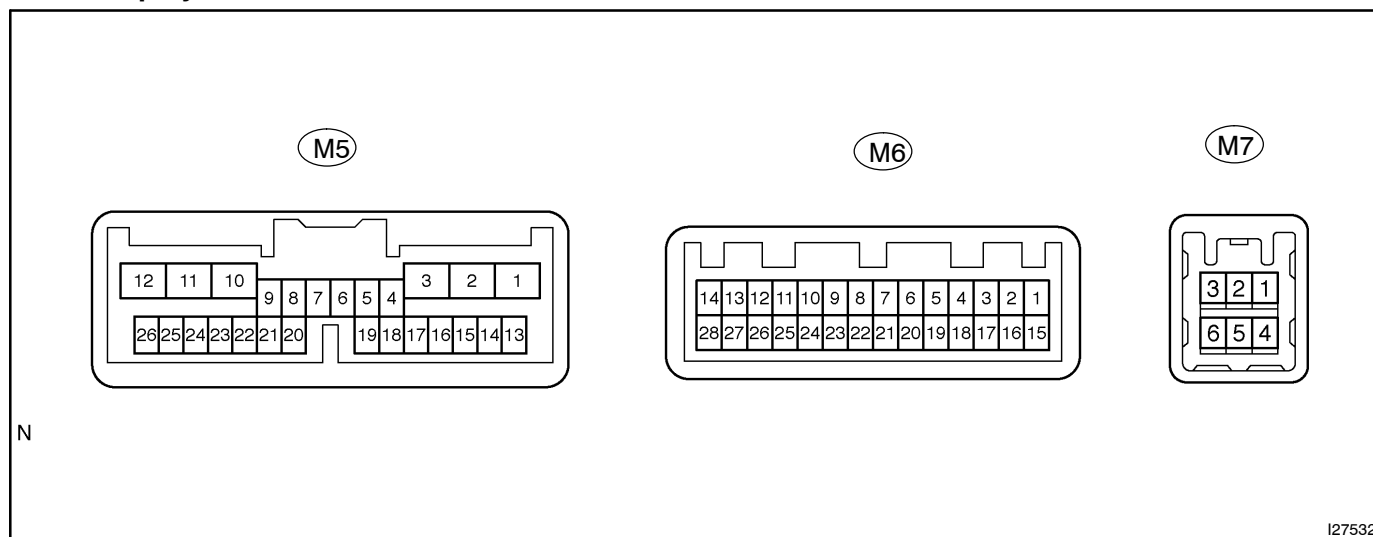


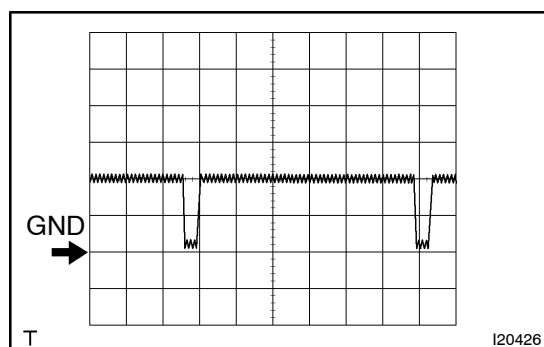
TERMINALS OF ECU

Multi-display:

