05HBQ–01

DIAGNOSTIC TROUBLE CODE CHART

Terms	Description
Physical address	3–digit, hexadecimal code assigned to all components connected to the AVC–LAN. Individual symbols are specified based on function. Units whose names are unknown or relevant units are displayed with physical addresses.
Logical address	2–digit, hexadecimal code assigned to all the functions in the AVC–LAN system.

HINT:

Titles for each unit are stated in the following order: [parts name (physical address)] [Name indicated by DTC]

1. MULTI–DISPLAY (physical address: 110) [EMV]

(a) Logical address: 01 (Communication control)

DTC	Name	Diagnosis	Verification	See page
D5	Absence of registration unit	A device that the sub code shows is (was) disconnected from the system when turning the power switch to the ON (ACC) or ON (ON) position. The communication condition with the device that the code shows cannot be obtained when the system starts.	Inspect the device indicated by the sub code (Refer to the inspection list for the device indicated by the sub code)	Refer to step 6
D8	No response for connection check	The device indicated by the sub code is (was) disconnected from the system after system start.	Inspect the device indicated by the sub code (Refer to the inspection list for the device indicated by the sub code)	Refer to step 6
D9	Last mode error	The device (for audio visual system) that had functioned before the system stopped is (was) disconnected from the system when the power switch is (was) in the ON (ACC) or ON (ON) position.	Inspect the device indicated by the sub code (Refer to the inspection list for the device indicated by the sub code)	Refer to step 6
DA	No response against ON/OFF command	No response is identified when changing mode (audio and visual mode change). Detected when sound and image do not change by switch operation.	Inspect the device indicated by the sub code (Refer to the inspection list for the device indicated by the sub code)	Refer to step 6
DB	Mode status error	This code detects a dual alarm.	Inspect the device indicated by the sub code (Refer to the inspection list for the device indicated by the sub code)	Refer to step 6
DC	Failure in transmission	This code indicates a transmission failure to the device indicated by the sub code. NOTE: This DTC may have no direct relationship with the malfunction.	Inspect the device indicated by the sub code (Refer to the inspection list for the device indicated by the sub code)	Refer to step 6
DE	Slave reset	This code is stored when a slave device has been disconnected after system start.	Inspect the device indicated by the sub code (Refer to the inspection list for the device indicated by the sub code)	Refer to step 6
21	ROM error	This code is output when a malfunction exists in ROM.	Replace multi–display	67–7
22	RAM error	This code is output when a malfunction exists in RAM.	Replace multi–display	67–7

(b) Logical address: 21 (SW): 23 (SW with name): 24 (SW converting): 25 (command SW)

DTC	Name	Diagnosis	Verification	See page
10	Panel switch error	The panel SW detection circuit has a failure.	Replace multi–display	67–23

2. NAVIGATION ECU (Physical address: 178) [NAVI]

(a) Logical address: 01 (Communication control)

HINT:

Methods used to verify the cause of the problem are listed in order of probability in the verification column.

