■NAVIGATION SYSTEM WITH AV SYSTEM

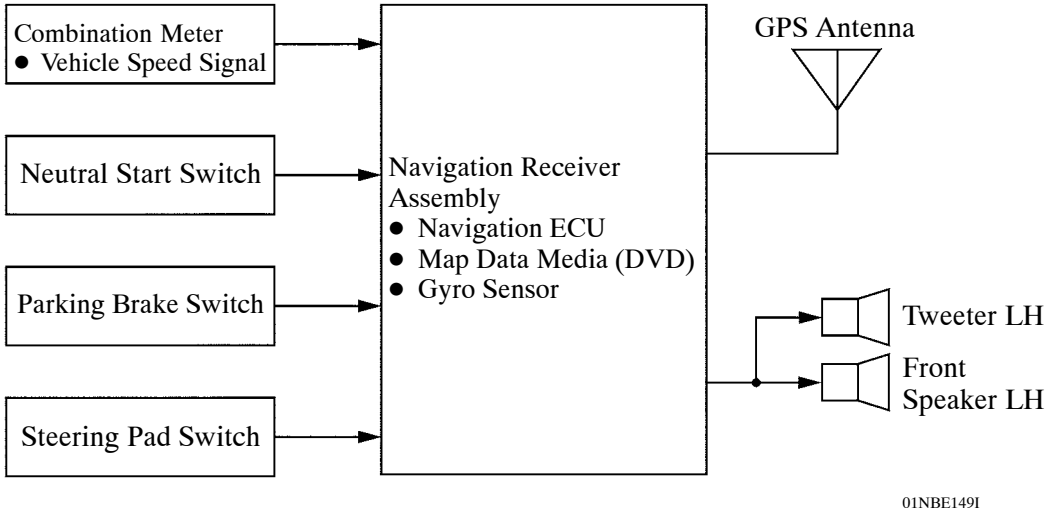
1. General

- The navigation system with AV system is used.
- It uses a wide, 6.5-inch LCD (Liquid Crystal Display) screen with a pressure sensitive touch panel for improved ease of use.
- A GPS (Global Positioning System) voice navigation is used.

