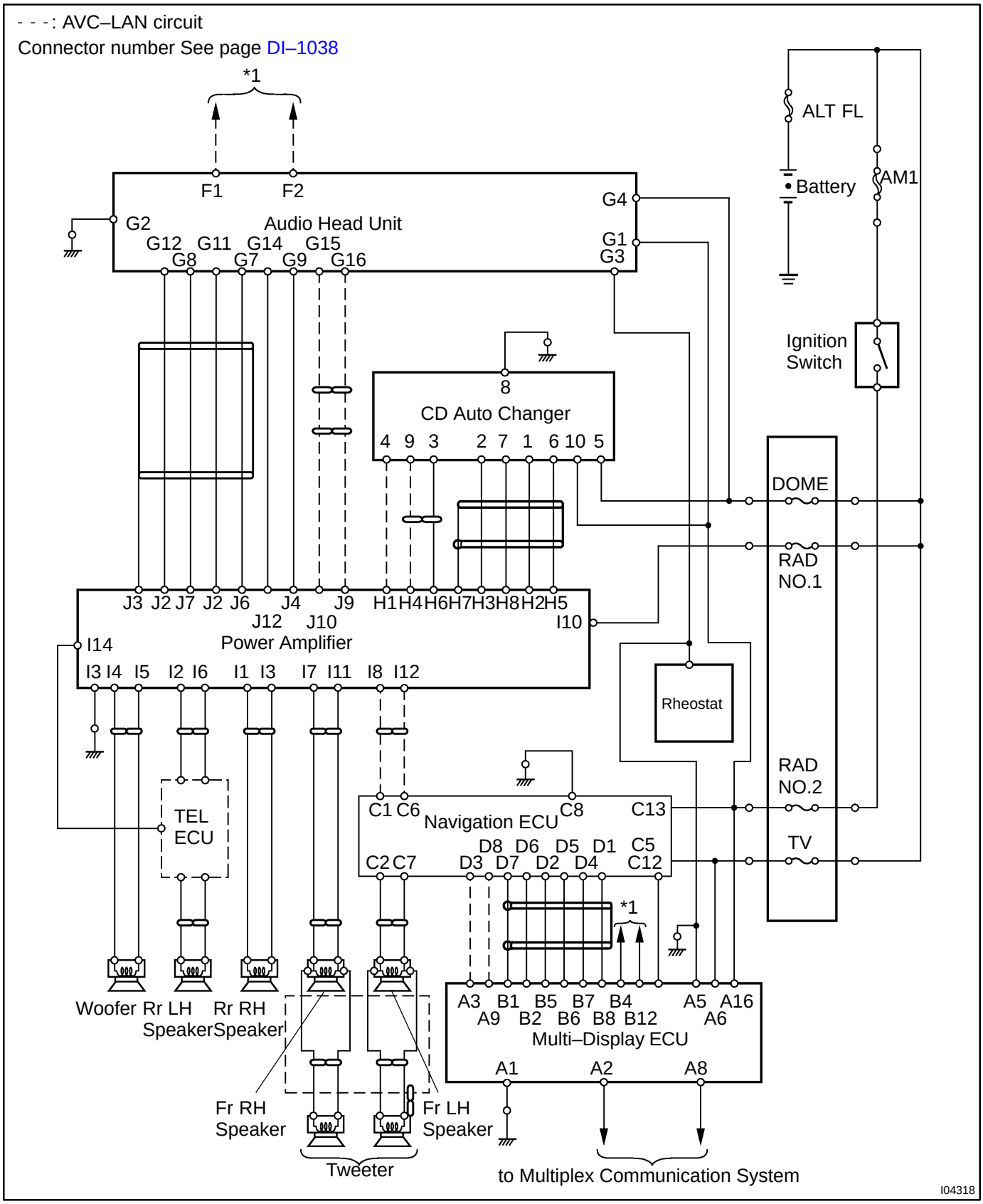
DI27Y–03

PRE–CHECK

1. WIRING DIAGRAM



2. DIAGNOSIS SYSTEM DESCRIPTION

HINT:

There are several diagnosis functions in the LEXUS Navigation System.

Though each operation procedure is explained on the following pages, the outline is as follows.

(a) SYSTEM CHECK
In this mode, communication circuit is inspected and self diagnosis is conduced in each system (Navigation ECU, display ECU, radio receiver, power amplifier and CD auto changer). The result is displayed on the screen.
At the bottom of the screen the map area is displayed.

