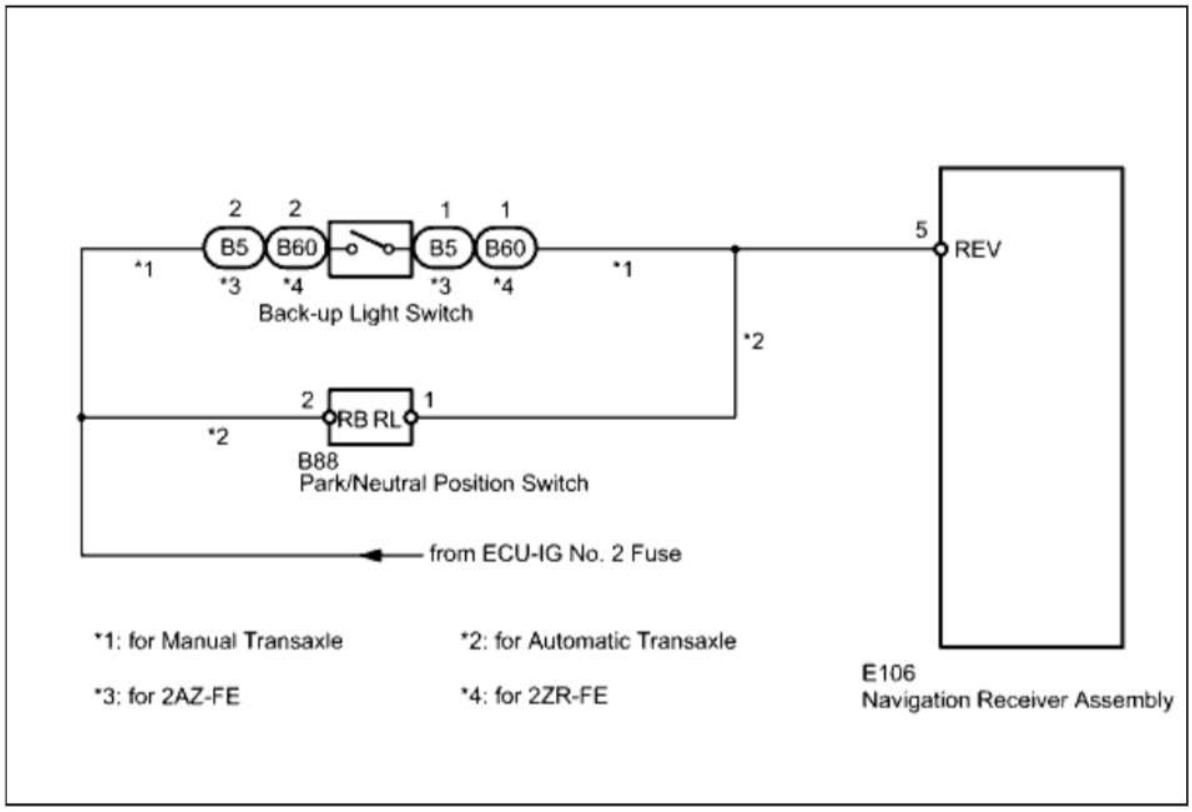
Last Modified: 3-10-2010	6.4 J	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM0000020O101TX
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION SYSTEM: Reverse Signal Circuit (2010 Corolla)		

Reverse Signal Circuit

DESCRIPTION

The navigation receiver assembly receives a reverse signal from the back-up light switch or the park/neutral position switch and information about the GPS antenna, and then adjusts the vehicle position.

WIRING DIAGRAM

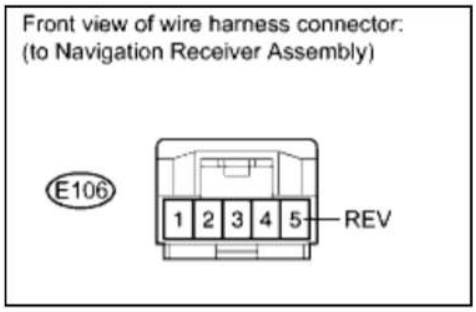


INSPECTION PROCEDURE

PROCEDURE

1.	**INSPECT NAVIGATION RECEIVER ASSEMBLY**

cardiagn.com



(a) Disconnect the navigation receiver assembly connector.