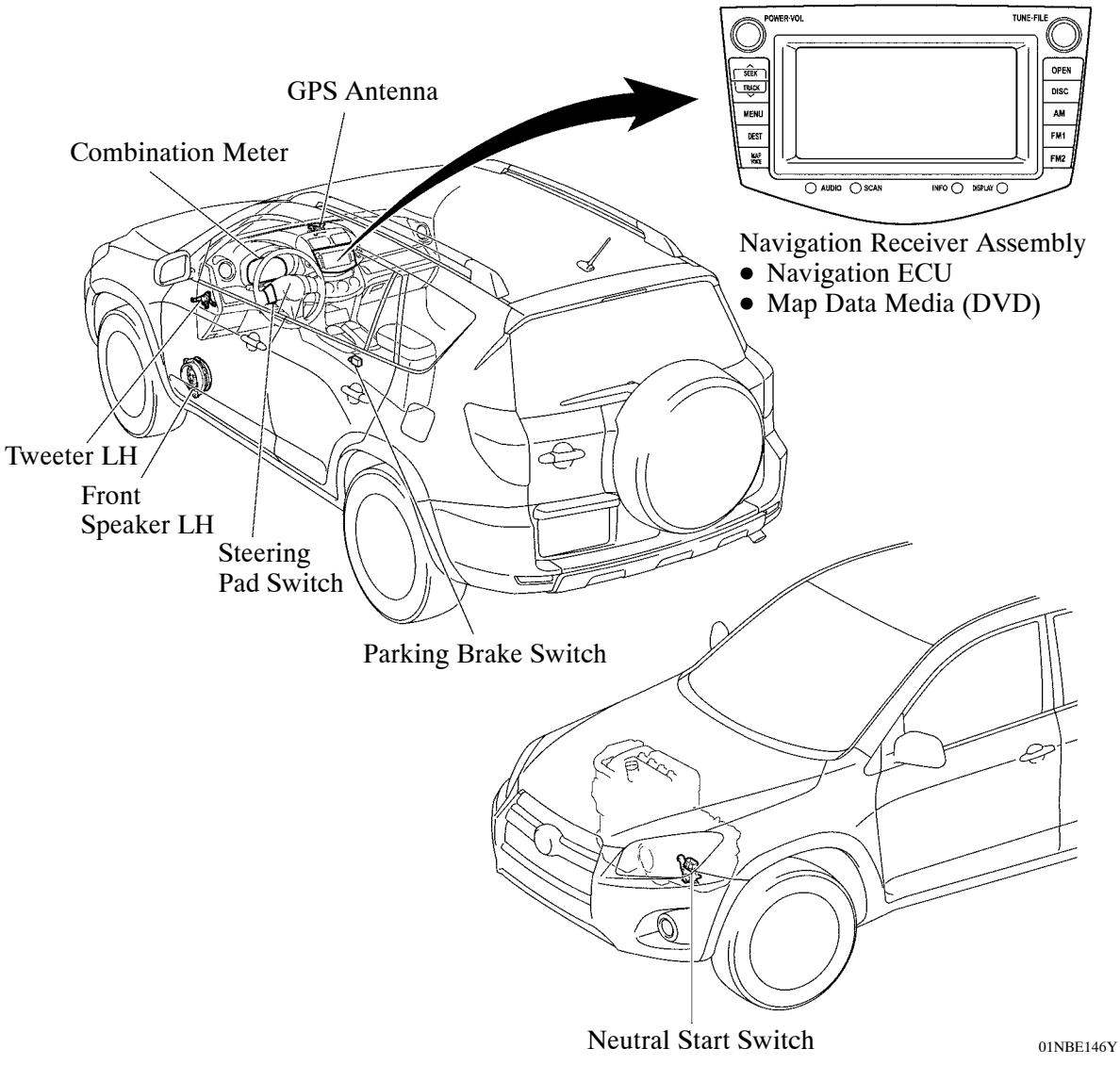
▶ Specifications ◀

Display	Wide 6.5-inch LCD	
	Pressure Sensitive Touch Panel	
	Manufactured by DENSO	
Navigation System	GPS	
Supported Language	Voice Guidance	Chinese
Map Data Media	DVD	
Navigation ECU	Manufactured by DENSO	
	Gyro Sensor	Piezoelectric Ceramic Piece

▶ System Diagram ◀



2. Layout of Main Components



3. Construction and Operation

General

The main functions of the navigation system are listed below:

Function	Outline
Navigation Screen Display	● Enlargement/Reduction, Rotation and Movement of Map ● Indication of Current Position and Direction of Travel ● Correction of Current Position ● Setting Change and Indication of Route ● Voice Guidance There are many additional functions.
Audio System	Displays the following operations: ● Radio Operation ● CD Operation
Maintenance Information	Can be used to inform the driver of inspection or replacement timing of the following items based on the calendar function and vehicle speed signal. Engine Oil: Replace Engine Oil Oil Filter: Replace Engine Oil Filter Rotation: Rotate Tires Tires: Replace Tires Battery: Replace Battery Brake Pad: Replace Brake Linings Wipers: Replace Wiper Blades LLC: Replace Engine Coolant Brake Oil: Replace Brake Fluid ATF: Replace ATF Service: Scheduled Maintenance Air Filter: Replace Air Filter Personal: New information items can be created
Calendar	Can show the calendar.
Help Screen	Can show the command list and operation guide.
Screen Adjustment	The brightness or contrast of the screen can be adjusted to suit the brightness of the surroundings.
Screen Setting	The following screen settings are available: Automatic Transition: Enables automatic return to the navigation screen from the audio screen. Switch Color: Color of touch-screen button can selected.
Delete Personal Data	The following personal data can be deleted or returned to their default settings: ● Maintenance Conditions ● Maintenance Information “off” Setting ● Memory Points ● Areas to Avoid ● Previous Points ● Route Trace ● User Selection Settings ● Phone Book Data ● Dialed Numbers and Received Calls ● Speed Dial ● Bluetooth Phone Data
Beep Setting	Beep Sound Off
Diagnosis Screen Display	● Service Check ● Display Check ● Navigation Check ● Bluetooth TEL Check