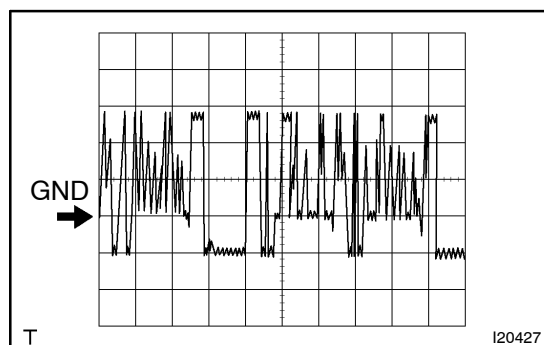


Symbols (Terminals No.)	Wiring Color	Terminal Description	Condition	Specification
GND1 (M5-3) – Body ground	W-B – Body ground	Ground	Always	Below 1 V
TX1+ (M5-4) – GND1 (M5-3)	P – W-B	AVC-LAN communication signal	Turn ignition switch to ON	2 to 3 V
TX1- (M5-5) – GND1 (M5-3)	L-B – W-B	AVC-LAN communication signal	Turn ignition switch to ON	2 to 3 V
TC (M5-7) – GND1 (M5-3)	P-B – W-B	Diagnosis ON signal	Turn ignition switch to the ON position	9 to 14 V
IG (M5-10) – GND1 (M5-3)	B-W – W-B	Ignition (ON)	Turn ignition switch OFF → ON	Below 1 V → 10 to 14 V
ACC (M5-11) – GND1 (M5-3)	GR – W-B	Accessory (ON)	Turn ignition switch OFF → ACC or ON	Below 1 V → 10 to 14 V
B1 (M5-12) – GND1 (M5-3)	L-W – W-B	Battery	Always	10 to 14 V
PKB (M5-16) – GND1 (M5-3)	R-W – W-B	Parking brake signal	Turn parking brake switch ON → OFF	Below 1 V → 10 to 14 V
SPD (M5-25) – GND1 (M5-3)	V – W-B	Speed signal from combination meter	See "vehicle signal check mode"	
SGND (M6-3) – GND1 (M5-3)	W-B – W-B	Screen noise or other types of noise occur	Ignition switch OFF	Below 1 V
MIN+ (M6-4) – GND1 (M5-3)	B – W-B	Microphone voice signal	See "microphone check"	–
MIN- (M6-5) – Body ground	W – Body ground	Microphone voice signal	See "microphone check"	–
MACC (M6-6) – GND1 (M5-3)	Y-G – W-B	Microphone Accessory	Turn ignition switch OFF → ON	Below 1 V → 10 to 14 V
TX3+ (M6-11) – GND1 (M5-3)	P-L – W-B	AVC-LAN communication signal	Turn ignition switch to ON	2 to 3 V
TX3- (M6-12) – GND1 (M5-3)	P-B – W-B	AVC-LAN communication signal	Turn ignition switch to ON	2 to 3 V
TX+ (M6-13) – GND1 (M5-3)	P – W-B	AVC-LAN communication signal	Turn ignition switch to ON	2 to 3 V
TX- (M6-14) – GND1 (M5-3)	L – W-B	AVC-LAN communication signal	Turn ignition switch to ON	2 to 3 V

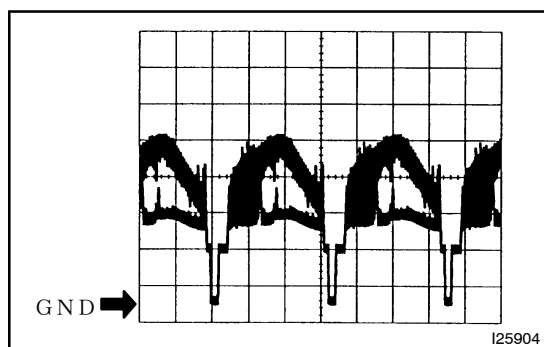
SGND (M6-17) – GND1 (M5-3)	Shielded – W-B	Screen noise or other types of noise occur	Ignition switch OFF	Below 1 V
MCO+ (M6-18) – GND1 (M5-3)	B – W-B	Microphone voice signal	See "microphone check"	–
MCO– (M6-19) – GND1 (M5-3)	W – W-B	Microphone voice signal	See "microphone check"	–
IVO+ (M6-21) – GND1 (M5-3)	O – W-B	Telephone voice signal (bluetooth)	See "microphone check"	–
IVO– (M6-22) – GND1 (M5-3)	W – W-B	Telephone voice signal (bluetooth)	See "microphone check"	–
VR (M6-23) – GND1 (M5-3)	B – W-B	Video return signal	Turn ignition switch OFF	Below 1 V
R (M6-24) – GND1 (M5-3)	Y – W-B	Display signal (red)	Navigation display is on	Pulse generation *2
G (M6-25) – GND1 (M5-3)	W – W-B	Display signal (green)	Navigation display is on	Pulse generation *2
B (M6-26) – GND1 (M5-3)	R – W-B	Display signal (blue)	Navigation display is on	Pulse generation *2
SYNC (M6-27) – GND1 (M5-3)	G – W-B	Display signal (synchronize)	Navigation display is on	Pulse generation *1
VG (M6-28) – Body ground	Shielded – Body ground	Shielded ground	Always	Below 1 V
NTSC (M7-1) – GND1 (M5-3)	W – W-B	DVD screen is in disorder	Ignition switch ON and DVD displayed	Pulse generation *3
SGD1 (M7-4) – GND1 (M5-3)	B – W-B	Screen noise or other types of noise occur	Ignition switch OFF	Below 1 V
SGND (M7-5) – GND1 (M5-3)	Shielded – W-B	Screen noise or other types of noise occur	Ignition switch OFF	Below 1 V



- *1: Oscilloscope wave
Terminal to be measured: SYNC – GND1
Setting for measurement: 500 mV/DIV 10– μs/DIV
Condition: Navigation display is displayed.

