DI27Z-10

DIAGNOSTIC TROUBLE CODE CHART

Terms	Meaning
Physical address	Three–digit code (shown in hexadecimal) which is given to each component comprising the AVC–LAN. Corresponding to the function, individual symbols are specified.
Logical address	Two-digit code (shown in hexadecimal) which is given to each function comprising the inner system of the AVC-LAN.

1. MULTI DISPLAY (Physical address: 110)

- *1: Even if no failure is detected, this code may be stored depending on the battery condition or voltage for starting an engine.
- *2: This code is stored when 180 sec. has passed after the power supply connector is pulled out after engine start.
- *3: This code may be stored when the engine key is turned again after engine start.
- *4: This code may be stored when the engine key is turned again 1 min. after engine start.
- (a) Logical address: 01 (Communication control)

DTC	Diagnosis item	Condition	Countermeasure and inspected parts
21	ROM Error	Abnormal condition of ROM is detected.	Replace multi-display assembly.
22	RAM Error	Abnormal condition of RAM is detected.	Replace multi-display assembly.
D5 *1	Registered component disconnected	Component shown by sub-code is or was disconnected from system with ignition switch in ACC or ON. Communication with component shown by sub-code is not ensured when engine is started.	Check harness for power supply of component shown by sub-code. Check harness for communication system of component shown by sub-code.
D8 *2	No response to connection check	Component shown by sub-code is or was disconnected from system after engine is started.	Check harness for power supply of component shown by sub-code. Check harness for communication system of component shown by sub-code.
D9 *1	Last Mode Error	Component operated (sound and/or image was provided) before engine stop is or was disconnected with ignition switch in ACC or ON.	Check harness for power supply of component shown by sub-code. Check harness for communication system of component shown by sub-code.
DA	No Response to ON/OFF Instruction	No response is identified when changing mode (audio and visual mode change). Detected when sound and picture does not change by button operation	Check harness for power supply system of component shown by sub-code. Check harness for communication system of component shown by sub-code. If error occurs again, replace component shown by auxilxary code
DB *1	Mode Status Error	Dual alarm is detected.	Check harness for power supply system of component shown by sub-code. Check harness for communication system of component shown by sub-code.
DC *4	Transmission Error	Transmission to component shown by sub- code has been failed. (This code does not necessarily mean actu- al failure.)	If same sub-code is recorded in other com- ponent(s), check harness for power supply and communication system of all compo- nents shown by code.
DE *3	Slave Reset (Momentary Interruption)	After engine start, slave component has been disconnected. DB	Check harness for power supply system of component shown by sub-code. Check harness for communication system of component shown by sub-code.

E2	ON/OFF Instruction Parameter Error	Error is detected in ON/OFF control command from multi-display assembly.	Replace multi-display assembly.
E3 *1	Registration Request Transmission	Registration Request command is output from slave component. By reception of connection check instruc- tion, Registration Request command is out- put from sub-master component.	Since this DTC is provided for engineering, it may be detected when no actual failure exists.

(b) Logical address: 21 (Switch)

DTC	Diagnosis item	Condition	Countermeasure and inspected parts
10	Panel Switch Error	Error in panel switch input part is detected. (Error in switch control part, or internal communication error with switch control part is detected.)	Inspect all switches on panel switch test screen in display check mode. If any of them does not function, replace multi-display assembly. If all switches function without problem, observe them for a while.
11	Touch Switch Error	Error in touch switch sensor is detected. (Light level of LED is detected to be less than a fixed value.)	Inspect all touch switches on touch switch test screen in display check mode. If any of lines does not react, replace multi-display assembly. If all of vertical and horizontal lines react normally, observe them for a while.

(c) Logical address: 34 (Front passenger monitor)

DTC	Diagnosis item	Condition	Countermeasure and inspected parts
10	Error in Picture Circuit	Error in power supply system for picture circuit (abnormal voltage) is detected.	Replace multi-display assembly.
11	Back-light Error (No current)	Decline in power output from inverter circuit for back-light.	Replace multi-display assembly.
12	Back-light Error (Excess current)	Excess power output from inverter circuit for back–light.	Replace multi-display assembly.