DTC	Name	Diagnosis	Verification	See page
D6	No master	When either the following condition meets. • The device that stores (stored) the code has (had) been disconnected when the power switch is (was) in ON (ACC) or ON (ON) position. • The master device has (had) been disconnected when this code is (was) stored.	1. Power source circuit (multi–display) 2. AVC–LAN circuit (navigation ECU–multi–display) 3. Power source circuit (navigation ECU) 4. Replace multi–display 5. Replace navigation ECU	05–1630 05–1665 05–1632 67–7 67–23
D7	Connection check error	When either the following condition meets. • The device that stored this code has (had) been disconnected after the system starts (started). • The master device has (had) been disconnected when this code is (was) stored.	1. Power source circuit (multi–display) 2. AVC–LAN circuit (navigation ECU–multi–display) 3. Power source circuit (navigation ECU) 4. Replace multi–display 5. Replace navigation ECU	05–1630 05–1665 05–1632 67–7 67–23
DC	Transmission error	The device stores the fact that transmission to the device indicated by the sub code has failed.	Inspect the device indicated by the sub code (Refer to the inspection list for the device indicated by the sub code)	Refer to step 6
DD	Master reset	When the device that should be the master has been disconnected after system starts.	1. Power source circuit (multi–display) 2. AVC–LAN circuit (navigation ECU–multi–display) 3. Replace multi–display	05–1630 05–1665 67–7
DF	Master error	When the device with a display fails and the master is switched to the audio device. Also when a communication error between sub master (audio) and master occurs, this code is stored.	1. Power source circuit (multi–display) 2. AVC–LAN circuit (navigation ECU–multi–display) 3. Replace multi–display	05–1630 05–1665 67–7
E0	Registration complete indication error	When ”Registration complete” command from the master device cannot be received.	This code is detected when signal receiving time is delayed	–
E1	Voice processing device ON error	When the AMP device records that the AMP output does not function even while the source device operates.	1. Power source circuit (multi–display) 2. AVC–LAN circuit (navigation ECU–multi–display) 3. Replace multi–display	05–1630 05–1665 67–7
E2	ON/OFF indication parameter error	When the command for ON/OFF control from the master device has a problem.	Replace multi–display	67–7
E3	Registration demand transmission	When the registration demand command from the slave device is output, or when the registration demand command is output by receiving connection confirmation command from the sub master device.	–	–
E4	Multiple frame incomplete	When the multiple frame transmission ends incompletely.	–	–

(b) Logical address: 58 (Navigation): 80 (GPS)

HINT:

Methods used to verify the cause of the problem are listed in order of probability in the verification column.

DTC	Name	Diagnosis	Verification	See page
10	Gyro error	Ground short, power supply short, or open circuit in the gyro signal, gyro failure.	1. Inspect the gyro error 2. Replace GPS antenna 3. Replace navigation ECU	05–1616 67–22 67–23
11	GPS receiver error	RTC, ROM, and RAM of the GPS receiver and TCXO errors. GPS receiver is failed.	Replace navigation ECU	67–23
40	GPS antenna error	GPS antenna error	1. Replace GPS antenna 2. Replace navigation ECU	67–22 67–23
41	GPS antenna power source error	Error of the power source to the GPS antenna	1. Replace GPS antenna 2. Replace navigation ECU	67–22 67–23
42	Map disc read error	Player error. A scratch or dirt on the disc. Access to an invalid address due to software error.	1. Inspect map disc read error 2. Replace map disc 3. Replace navigation ECU	05–1617 – 67–23
43	SPD signal error	The difference between the GPS speed and SPD pulse is detected.	1. Inspect speed signal error 2. Speed signal circuit 3. Replace navigation ECU	05–1618 05–1634 67–23

3. RADIO RECEIVER ASSY (Physical address: 190) [AUDIO H/U]

(a) Logical address: 01 (Communication control)

HINT:

Methods used to verify the cause of the problem are listed in order of probability in the verification column.

DTC	Name	Diagnosis	Verification	See page
D6	No master	When either the following condition meets. • The device that stores (stored) the code has (had) been disconnected when the power switch is (was) in ON (ACC) or ON (ON) position. • The master device has (had) been disconnected when this code is (was) stored.	1. Power source circuit (multi–display) 2. AVC–LAN circuit (multi–display – radio receiver assy) 3. Power source circuit (radio receiver assy) 4. Replace multi–display 5. Replace radio receiver assy	05–1630 05–1669 05–1692 67–7 67–5
D7	Connection check error	When either the following condition meets. • The device that stored this code has (had) been disconnected after the system starts (started). • The master device has (had) been disconnected when this code is (was) stored.	1. Power source circuit (multi–display) 2. AVC–LAN circuit (multi–display – radio receiver assy) 3. Power source circuit (radio receiver assy) 4. Replace multi–display 5. Replace radio receiver assy	05–1630 05–1669 05–1692 67–7 67–5
DC	Transmission error	The device stores the fact that transmission to the device indicated by the sub code has failed.	Inspect the device indicated by the sub code (Refer to the inspection list for the device indicated by the sub code)	Refer to step 6
DD	Master reset	When the device that should be the master has been disconnected after system starts.	1. Power source circuit (multi–display) 2. AVC–LAN circuit (multi–display – radio receiver assy) 3. Replace multi–display	05–1630 05–1669 67–7
DF	Master error	When the device with a display fails and the master is switched to the audio device. Also when a communication error between sub master (audio) and master occurs, this code is stored.	1. Power source circuit (multi–display) 2. AVC–LAN circuit (multi–display – radio receiver assy) 3. Replace multi–display	05–1630 05–1669 67–7