(b) Measure the voltage according to the value(s) in the table below.

Standard Voltage:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
E106-5 (REV) - Body ground	Ignition switch ON Shift lever is in R	11 to 14 V
E106-5 (REV) - Body ground	Ignition switch ON Shift lever is in any position except R	Below 1 V

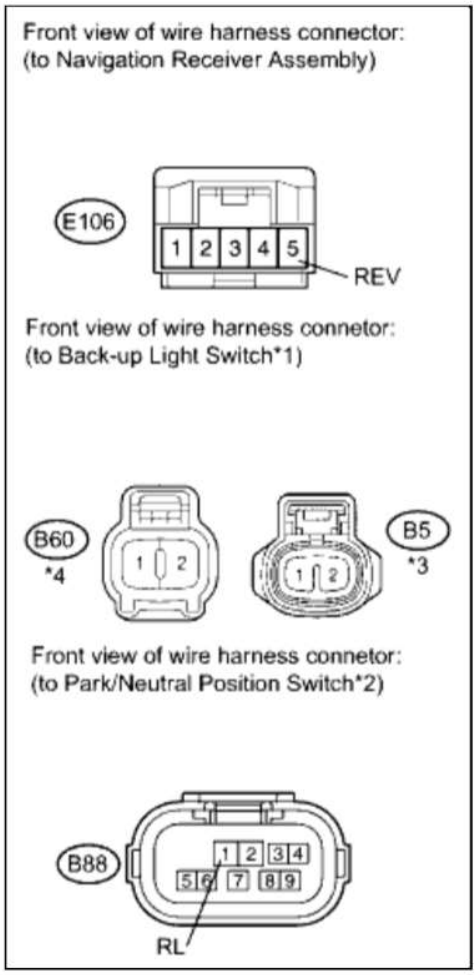
NG ▶ **CHECK HARNESS AND CONNECTOR (NAVIGATION RECEIVER - BACK-UP LIGHT SWITCH, PNP SWITCH)**

OK ▶ **REPLACE NAVIGATION RECEIVER ASSEMBLY**

2.	**CHECK HARNESS AND CONNECTOR (NAVIGATION RECEIVER - BACK-UP LIGHT SWITCH, PNP SWITCH)**

(a) Disconnect the navigation receiver assembly connector.

cardiagn.com



(b) Disconnect the back-up light switch*1 or the park/neutral position switch*2.

(c) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

for Manual Transaxle

for Automatic Transaxle

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
E106-5 (REV) - B5-1*3	Always	Below 1 Ω
E106-5 (REV) - B60-1*4	Always	Below 1 Ω
E106-5 (REV) - Body ground	Always	10 kΩ or higher

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
E106-5 (REV) - B88-1 (RL)	Always	Below 1 Ω
E106-5 (REV) - Body ground	Always	10 kΩ or higher

HINT:

cardiagn.com

- *1: for Manual Transaxle
- *2: for Automatic Transaxle
- *3: for 2AZ-FE
- *4: for 2ZR-FE

NG ▶ **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK ▼

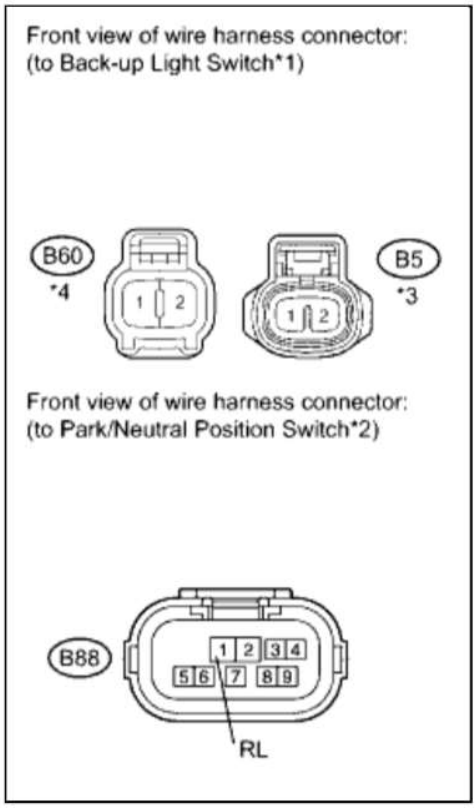
3.	**CHECK HARNESS AND CONNECTOR (BACK-UP LIGHT SWITCH, PNP SWITCH - BATTERY)**

(a) Measure the voltage according to the value(s) in the table below.