2. GATEWAY ECU (Physical address: 1C6)

HINT:

*1: When 210 sec. has passed after pulling out the power supply connector of the master component with the ignition switch in ACC or ON, this code is stored.

DTC	Diagnosis item	Condition	Countermeasure and inspected parts
D4 *1	Regular Communication Error	Component in which this code is recorded has been disconnected after engine start. Or, when this code was recorded, multi-display was disconnected.	Check harness for power supply system of multi-display assembly. Check harness for communication system of multi-display assembly. Check harness for power supply system of gateway ECU. Check harness for communication system of gateway ECU.

3. RADIO AND PLAYER (Physical address: 190)

- *1: Even if no failure is detected, this code may be stored depending on the battery condition or voltage for starting an engine.
- *2: This code is stored when 180 sec. has passed after the power supply connector is pulled out after engine start.
- *3: This code may be stored when the engine key is turned again 1 min. after engine start.
- *4: This code may be stored when the engine key is turned again after engine start.
- *5: When 210 sec. has passed after pulling out the power supply connector of the master component with the ignition switch in ACC or ON, this code is stored.
- (a) Logical address: 01 (Communication control)

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DTC	Diagnosis item	Condition	Countermeasure and inspected parts
D6 *1	Absence of Master	Component in which this code is recorded has been disconnected from system with ignition in ACC or ON. Or, when this code was recorded, multi-display assembly was disconnected.	Check harness for power supply system of multi-display. Check harness for communication system of multi-display. Check harness for power supply system of radio and player. Check harness for communication system of radio and player.
D8 *2	No Response to Connection Check	Component shown by sub-code is or had been disconnected from system after engine is start.	 Check harness for power supply system of component shown by sub-code. Check harness for communication system of component shown by sub-code.
D9 *1	Last Mode Error	Component operated (sounds and/or images were provided) before engine stop is or has been disconnected with ignition switch in ACC or ON.	Check harness for power supply system of component shown by sub-code. Check harness for communication system of component shown by sub-code.
DA	No Response to ON/OFF Instruction	No response is identified when changing mode (audio and visual mode change). Detected when sound and picture does not change by button operation.	Check harness for power supply system of component shown by sub-code. Check harness for communication system of component shown by sub-code. If error occurs again, replace component shown by sub-code.
DB *1	Mode Status Error	Dual alarm is detected.	Check harness for power supply of component shown by sub-code. Check harness for communication system of component shown by sub-code.
DC *3	Transmission Error	Transmission to component shown by sub- code has been failed. (Detecting this DTC does not necessarily mean actual failure.)	If same sub-code is recorded in order com- ponent, check harness for power supply and communication system of all components shown by code.
DD *4	Master Reset (Momentary Interruption)	After engine is started, multi-display assembly was disconnected from system.	Check harness for power supply system of multi-display. Check harness for communication system of multi-display. Check harness for power supply system of radio and player. Check harness for communication system of radio and player. If this error occurs frequently, replace multi-display assembly.

DE *4	Slave Reset (Momentary Interruption)	After engine is started, slave component was disconnected from system.	Check harness for power supply of component shown by sub-code. Check harness for communication system of component shown by sub-code.
DF *5	Master Error	Due to defective condition of component with a display, master function is switched to audio equipment. Error occurs in communication between sub-master (audio) and master component.	Check harness for power supply of multi–display assembly. Check harness for communication system of multi–display assembly. Check harness for communication system between multi–display assembly and sub–master component.
E0 *1	Registration Completion Instruction Error	"Registration Completion Instruction" command from master cannot be received.	Since this DTC is provided for engineering purpose, it may be detected when no actual failure exists.
E1 *1	Audio processor ON error	While source equipment is operating, AMP output is stopped.	Check harness for power supply of multi–display assembly. Check harness for communication system of multi–display assembly.
E2	ON/OFF Instruction Parameter Error	Error occurs in ON/OFF controlling command from multi-display assembly.	Replace multi-display assembly.
E3 *1	Registration Request Transmission	Registration Request command is output from slave component. Receiving Connection Check Instruction, Registration Request command is output from sub-master component.	Since this DTC is provided for engineering purpose, it may be detected when no actual failure exists.
E4 *1	Multiple Frame Abort	Multiple frame transmission is aborted.	Since this DTC is provided for engineering purpose, it may be detected when no actual failure exists.