E0	Registration complete indication error	When "Registration complete" command from the master device cannot be received.	This code is detected when signal receiving time is delayed.	–
E1	Voice processing device ON error	When the AMP device records that the AMP output does not function even while the source device operates.	1. Power source circuit (multi–display) 2. AVC–LAN circuit (multi–display – radio receiver assy) 3. Replace multi–display	05–1630 05–1669 67–7
E2	ON/OFF indication parameter error	When the command for ON/OFF control from the master device has a problem.	Replace multi–display	67–7
E3	Registration demand transmission	When the registration demand command from the slave device is output, or when the registration demand command is output by receiving connection confirmation command from the sub master device.	–	–
E4	Multiple frame incomplete	When the multiple frame transmission ends incompletely	–	–

(b) Logical address: 01 (Communication control)

DTC	Name	Diagnosis	Verification	See page
D5	Absence of registration unit	A device that the sub code shows is (was) disconnected from the system when turning the power switch to the ON (ACC) or ON (ON) position. The communication condition with the device that the code shows cannot be obtained when the system starts.	Inspect the device indicated by the sub code (Refer to the inspection list for the device indicated by the sub code)	Refer to step 6
D8	No response for connection check	The device indicated by the sub code is (was) disconnected from the system after system start	Inspect the device indicated by the sub code (Refer to the inspection list for the device indicated by the sub code)	Refer to step 6
D9	Last mode error	The device (for audio visual system) that had functioned before the system stopped is (was) disconnected from the system when the power switch is (was) in the ON (ACC) or ON (ON) position.	Inspect the device indicated by the sub code (Refer to the inspection list for the device indicated by the sub code)	Refer to step 6
DA	No response against ON/OFF command	No response is identified when changing mode (audio and visual mode change). Detected when sound and image do not change by switch operation.	Inspect the device indicated by the sub code (Refer to the inspection list for the device indicated by the sub code)	Refer to step 6
DB	Mode status error	This code detects a dual alarm.	Inspect the device indicated by the sub code (Refer to the inspection list for the device indicated by the sub code)	Refer to step 6
DC	Failure in transmission	This code indicates a transmission failure to the device indicated by the sub code. NOTE: This DTC may have no direct relationship with the malfunction.	Inspect the device indicated by the sub code (Refer to the inspection list for the device indicated by the sub code)	Refer to step 6
DE	Slave reset	This code is stored when a slave device has been disconnected after system start.	Inspect the device indicated by the sub code (Refer to the inspection list for the device indicated by the sub code)	Refer to step 6

(c) Logical address: 60 (Radio)

HINT:

Methods used to verify the cause of the problem are listed in order of probability in the verification column.

DTC	Name	Diagnosis	Verification	See page
10	AM tuner PLL does not lock	The PLL circuit in the AM tuner is abnormal.	1. After clearing the DTC, check the antenna wiring 2. If the same code is detected, replace the radio receiver assy	– 67–5
11	FM tuner PLL does not lock	The PLL circuit in the FM tuner is abnormal.	1. After clearing the DTC, check the antenna wiring 2. If the same code is detected, replace the radio receiver assy	– 67–5
40	Antenna is not connected	The antenna is disconnected.	1. After clearing the DTC, check the antenna wiring 2. If the same code is detected, replace the radio receiver assy	– 67–5
41	Antenna power source error	The power source system of the antenna is abnormal.	1. After clearing the DTC, check the antenna wiring 2. If the same code is detected, replace the radio receiver assy	– 67–5
42	Tuner power source error	The power source of the tuner is abnormal.	1. Power source circuit (radio receiver assy) 2. Replace radio receiver assy	05–1492 67–5
43	AM tuner error	The AM tuner is abnormal.	Replace radio receiver assy	67–5
44	FM tuner error	The FM tuner is abnormal.	Replace radio receiver assy	67–5
45	SW tuner error	The SW tuner is abnormal.	Replace radio receiver assy	67–5

(d) Logical address: 62 (CD): 63 (CD changer)

HINT:

Methods used to verify the cause of the problem are listed in order of probability in the verification column.