Standard Voltage:

for Manual Transaxle

for Automatic Transaxle



TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
B5-2 - Body ground*3	Ignition switch ON	11 to 14 V
B60-2 - Body ground*4	Ignition switch ON	11 to 14 V

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
B88-2 - Body ground	Ignition switch ON	11 to 14 V

HINT:

- *1: for Manual Transaxle
- *2: for Automatic Transaxle
- *3: for 2AZ-FE
- *4: for 2ZR-FE

Result:

RESULT	PROCEED TO

cardiagn.com

NG	A
OK (for C59 Manual Transaxle)	B
OK (for E351 Manual Transaxle)	C
OK (for U250E Automatic Transaxle)	D
OK (for U341E Automatic Transaxle)	E

E ▶ **REPLACE PARK/NEUTRAL POSITION SWITCH (for U341E Automatic Transaxle)**

D ▶ **REPLACE PARK/NEUTRAL POSITION SWITCH (for U250E Automatic Transaxle)**

C ▶ **REPLACE BACK-UP LIGHT SWITCH (for E351 Manual Transaxle)**

B ▶ **REPLACE BACK-UP LIGHT SWITCH (for C59 Manual Transaxle)**

A ▶ **REPAIR OR REPLACE HARNESS OR CONNECTOR**



cardiagn.com

Last Modified: 3-10-2010	6.4 J	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM0000020QE016X
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION SYSTEM: Sound Signal Circuit between Navigation Receiver Assembly and Stereo Jack Adapter (2010 Corolla)		

Sound Signal Circuit between Navigation Receiver Assembly and Stereo Jack Adapter

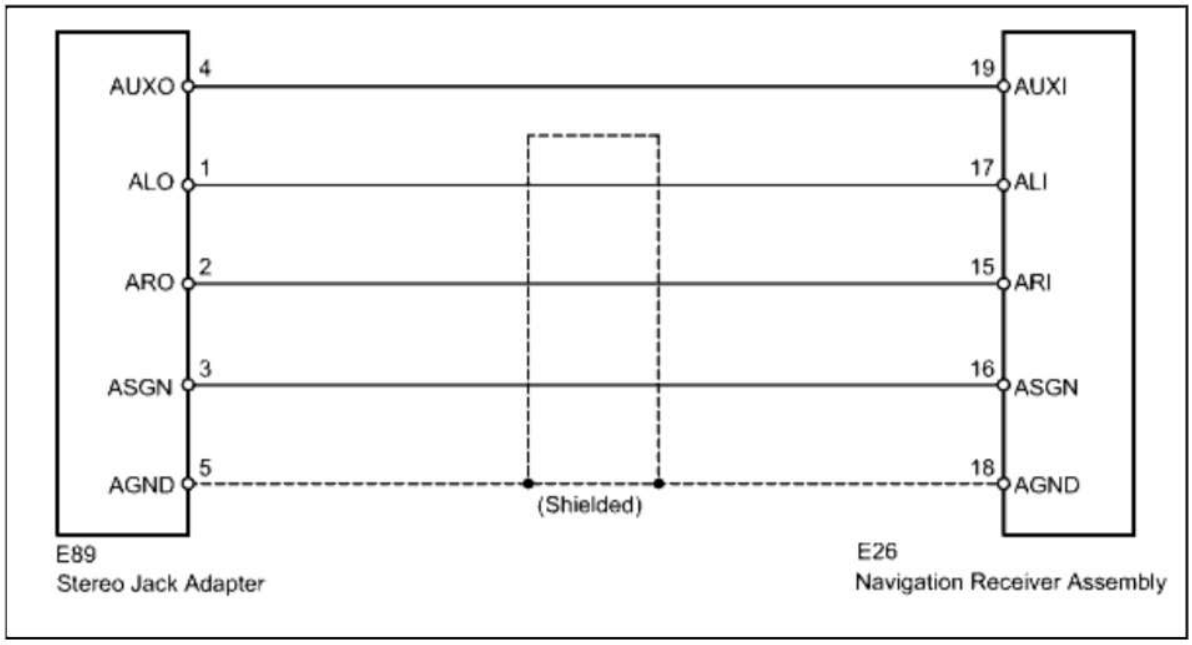
DESCRIPTION

The stereo jack adapter sends an external device sound signal to the navigation receiver assembly through this circuit.