(b) DISPLAY CHECK
In this mode, images and touch switches on the screen are inspected.

(c) VEHICLE SIGNAL DISPLAY CHECK
In this mode, 2 items of vehicle signal conditions input in the navigation ECU are displayed at the real time (renewed every approx. 1 sec.).

(d) INTERNAL COEFFICIENT SET
This sets time and data of calender and compensation coefficient to improve the accuracy of navigation system.
It is not always necessary to adjust the compensation coefficient, however when the error is excessive due to replacement of tires etc., reset the coefficient again.

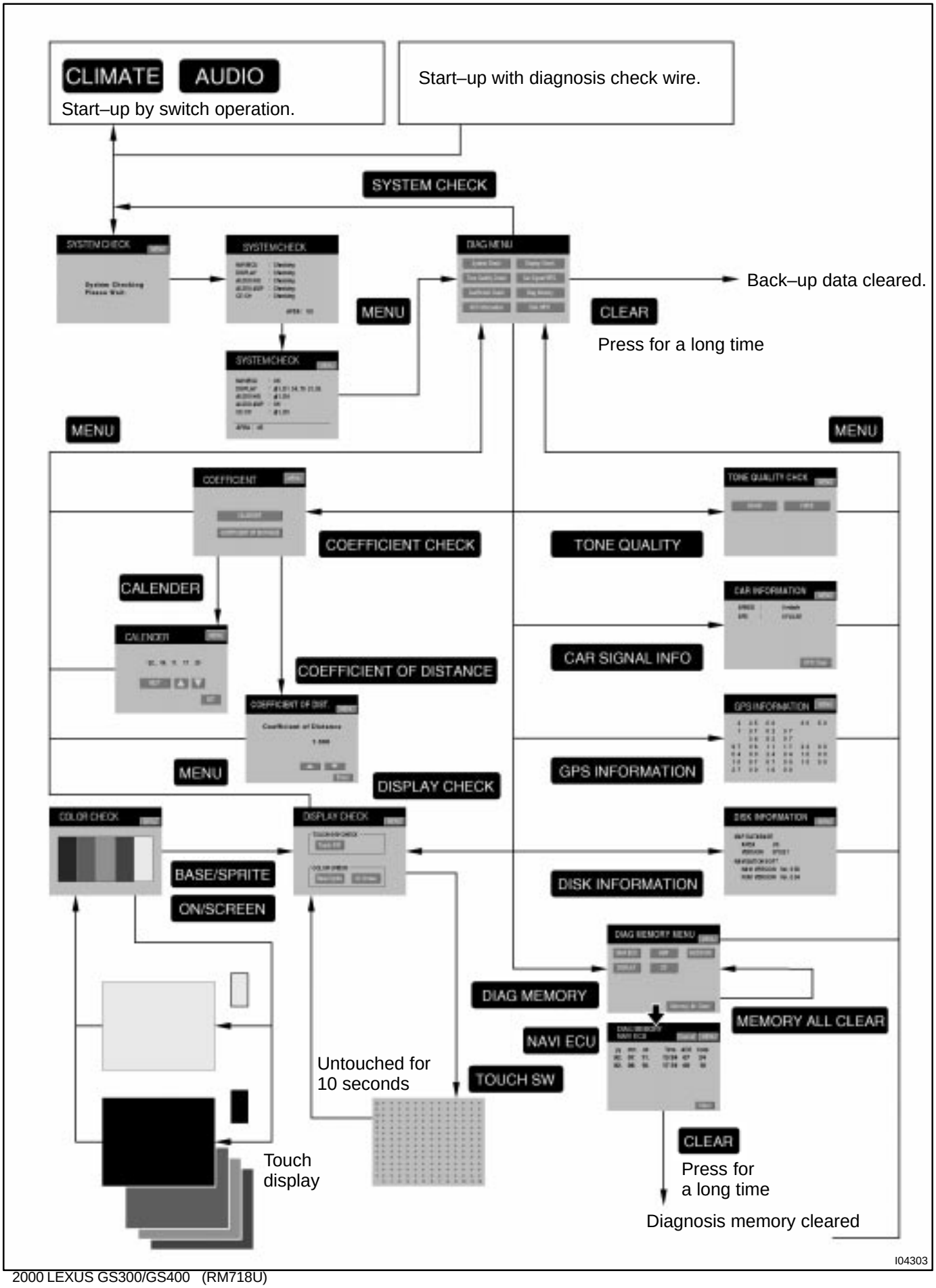
(e) DIAGNOSIS MEMORY
Information is stored in the diagnosis memory when an error occurs in the communication of the system and the system.