DTC	Name	Diagnosis	Verification	See page
10	CD player mechanical error	A mechanical error in the CD player is detected while the CD is not being inserted or ejected.	Replace radio receiver assy	67–5
11	CD insertion & eject error	CD insertion or ejection is failed.	Replace radio receiver assy	67–5
12	CD reading abnormal	CD reading problem occurs.	Replace radio receiver assy	67–5
40	No disc	No disc is inserted.	1. Check whether the CD is inserted or not. If the CD is inserted, check whether it can be ejected or not. If it cannot be ejected, replace radio receiver assy. 2. Inspect CD 3. If the same code is detected, replace the radio receiver assy	67–5 05–1533 67–5
41	Wrong disc	An unsuitable disc is inserted.	1. Inspect CD 2. If the same code is detected, replace the radio receiver assy	05–1533 67–5
42	Disc cannot be read	The disc cannot be read.	1. Inspect CD 2. If the same code is detected, replace the radio receiver assy	05–1533 67–5
43	CD–ROM abnormal	CD–ROM operation is abnormal.	Replace radio receiver assy	67–5

44	CD abnormal	Operation error in the CD mechanism (except for code 10).	1. After clearing the DTC, check the malfunction symptom. 2. If the same code is detected, replace the radio receiver assy	– 67–5
45	EJECT error	Magazine cannot be ejected.	Replace radio receiver assy	67–5
46	Disc has scratches in the reverse surface	CD has a dirt or scratches in the reverse side.	1. Inspect CD 2. If the same code is detected, replace the radio receiver assy	05–1533 67–5
47	CD temperature is high	The sensor detects that the CD unit temperature is high.	1. Park the vehicle in a cool place. Turn the system off. After checking that the temperature of the radio and navigation assy becomes sufficiently low, turn the system on in order to verify the malfunction symptom. 2. If the same code is detected, replace the radio receiver assy	– 67–5
48	Excess current	Excess current is applied to the disc player changer.	Replace radio receiver assy	67–5
50	Tray insertion/ejection error	Malfunction in insertion/ejection system	Replace radio receiver assy	67–5
51	Elevator error	Mechanical error occurred during elevator operation	Replace radio receiver assy	67–5
52	Clamp error	Clamp unusually generating	Replace radio receiver assy	67–5

(e) Logical address: 61 (Cassette)

HINT:

Methods used to verify the cause of the problem are listed in order of probability in the verification column.

DTC	Name	Diagnosis	Verification	See page
10	Belt cut	The inside belt is cut or came off.	Replace radio receiver assy	67–5
40	Mechanical error of media	A malfunction due to mechanical problem, cassette tape is cut or entangled.	1. Replace the cassette tape and recheck the symptom 2. If the same code is detected, replace the radio receiver assy	– 67–5
41	EJECT error	A malfunction due to mechanical problem.	Replace radio receiver assy	67–5
42	Tape tangling	Cassette tape is tangled.	Replace radio receiver assy	67–5
43	Head dirt	Head is dirty.	1. Clean the head and recheck the symptom 2. If the same code is detected, replace the radio receiver assy	– 67–5
44	Device power supply problem	A short or open in the power circuit.	1. Power source circuit (radio receiver assy) 2. Replace radio receiver assy	05–1492 67–5

4. GATEWAY ECU (Physical address: 1C6) [G/W]

(a) Logical address: 01 (Communication control)

HINT:

Methods used to verify the cause of the problem are listed in order of probability in the verification column.

DTC	Name	Diagnosis	Verification	See page
D4	Regular Communication Error	Component in which this code is recorded has been disconnected from system with power in the ACC or ON position. Either that, or the multi–display was disconnected when this code was recorded.	1. Power source circuit (multi–display) 2. AVC–LAN circuit (multi–display – gateway ECU) 3. Replace multi–display 4. Replace gateway ECU	05–1630 05–1667 67–7 –

5. STEREO COMPONENT AMPLIFIER ASSY (Physical address: 440) [DSP AMP]

(a) Logical address: 01 (Communication control)

HINT:

Methods used to verify the cause of the problem are listed in order of probability in the verification column.