(b) Logical address: 61 (Cassette tape player's switch)

DTC	Diagnosis item	Condition	Countermeasure and inspected parts
40	Mechanical Error of Media	Malfunction due to mechanical failure is identified. Or cassette tape is cut or entangled.	Inspect cassette tape. Replace radio and player.

(c) Logical address: 63 (In-dash CD changer)

DTC	Diagnosis item	Condition	Countermeasure and inspected parts
42	No Disc Readout	Disc cannot be read.	Inspect CD.
44	CD Error	Error is detected in CD player.	Replace radio and player.
45	EJECT Error	Disc cannot be ejected.	Replace radio and player.
47	CD High Temp.	High temperature is detected in CD changer.	Replace radio and player.
48	CD Excess Current	Excess current is applied to CD changer.	Replace radio and player.

4. NAVIGATION ECU (Physical address: 178)

- *1: Even if no failure is detected, this code may be stored depending on the battery condition or voltage for starting the engine.
- *2: When 210 sec. has passed after pulling out the power supply connector of the master component with the ignition switch in ACC or ON, this code is stored.
- *3: This code may be stored when the engine key is turned 1 min. again after engine start.
- *4: This code may be stored when the engine key is turned again after engine start.
- (a) Logical address: 01 (Communication control)

DTC	Diagnosis item	Condition	Countermeasure and inspected parts
D6 *1	Absence of Master	Component in which this code is recorded has been disconnected from system with ignition in ACC or ON. Or, when this code was recorded, multi-display assembly was disconnected.	Check harness for power supply system of multi-display. Check harness for communication system of multi-display. Check harness for power supply system of navigation ECU. Check harness for communication system of navigation ECU.
D7 *2	Connection Check Error	Component in which this code is recorded has been disconnected from system after engine start. Or, when this code was recorded, multi-display assembly was disconnected. D6	Check harness for power supply system of multi-display. Check harness for communication system of multi-display. Check harness for power supply system of navigation ECU. Check harness for communication system of navigation ECU.
DC *3	Transmission Error	Transmission to component shown by sub- code has been failed. (This code does not necessarily mean actu- al failure.)	If same sub-code is recorded in other com- ponent(s), check harness for power supply and communication system of all compo- nents shown by code.
DD *4	Master Reset (Momentary Interruption)	Component that is to be master has been disconnected after engine start.	Check harness for power supply system of multi-display assembly. Check harness for communication system of multi-display assembly. If error occurs frequently, replace multi-display assembly.
E0 *1	Registration Completion Instruction Error	"Registration Completion Instruction" command from master cannot be received.	Since this DTC is provided for engineering, it may be detected when no actual failure exists.
E2	ON/OFF Instruction Parameter Error	Error is detected in ON/OFF control command from multi-display assembly.	Replace multi-display assembly.
E3 *1	Registration Request Transmission	Registration Request command is output from slave component. Registration Request command is output from sub-master component.	Since this DTC is provided for engineering, it may be detected when no actual failure exists.

DF *4	Master Error	Due to defective condition of component with a display, master function is switched to audio equipment. Error occurs in communication between sub-master (audio) and master component.	Check harness for power supply of multidisplay assembly. Check harness for communication system of multidisplay assembly. Check harness for communication system between multidisplay assembly and radio and player.
E4 *1	Multiple Frame Abort	Multiple frame transmission is aborted.	Since this DTC is provided for engineering purpose, it may be detected when no actual failure exists.