Navigation Screen Display

- Based on the map data on the DVD, signals from the GPS satellites, signals from the built-in gyro sensor, and signals from the vehicle speed sensor, the vehicle's present position, direction of travel, and driven distance are calculated and displayed on the navigation screen display.
- The functions of the navigation screen display are shown below:

Item		Function
Map Display	Linear Touch Scroll	Enables smooth scrolling by connecting the touch points on the screen.
	On-route Scroll	Scrolls the center of the cursor forward and backward constantly along the route.
	Heading Up	Displays the map so that the direction of the route progression heads up during route guidance.
	Map Color Change	Depending on the position of the headlight switch, the screen changes between day mode and night mode.
	Front Wide	Displays a map in the direction of travel in an enlarged form. (Heading up only)
	Multi-step Scale Display	Changes and displays the map scale in 13 stages.
	Stepless Scale Display	Changes the scale of the map from the basic 13 steps to an even finer display.
	Direct Scale Change	Directly selects and displays the map scale.
	Split-view Display	Displays different modes on a screen that is split into two views.
	Points-of-interest Display	Displays selected types of marks on the map.
	Map Coverage Info Screen	Displays the map area that is recorded on DVD.
	Whole Route Function	Changes the display scale of the map screen and displays the whole route.
	Street Name Indication on Scrolled Map	Displays the street name and the city name even when the map screen is being scrolled.
	Lane Indication	Displays the lane in the direction of travel at an intersection along the route.
	Arrival Time	Displays the expected time of arrival at the destination.
	Route Trace	Displays the route on the map.
Destination Search	Last Destination Memory	Stores 20 locations of coordinates, names and times that have been set as destinations in the past.
	Hybrid Points-of-interest Search	Narrows the search by names of points-of-interest, category, and areas.
	Points-of-interest Pinpoint Display	Pinpoints and displays the position of point-of-interest.
	House Number Search	Searches for a house number.
	Special Memory Point	Sets a pre-registered point as a destination point while driving.
	Nearest Points-of-interest Search List Display	Searches for nearest points-of-interest and displays a list.
	Intersection Search	By specifying two streets, the point at which they intersect is set as the destination point.
	Telephone Number Search	Searches for a facility by its telephone number.
	POI, Brand Icon Indication	Displays icons for points-of-interest.

(Continued)

Item		Function
Route Search	Multiple Destination Setting	Sets multiple destinations. It can also rearrange the sequence of the destinations.
	Route Search	Searches for multiple routes.
	Search Condition Designation	Searches for other recommended shortest routes.
	Regulated Road Consideration	Performs a search talking regulated roads into consideration.
	Avoidance Area	Avoids a designated area and searches a route.
	Motorway Mode Screen	Displays information on facilities in the vicinity of the motorway exits and entrances.
Guidance	Off-route Arrow Display	Uses arrows to display the direction of the destination during off-route.
	Rotary Guidance	Guidance that renders the entry and exit into a rotary as a single branching point.
	Right or Left Turn Guidance	Voice guidance to instruct the direction of travel to be taken.
	Motorway Direction of Travel Guidance	Voice guidance to instruct the direction of travel to take on the motorway.
	Distance Display Destination	Displays the distance from the present location to the destination.
	Motorway Branch Type Specimen Guidance	Type specimen for guidance to a freeway branch.
	Intersection Map Display	Intersection map appears when approaching an intersection.
	Just Guidance	Informs the driver of a target intersection by emitting a sound just before reaching a guidance intersection.

Diagnosis Screen Display

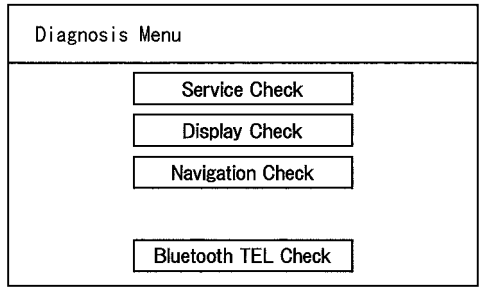
The navigation system is equipped with a self-diagnosis function and can display the diagnosis menus shown on the right.
The diagnosis menu contains the following items:

a) Service Check

b) Display Check

c) Navigation Check

d) Bluetooth TEL Check



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For details on the procedure required to enter the diagnosis menu screen, refer the TOYOTA RAV4 Repair Manual (Pub. No. RM01N3E).