DTC	Name	Diagnosis	Verification	See page
D6	No master	When either the following condition meets. • The device that stores (stored) the code has (had) been disconnected when the power switch is (was) in ON (ACC) or ON (ON) position. • The master device has (had) been disconnected when this code is (was) stored.	1. Power source circuit (multi–display) 2. AVC–LAN circuit (multi–display – radio receiver assy) 3. Power source circuit (stereo component amplifier assy) 4. AVC–LAN circuit (radio receiver assy – stereo component amplifier assy) 5. Replace multi–display 6. Replace stereo component amplifier assy	05–1630 05–1669 05–1495 05–1521 67–7 67–25
D7	Connection check error	When either the following condition meets. • The device that stored this code has (had) been disconnected after the system starts (started). • The master device has (had) been disconnected when this code is (was) stored.	1. Power source circuit (multi–display) 2. AVC–LAN circuit (multi–display – radio receiver assy) 3. Power source circuit (stereo component amplifier assy) 4. AVC–LAN circuit (radio receiver assy – stereo component amplifier assy) 5. Replace multi–display 6. Replace stereo component amplifier assy	05–1630 05–1669 05–1495 05–1521 67–7 67–25
DC	Transmission error	The device stores the fact that transmission to the device indicated by the sub code has failed.	Inspect the device indicated by the sub code (Refer to the inspection list for the device indicated by the sub code)	Refer to step 6
DD	Master reset	When the device that should be the master has been disconnected after system starts.	1. Power source circuit (multi–display) 2. AVC–LAN circuit (multi–display – radio receiver assy) 3. Replace multi–display	05–1630 05–1669 67–7
DF	Master error	When the device with a display fails and the master is switched to the audio device. Also when a communication error between sub master (audio) and master occurs, this code is stored.	1. Power source circuit (multi–display) 2. AVC–LAN circuit (multi–display – radio receiver assy) 3. Replace multi–display	05–1630 05–1669 67–7
E0	Registration complete indication error	When ”Registration complete” command from the master device cannot be received.	This code is detected when signal receiving time is delayed.	–
E1	Voice processing device ON error	When the AMP device records that the AMP output does not function even while the source device operates.	1. Power source circuit (multi–display) 2. AVC–LAN circuit (multi–display – radio receiver assy) 3. Replace multi–display	05–1630 05–1669 67–7
E2	ON/OFF indication parameter error	When the command for ON/OFF control from the master device has a problem.	Replace multi–display	67–7

E3	Registration demand transmission	When the registration demand command from the slave device is output, or when the registration demand command is output by receiving connection confirmation command from the sub master device.	–	–
E4	Multiple frame incomplete	When the multiple frame transmission ends incompletely	–	–

6. THE INSPECTION LIST FOR THE DEVICE INDICATED BY THE SUB CODE

HINT:

Methods used to verify the cause of the problem are listed in order of probability in the verification column.

Sub code address (Device name)	Verification	See page
110 (Multi–display)	1. Power source circuit (multi–display) 2. AVC–LAN circuit (multi–display – radio receiver assy) 3. Replace multi–display	05–1630 05–1669 67–7
178 (Navigation ECU)	1. Power source circuit (navigation ECU) 2. AVC–LAN circuit (multi–display – navigation ECU) 3. Replace navigation ECU	05–1632 05–1665 67–23
190 (Radio receiver assy)	1. Power source circuit (radio receiver assy) 2. AVC–LAN circuit (multi–display – radio receiver assy) 3. Replace radio receiver assy	05–1492 05–1669 67–5
1C6 (Gateway ECU)	1. AVC–LAN circuit (multi–display – gateway ECU) 2. Replace gateway ECU	05–1667 –
440 (Stereo Component Amplifier Assy)	1. Power source circuit (stereo component amplifier assy) 2. AVC–LAN circuit (radio receiver assy–stereo component amplifier assy) 3. Replace stereo component amplifier assy	05–1495 05–1521 67–25