The sound signal that has been sent is amplified by the stereo component amplifier and then is sent to the speakers.

If there is an open or short in the circuit, sound cannot be heard from the speakers even if there is no malfunction in the stereo component amplifier, navigation receiver assembly, or speakers.

WIRING DIAGRAM

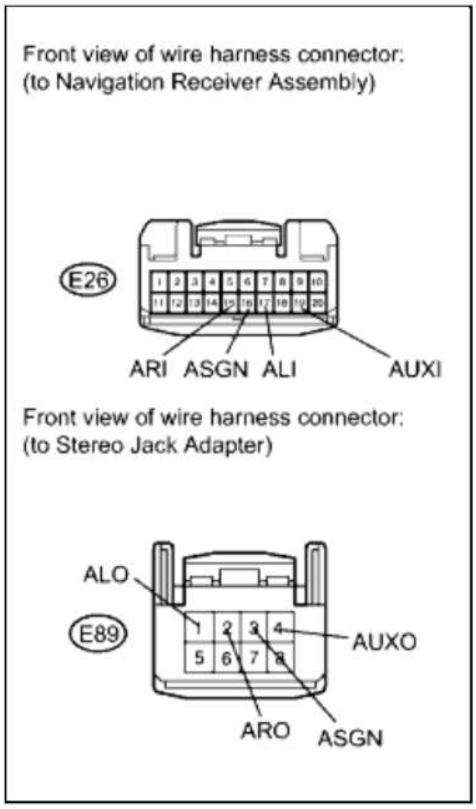


INSPECTION PROCEDURE

PROCEDURE

1.	**CHECK HARNESS AND CONNECTOR (NAVIGATION RECEIVER ASSEMBLY - STEREO JACK ADAPTER)**	(a) Disconnect the navigation receiver assembly connector.

cardiagn.com



(b) Disconnect the stereo jack adapter connector.

(c) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
E89-4 (AUXO) - E26-19 (AUXI)	Always	Below 1 Ω
E89-3 (ASGN) - E26-16 (ASGN)	Always	Below 1 Ω
E89-2 (ARO) - E26-15 (ARI)	Always	Below 1 Ω
E89-1 (ALO) - E26-17 (ALI)	Always	Below 1 Ω
E89-4 (AUXO) - Body ground	Always	10 kΩ or higher
E89-3 (ASGN) - Body ground	Always	10 kΩ or higher
E89-2 (ARO) - Body ground	Always	10 kΩ or higher
E89-1 (ALO) - Body ground	Always	10 kΩ or higher

NG ▶ **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK ▶ **PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE**

