

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. | Inspection for 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. | Inspection for 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. | Inspection for 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. | Inspection for 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. | Inspection for 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. | Inspection for 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. | Inspection for 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. <ul style="list-style-type: none"> • The device that stores (stored) the code has (had) been disconnected when the power switch is in ON (ACC) or ON (ON) position. • The master device has (had) been disconnected when this code is stored. | <ol style="list-style-type: none"> 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 | 05-1933 05-1967 05-1935 67-7 67-23 |
| D7 | Connection check error | When either the following condition meets. <ul style="list-style-type: none"> • 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. | <ol style="list-style-type: none"> 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 | 05-1933 05-1967 05-1935 67-7 67-23 |
| DC | Transmission error | The device stores the fact that transmission to the device indicated by the sub code has failed. | Inspection for 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. | <ol style="list-style-type: none"> 1. Power source circuit (multi-display) 2. AVC-LAN circuit (navigation ECU-multi-display) 3. Replace multi-display | 05-1933 05-1967 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. | <ol style="list-style-type: none"> 1. Power source circuit (multi-display) 2. AVC-LAN circuit (navigation ECU-multi-display) 3. Replace multi-display | 05-1933 05-1967 67-7 |
| E0 | Registration complete indication error | When "Registration complete" command from the master device cannot be received. | This code will be 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. | <ol style="list-style-type: none"> 1. Power source circuit (multi-display) 2. AVC-LAN circuit (navigation ECU-multi-display) 3. Replace multi-display | 05-1933 05-1967 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 incomplete. | – | – |

(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 | 05–1919 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 | 05–1920 – 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 | 05–1921 05–1937 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 in ON (ACC) or ON (ON) position. • The master device has (had) been disconnected when this code is 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 | 05–1933 05–1971 05–1793 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 | 05–1933 05–1971 05–1793 67–7 67–5 |
| DC | Transmission error | The device stores the fact that transmission to the device indicated by the sub code has failed. | Inspection for 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 | 05–1933 05–1971 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 | 05–1933 05–1971 67–7 |

DIAGNOSTICS – NAVIGATION SYSTEM

| | | | | |
|----|--|--|---|----------------------------|
| E0 | Registration complete indication error | When "Registration complete" command from the master device cannot be received. | This code will be 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 | 05-1933 05-1971 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 incomplete | – | – |

(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. | Inspection for 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 | Inspection for 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 ACC or ON position. | Inspection for 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. | Inspection for 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. | Inspection for 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. | Inspection for 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. | Inspection for 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 | 05–1793 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 read 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 05–1836 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 | 05–1836 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 | 05–1836 67–5 |

DIAGNOSTICS – NAVIGATION SYSTEM

| | | | | |
|----|---|---|---|-----------------|
| 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 | 05-1836 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 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 come 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 | 05-1793 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. | <ol style="list-style-type: none"> 1. Power source circuit (multi-display) 2. AVC-LAN circuit (multi-display – gateway ECU) 3. Replace multi-display 4. Replace gateway ECU | 05-1933 05-1969 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. <ul style="list-style-type: none"> • The device that stores (stored) the code has (had) been disconnected when the power switch is in ON (ACC) or ON (ON) position. • The master device has (had) been disconnected when this code is stored. | <ol style="list-style-type: none"> 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 | 05–1933 05–1971 05–1796 05–1824 67–7 67–25 |
| D7 | Connection check error | When either the following condition meets. <ul style="list-style-type: none"> • 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. | <ol style="list-style-type: none"> 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 | 05–1933 05–1971 05–1796 05–1824 67–7 67–25 |
| DC | Transmission error | The device stores the fact that transmission to the device indicated by the sub code has failed. | Inspection for 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. | <ol style="list-style-type: none"> 1. Power source circuit (multi–display) 2. AVC–LAN circuit (multi–display – radio receiver assy) 3. Replace multi–display | 05–1933 05–1971 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. | <ol style="list-style-type: none"> 1. Power source circuit (multi–display) 2. AVC–LAN circuit (multi–display – radio receiver assy) 3. Replace multi–display | 05–1933 05–1971 67–7 |
| E0 | Registration complete indication error | When "Registration complete" command from the master device cannot be received. | This code will be 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. | <ol style="list-style-type: none"> 1. Power source circuit (multi–display) 2. AVC–LAN circuit (multi–display – radio receiver assy) 3. Replace multi–display | 05–1933 05–1971 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 incomplete | – | – |

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 | 05-1933 05-1971 67-7 |
| 178 (Navigation ECU) | 1. Power source circuit (navigation ECU) 2. AVC-LAN circuit (multi-display – navigation ECU) 3. Replace navigation ECU | 05-1935 05-1967 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 | 05-1793 05-1971 67-5 |
| 1C6 (Gateway ECU) | 1. AVC-LAN circuit (multi-display – gateway ECU) 2. Replace gateway ECU | 05-1969 – |
| 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 | 05-1796 05-1824 67-25 |