(f) GPS INFORMATION
GPS information receiving condition is displayed.

(g) TONE QUALITY CHECK
Chime or navigation voice recorded in HARDDISK can be heard when necessary.

(h) DISK INFORMATION
Area and version No. of map data base and version No. of navigation soft are displayed.

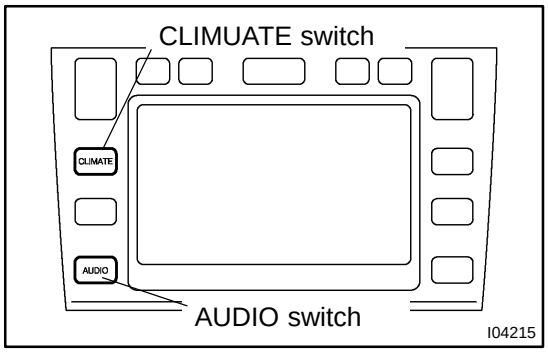
3. DIAGNOSIS CHECK



(a) DIAGNOSIS START–UP

HINT:

There are two ways to startup diagnosis menu, one is using the diagnosis check wire and the other is using the switch.

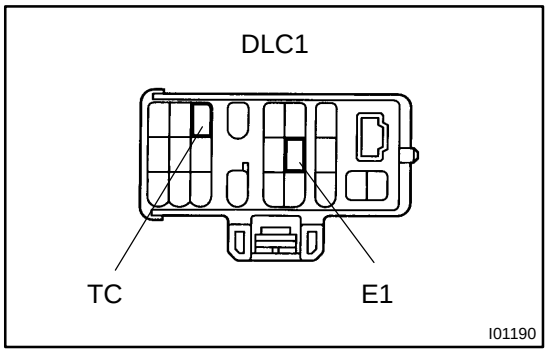


(b) START–UP BY SWITCH OPERATION

While pressing ”CLIMATE” and ”AUDIO” switches simultaneously, by turning the light control switch to OFF, TAIL, OFF, TAIL, and OFF the system is startedup.

NOTICE:

On the screen with LEXUS mark displayed at the time of starting up, do not perform the transmitting operation to the diagnosis mode.



(c) START–UP WITH DIAGNOSIS CHECK WIRE

With the switch in ACC or ON position or engine running, the system is started up by connecting TC and E1 terminals of DLC1 to SST.

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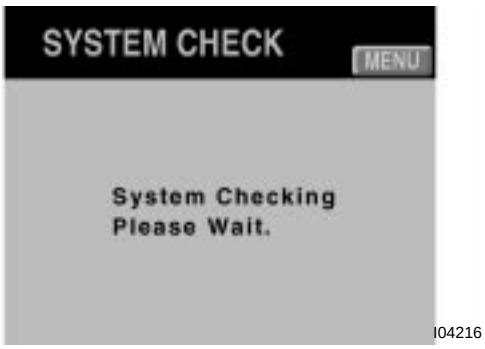
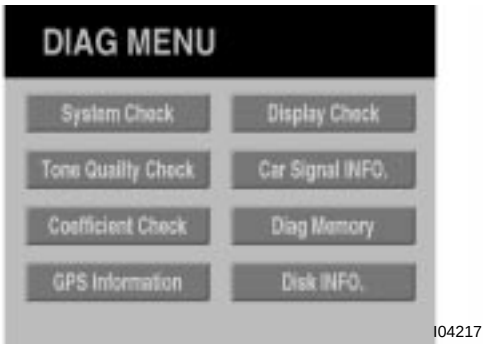


(d) SYSTEM STARTING

It takes approximately 30 seconds to check the system.

(e) FINISHING

Diagnosis mode finishes by turning the ignition switch ACC or OFF.