(b) Logical address: 58 (Navigation ECU)

DTC	Diagnosis item	Condition	Countermeasure and inspected parts
10	Gyro Error	Error in gyro sensor is detected. (Abnormal value in voltage output from sensor is detected for more than specified time.)	Replace navigation ECU.
42	Map Disc Error	Data cannot be read for a certain time due to scratches or dirt on disc surface or insertion of wrong disc.	Inspect disc and replace if necessary. (Visually check disc surface and wipe it with soft cloth.)
43	Vehicle Signal Error	Input error of vehicle signal is detected. (When no vehicle signal has been input for a certain time.)	Inspect wire harness. If wire harness is normal, replace navigation ECU.

(c) Logical address: 58 (GPS receiver)

DTC	Diagnosis item	Condition	Countermeasure and inspected parts
11	GPS Receiver Error	Operation error of GPS receiver is detected.	At an outdoor site with a clear view, operate to display GPS data. If GPS mark is not properly displayed after 15 min. or more, replace navigation ECU.
40	GPS Antenna Error	Open condition of GPS antenna is detected. (Open circuit, connection failure of connectors, etc.)	Inspect antenna and replace if necessary.
41	Power Supply Error of GPS Antenna	Abnormal voltage of GPS antenna cable or short circuit is detected.	 Inspect GPS antenna and replace if necessary. (When no continuity is identified between connector's core and sealed part, GPS antenna is normal.) If GPS antenna is normal, replace navigation ECU.

5. STEREO COMPONENT AMPLIFIER (Physical address: 440)

- *1: Even if no failure is detected, this code may be stored depending on the battery condition or voltage for starting an engine.
- *2: This code may be stored when the engine key is turned again 1 min. after engine start.
- *3: This code may be stored when the engine key is turned again after engine start.
- *4: When 210 sec. has passed after pulling out the power supply connector of the master component with the ignition switch in ACC or ON, this code is stored.

DTC	Diagnosis item	Condition	Countermeasure and inspected parts
D6 *1	Absence of Master	Component in which this code is recorded has been disconnected from system with ignition in ACC or ON. Or, when this code was recorded, multi-display assembly was disconnected.	Check harness for power supply of multi display. Check harness for communication system of multi display. Check harness for power supply of stereo component amplifier. Check harness for communication system of stereo component amplifier.
D7	Communication Check Error	Component in which this code is recorded is or was disconnected from system after engine start. Or, when recording this code, multi-display assembly was disconnected.	Check harness for power supply of multi display. Check harness for communication system of multi display. Check harness for power supply of stereo component amplifier. Check harness for communication system of stereo component amplifier.
DC *2	Transmission Error	Transmission to component shown by sub- code has been failed. (Detecting this DTC does not necessarily mean actual failure.)	If same sub-code is recorded in other com- ponent, check harness for power supply and communication system of all components shown by code.
DD *3	Master Reset (Momentary Interruption)	After engine start, multi-display assembly was disconnected from system.	Check harness for power supply of multi display. Check harness for communication system of multi display. Check harness for power supply of stereo component amplifier. Check harness for communication system of stereo component amplifier. If this error occurs frequently, replace multi-display assembly.
DF *4	Master Error	Due to defective condition of component with a display, master function is switched to audio equipment. Error occurs in communication between sub-master (audio) and master component.	Check harness for power supply of multi–display assembly. Check harness for communication system of multi–display assembly. Check harness for communication system between multi–display assembly and sub–master component.
E0 *1	Registration Completion Instruction Error	"Registration Completion Instruction" command from master cannot be received.	Since this DTC is provided for engineering purpose, it may be detected when no actual failure exists.
E1 *1	Audio processor ON error	While source equipment is operating, AMP output is stopped.	Check harness for power supply of multi-display assembly. Check harness for communication system of multi-display assembly.
E2	ON/OFF Instruction Parameter Error	Error occurs in ON/OFF controlling command from multi-display assembly.	Replace multi-display assembly.
E3 *1	Registration Request Transmission	Registration Request command is output from slave component. Registration Connection Check Instruction, Registration Request command is output from sub-master component.	Since this DTC is provided for engineering purpose, it may be detected when no actual failure exists.