cardiagn.com

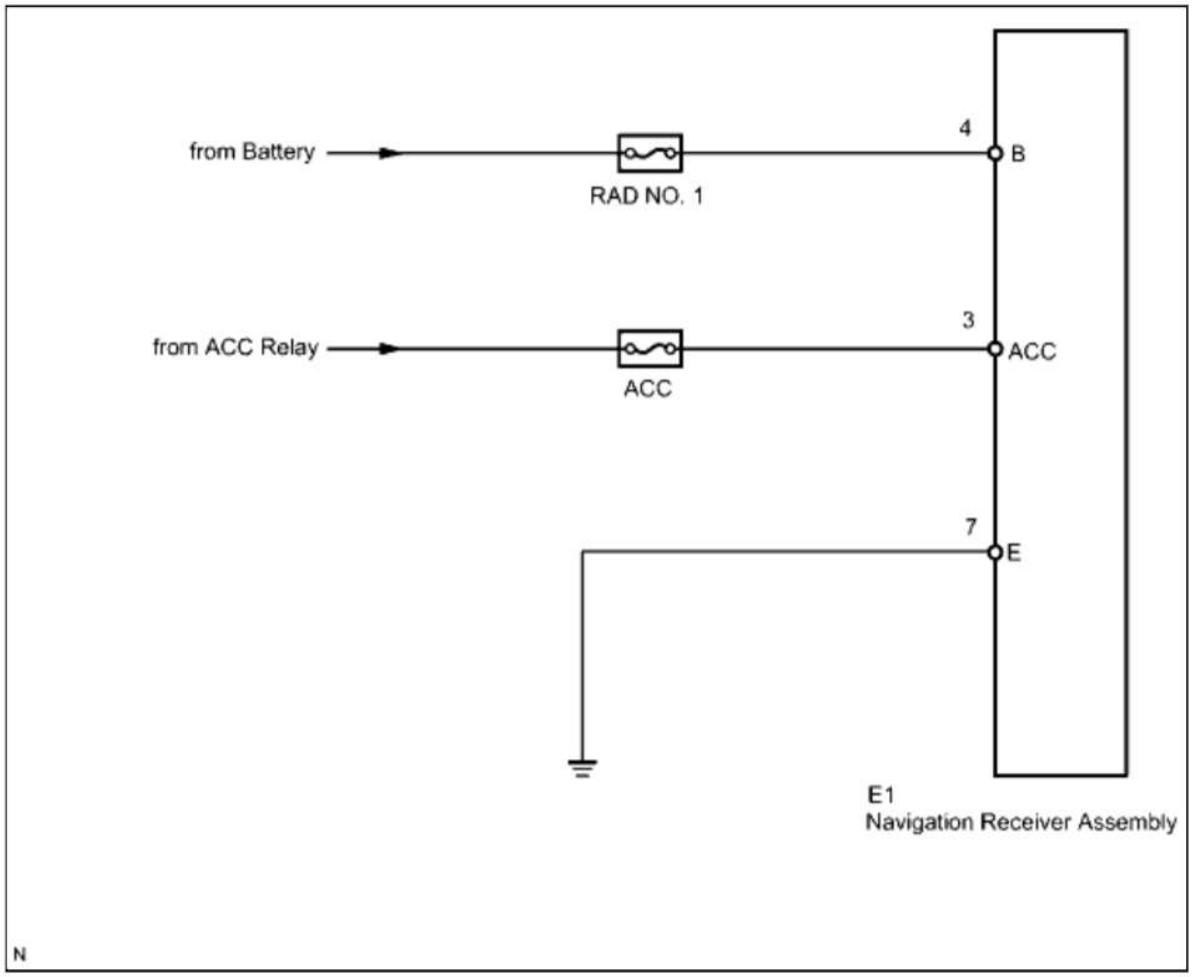
Last Modified: 3-10-2010	6.4 J	**From:** 200901
Model Year: 2010	**Model:** Corolla	**Doc ID:** RM000002NNF00WX
Title: NAVIGATION / MULTI INFO DISPLAY: NAVIGATION SYSTEM: Navigation Receiver Assembly Power Source Circuit (2010 Corolla)		

Navigation Receiver Assembly Power Source Circuit

DESCRIPTION

This is the power source circuit to operate the navigation receiver assembly.

WIRING DIAGRAM



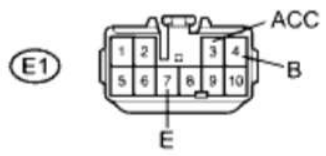
INSPECTION PROCEDURE

PROCEDURE

cardiagn.com

1.	**CHECK HARNESS AND CONNECTOR (NAVIGATION RECEIVER ASSEMBLY - BATTERY, BODY GROUND)**

Front view of wire harness connector:
(to Navigation Receiver Assembly)



(a) Disconnect the navigation receiver assembly connector.

(b) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
E1-7 (E) - Body ground	Always	Below 1 Ω

(c) Measure the voltage according to the value(s) in the table below.

Standard Voltage:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
E1-4 (B) - E1-7 (E)	Always	11 to 14 V
E1-3 (ACC) - E1-7 (E)	Ignition switch ACC	11 to 14 V

NG ▶ **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK ▶ **PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE**

cardiagn.com