(f) DIAGNOSIS MENU DISPLAY

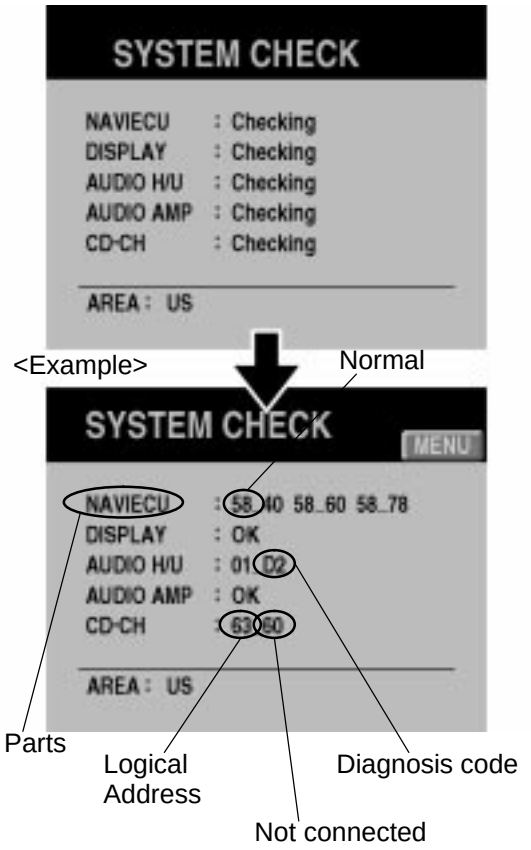
When startingup by switch operation the top menu is displayed on the screen.

Each diagnosis function can be performed by touching switches on this screen.

(g) SYSTEM CHECK SCREEN

- This screen performs the system inspection.
- After the system inspection completes, when pressing ”MENU”, screen returns to the diagnosis menu screen.
  (In diagnosis mode, the every screen can return to the diagnosis menu screen by pressing ”MENU”.)
- On ”SYSTEM CHECK” screen, up to 3 logical addresses and 3 diagnosis codes of the equipment are displayed.
  In the case of normal condition, ”O.K.” is displayed.
- On a screen, up to 3 diagnosis codes for each equipment are displayed.
  When diagnosis codes are more than 4, the screen is switched to another screen and returned every 3 seconds.

● Checking



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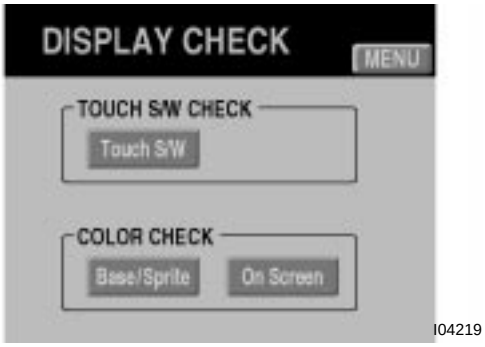
HINT:

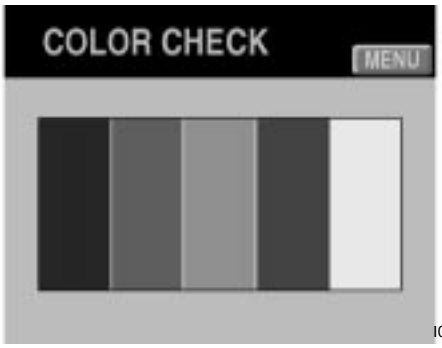
*: Logical address refers to the codes allotted to each part of objected equipment which has been subdivided.

- When an objected equipment is not connected, ”–D0” of the diagnosis code is displayed.
- Diagnosis codes are displayed orderly when diagnosis completes.
- If the same diagnosis code is received several times, only 1 code is displayed.



(h) DISPLAY CHECK SCREEN

- On the diagnosis menu screen when pressing ”DISPLAY CHECK”, the screen turns to the screen shown in the illustration.
- On this screen when pressing ”BASE/SPRITE” or ”ON SCREEN”, the screen changes to the one shown in the illustration, this screen displays a color bar.



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- When pressing the color bar, the color of whole
  If pressing the screen again, the screen returns to the display inspection screen.
- When pressing ”TOUCH S/W”, screen turns to the touch switch check screen.