6. STEREO COMPONENT TUNER (Physical address: 1F0)

HINT:

- *1: Even if no failure is detected, this code may be stored depending on the battery condition or voltage for starting an engine.
- *2: This code may be stored when the engine key is turned again 1 min. after engine start.
- *3: This code may be stored when the engine key is turned again after engine start.
- *4: When 210 sec. has passed after pulling out the power supply connector of the master component with the ignition switch in ACC or ON, this code is stored.

DTC	Diagnosis item	Condition	Countermeasure and inspected parts
D6 *1	Absence of Master	Component in which this code is recorded has been disconnected from system with ignition in ACC or ON. Or, when this code was recorded, multi-display assembly was disconnected.	Check harness for power supply of stereo component tuner. Check harness for communication system of stereo component tuner. Check harness for power supply system of multi display. Check harness for communication system multi display.
D7	Communication Check Error	Component in which this code is recorded is or was disconnected from system after engine start. Or, when recording this code, multi-display assembly was disconnected.	Check harness for power supply of stereo component tuner. Check harness for communication system of stereo component tuner. Check harness for power supply system of multi display. Check harness for communication system multi display.
DC *2	Transmission Error	Transmission to component shown by sub- code has been failed. (Detecting this DTC does not necessarily mean actual failure.)	If same sub-code is recorded in order com- ponent, check harness for power supply and communication system of all components shown by code.
DD *3	Master Reset (Momentary Interruption)	After engine start, multi-display assembly was disconnected from system.	Check harness for power supply system of stereo component tuner. Check harness for communication system of stereo component tuner. Check harness for power supply system of multi display. Check harness for communication system multi display. If this error occurs frequently, replace multi-display assembly.
DF *4	Master Error	Due to defective condition of component with a display, master function is switched to audio equipment. Error occurs in communication between sub-master (audio) and master component.	Check harness for power supply of multi–display assembly. Check harness for communication system of multi–display assembly. Check harness for communication system between multi–display assembly and radio and player.
E0 *1	Registration Completion Instruction Error	"Registration Completion Instruction" command from master cannot be received.	Since this DTC is provided for engineering purpose, it may be detected when no actual failure exists.

E2	ON/OFF Instruction Parameter Error	Error occurs in ON/OFF controlling command from radio and player.	Replace multi display.
E3 *1	Registration Request Transmission	Registration Request command is output from slave component. Receiving Connection Check Instruction, Registration Request command is output from sub-master component.	Since this DTC is provided for engineering purpose, it may be detected when no actual failure exists.

7. AUDIO AND REAR A/C CONTROL SWITCH (Physical address: 1C0)

HINT:

- *1: Even if no failure is detected, this code may be stored depending on the battery condition or voltage for starting an engine.
- *2: This code may be stored when the engine key is turned again 1 min. after engine start.
- *3: This code may be stored when the engine key is turned again after engine start.
- *4: When 210 sec. has passed after pulling out the power supply connector of the master component with the ignition switch in ACC or ON, this code is stored.

DTC	Diagnosis item	Condition	Countermeasure and inspected parts
D6 *1	Absence of Master	Component in which this code is recorded has been disconnected from system with ignition in ACC or ON. Or, when this code was recorded, multi-display assembly was disconnected.	Check harness for power supply system of multi-display. Check harness for communication system multi-display. Check harness for power supply system of audio and rear A/C control switch. Check harness for communication system audio and rear A/C control switch.
D7 *2	Communication Check Error	Component in which this code is recorded is or was disconnected from system after engine start. Or, when recording this code, multi-display assembly was disconnected.	Check harness for power supply system of multi-display. Check harness for communication system of multi-display. Check harness for power supply system of audio and rear A/C control switch. Check harness for communication system audio and rear A/C control switch
DC *2	Transmission Error	Transmission to component shown by sub-code has been failed. (Detecting this DTC does not necessarily mean actual failure.)	If same sub-code is recorded in order com- ponent, check harness for power supply and communication system of all components shown by code.
DD *3	Master Reset (Momentary Interruption)	After engine start, multi-display assembly was disconnected from system.	Check harness for power supply system of multi-display. Check harness for communication system multi-display. Check harness for power supply system of audio and rear A/C control switch. Check harness for communication system audio and rear A/C control switch If this error occurs frequently, replace multi-display assembly.