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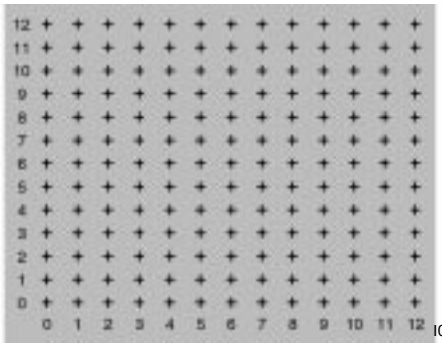
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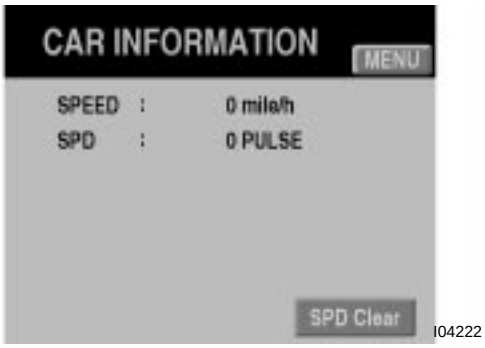
(i) TOUCH SWITCH CHECK SCREEN

- On this screen when ”+” displayed on the screen is touched, the touched part is deleted.
- If the screen is left untouched for 10 seconds, it turns to display check screen.



(j) CAR SIGNAL INFORMATION SCREEN

- When pressing ”CAR SIGNAL INFO.” the screen turns to the screen shown in the illustration.
- This screen inspects whether the following signals are received or send normally.

SPEED: This displays the current vehicle speed.
(The displayed unit is the unit currently set.)
SPD: This displays the count of pulse. Pulse is added as the vehicle runs.

- If touching ”SPD Clear”, the value of SPD turns to ”0”.
- Each signal is renewed every 1 seconds.

(k) SPEED COMPENSATION COEFFICIENT SCREEN

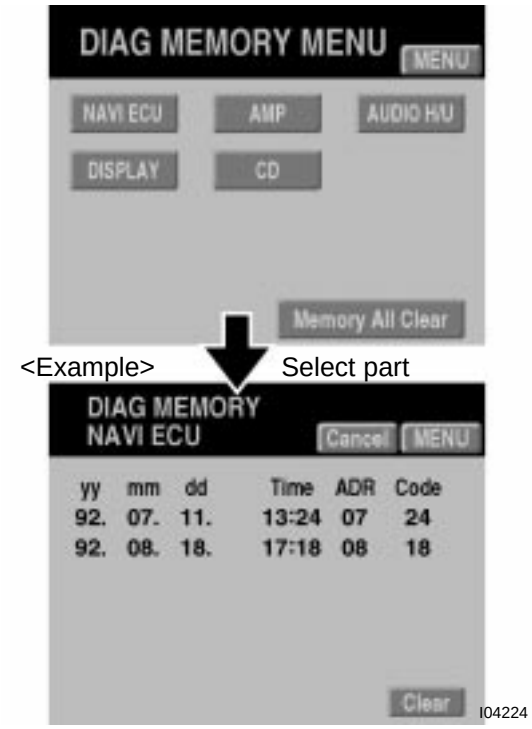
- When pressing ”COEFFICIENT OF DISTANCE” on the internal coefficient set screen, the screen turns to the speed compensation coefficient screen.

HINT:
Navigation ECU compensates automatically the error between the distance calculated by ECU and actually measured and performs map–matching. Accordingly it is not necessary for a driver to compensate the error.

- This screen sets the value of how far the vehicle should go or should delay, when the present site on the map directed by a cursor does not match the real site because of tire replacement etc., This value is called speed compensation coefficient.

HINT:
After matching the present site directed by a cursor on the map with the real site correctly the vehicle is driven on the straight road for 5 Km. When the site on the map is 50 M (1 %) ahead of the real site, the value is 0.990, when 50 M behind, the value is 1.010.

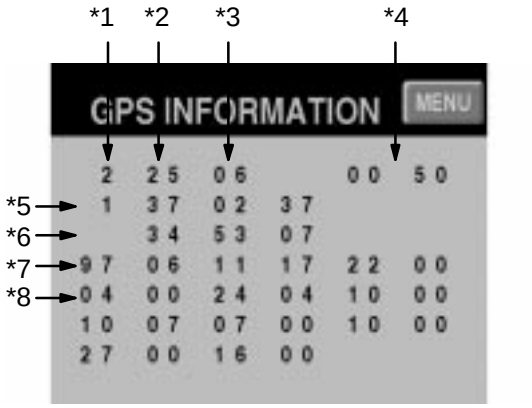
- By pressing triangularity mark, the value is changes, by pressing ”Enter”, setting completes.