DF *4	Master Error	Due to defective condition of component with a display, master function is switched to audio equipment. Error occurs in communication between sub-master (audio) and master component.	Check harness for power supply of multi–display assembly. Check harness for communication system of multi–display assembly. Check harness for communication system between multi–display assembly and radio and player.
E0 *1	Registration Completion Instruction Error	"Registration Completion Instruction" command from master cannot be received.	Since this DTC is provided for engineering, it may be detected when no actual failure exists.
E3 *1	Registration Request Transmission	Registration Request command is output from slave component. Receiving Connection Check Instruction, Registration Request command is output from sub-master component.	Since this DTC is provided for engineering purpose, it may be detected when no actual failure exists.
E4 *1	Multiple Frame Abort	Multiple frame transmission is aborted.	Since this DTC is provided for engineering purpose, it may be detected when no actual failure exists.

8. TELEPHONE ECU (Physical address:17C)

HINT:

- *1: Even if no failure is detected, this code may be stored depending on the battery condition or voltage for starting an engine.
- *2: This code may be stored when the engine key is turned again 1 min. after engine start.
- *3: This code may be stored when the engine key is turned again after engine start.
- *4: When 210 sec. has passed after pulling out the power supply connector of the master component with the ignition switch in ACC or ON, this code is stored.

DTC	Diagnosis item	Condition	Countermeasure and inspected parts
21	ROM Error	Abnormal condition of ROM is detected.	Replace multi-display assembly.
22	RAM Error	Abnormal condition of RAM is detected.	Replace multi-display assembly.
D6 *1	Absence of Master	Component in which this code is recorded has been disconnected from system with ignition in ACC or ON. Or, when this code was recorded, multi-display assembly was disconnected.	Check harness for power supply of radio and player. Check harness for communication system of radio and player. Check harness for power supply of stereo component amplifier. Check harness for communication system of stereo component amplifier.
D7	Communication Check Error	Component in which this code is recorded is or was disconnected from system after engine start. Or, when recording this code, multi-display assembly was disconnected.	 Check harness for power supply of radio and player. Check harness for communication system of radio and player. Check harness for power supply of telephone tranceiver and speaker relay. Check harness for communication system of telephone tranceiver and speaker relay.
DC *2	Transmission Error	Transmission to component shown by sub- code has been failed. (Detecting this DTC does not necessarily mean actual failure.)	If same sub-code is recorded in order com- ponent, check harness for power supply and communication system of all components shown by code.

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DD *3	Master Reset (Momentary Interruption)	After engine start, multi-display assembly was disconnected from system.	Check harness for power supply of radio and player. Check harness for communication system of radio and player. Check harness for power supply of telephone receiver and speaker relay. Check harness for communication system of telephone receiver and speaker relay. If this error occurs frequently, replace multi-display assembly.
E0 *1	Registration Completion Instruction Error	"Registration Completion Instruction" command from master cannot be received.	Since this DTC is provided for engineering purpose, it may be detected when no actual failure exists.
E2	ON/OFF Instruction Parameter Error	Error occurs in ON/OFF controlling command from multi-display assembly.	Replace multi-display assembly.
E3 *1	Registration Request Transmission	Registration Request command is output from slave component. Registration Connection Check Instruction, Registration Request command is output from sub-master component.	Since this DTC is provided for engineering purpose, it may be detected when no actual failure exists.
E4 *1	Multiple Frame Abort	Multiple frame transmission is aborted.	Since this DTC is provided for engineering purpose, it may be detected when no actual failure exists.