(l) DIAGNOSIS MEMORY SCREEN

- On the diagnosis menu screen when pressing ”DIAG. MEMORY” the screen turns to the screen shown in the illustration.
- Up to 6 diagnosis codes per an equipment are displayed. If more than 6 diagnosis codes are displayed, oldest diagnosis code will be deleted orderly.
- If the same diagnosis code occurred, the date when the code occurred is renewed.
- When the same diagnosis code occurs, the data when it occurred is renewed.
- When the diagnosis code does not occur to any equipment in the system, ”O.K.” is displayed.
- When ”CLEAR” is kept to touch for 3 seconds, all diagnosis memories are cleared.
- When pressing ”Memory All Clear” for 3 secs., diagnois memories of all equipment are cleared.

<Example>



*1: Two–measurement satellite is caught

*2: 25 satellites available for navigation

*3: 6 satellites that GPS antenna receivess the signals from

*4: Height +50 M

*5: East longitude
137 degree, 2 minutes, 37 seconds

*6: North altitude
34 degree, 53 minutes, 7 seconds

*7: 97 years, 6 monthes, 11 days,
17 times, 22 minutes, 00 seconds

*8: ID number of satellite

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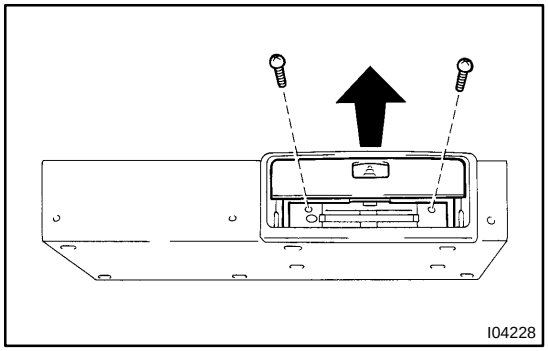
(m) GPS INFORMATION SCREEN

- On the diagnosis menu screen, when pressing ”GPS INFORMATION”, the screen turns to the screen shown in the illustration.
- The displayed contents on this screen are as follows.

*1: Measurement conditions on present site
0: No measurement satellite is caught.
1: One measurement satellite is caught.
2: Two–measurement satellites are caught.
3: Two–dimensional measurement
4: Three dimensional measurement
F: Receiver disorder
*2: Number of satellites available for navigation.
*3: Number of satellites that GPS antenna receives the signals from
*4: Height (M)
*5: Longitude (degree; minute; second)
(In the case of west longitude, ”–” is displayed on the column of first letter, in the case of east longitude, nothing is displayed.)
*6: Altitude (degree; minute; second)
(In the case of south altitude, ”–” is displayed on the column of first letter, in the case of north altitude, nothing is displayed.)
*7: Year, date
(Year: month: day: time: minute: second)
*8: ID of satellite that GPS antenna receives radio wave from setellitry.

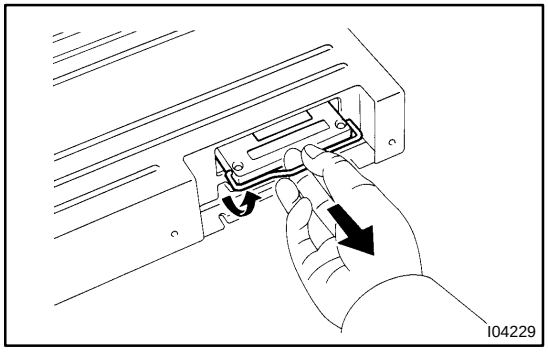
(n) TONE QUALITY CHECK
- On the diagnosis menu screen, when pressing ”TONE QUALITY CHECK”, the screen turns to the screen shown in the illustration.
- Tone check is performed by pressing the menu displayed on this screen.
- When pressing ”CHIME”, chime of ”poop” sounds 3 times.
- When pressing ”VOICE”, the voice saying ”Please proceed to the highlighted route. Then the route guideance will start.” sounds 1 time.

(o) DISC INFORMATION
- On the diagnosis menu screen when pressing ”DISK INFORMATION”, the screen turns to the screen shown in the illustration.
- This screen displays the information MAP DATABASE and NAVIGATION SOFT.



4. REPLACE HARDDISK

(a) Remove the 3 bolts and the navigation ECU.
(b) Raise the lid up.
(c) Remove the 2 screws and the cover.



(d) Replace harddisk.

NOTICE:
- **Do not apply any impact to the harddisc. There is a fear to damage the harddisc if applying impact.**
- **When inserting a harddisk again, insert it furthest securely.**