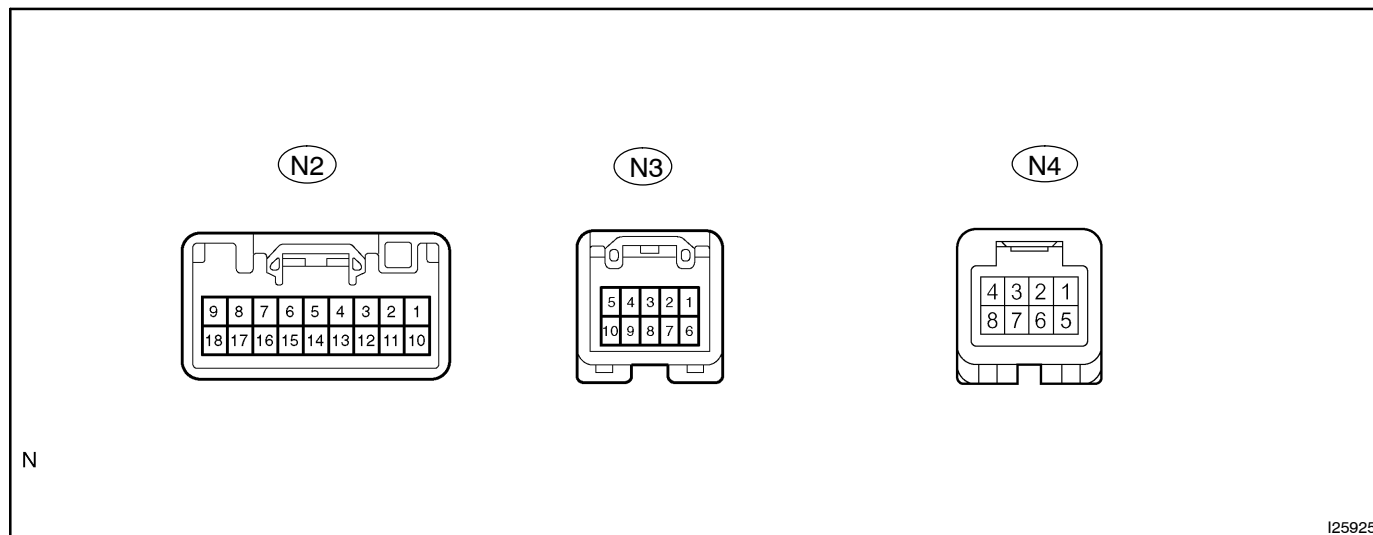


- *2: Oscilloscope wave
Terminal to be measured: R, G, B – GND1
Setting for measurement: 200 mV/DIV 10– μs/DIV
Condition: Navigation map is switched.



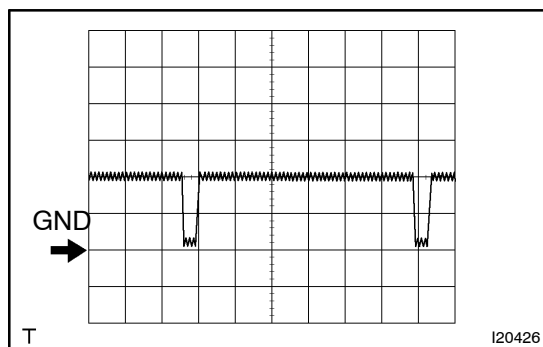
- *3: Oscilloscope wave
Terminal to be measured: NTSC – SGD1
Setting for measurement: 0.2 mV/DIV, 0.2 μ s/DIV
Condition: Ignition switch ON and DVD displayed.

Navigation ECU

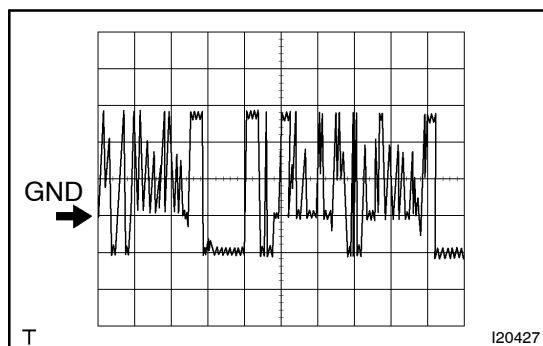


Symbols (Terminals No.)	Wiring Color	Terminal Description	Condition	Specification
AUI+ (N2-1) – GND (N2-17)	P – W-B	Sound signal (input)	Audio system is playing	–
AUO+ (N2-2) – GND (N2-17)	P – W-B	Sound signal (output)	Audio system is playing	–
SLD1 (N2-3) – Body ground	Shielded – Body ground	Shielded ground	Always	Below 1.0 V
SPD (N2-5) – GND1 (N2-17)	V – W-B	Speed signal from combination meter	See "Vehicle Signal Check Mode" (see page DI-1553)	–
+B (N2-9) – GND (N2-17)	L-Y – W-B	Battery	Always	10 to 14 V
AUI- (N2-10) – GND (N2-17)	V – W-B	Sound signal (input)	Audio system is playing	–
AUO- (N2-11) – GND (N2-17)	V – W-B	Sound signal (output)	Audio system is playing	–
VOI+ (N2-12) – Body ground	O – Body ground	Telephone voice signal (bluetooth)	See "microphone check"	–
VOI- (N2-13) – Body ground	W – Body ground	Telephone voice signal (bluetooth)	See "microphone check"	–
REV (N2-14) – GND (N2-17)	R-B – W-B	Reverse signal from combination meter	See "Vehicle Signal Check Mode" (see page DI-1553)	–
GND (N2-17) – Body ground	W-B – Body ground	Ground	Always	Below 1 V
ACC (N2-18) – GND (N2-17)	GR – W-B	Accessory (ON)	Turn ignition switch OFF → ACC or ON	Below 1 V → 10 – 14 V
VR (N3-1) – GND (N2-17)	B – W-B	Video return signal	Turn ignition switch OFF	Below 1 V
R (N3-2) – GND (N2-17)	Y – W-B	Display signal (red)	Navigation display is on	Pulse generation *2
B (N3-3) – GND (N2-17)	R – W-B	Display signal (blue)	Navigation display is on	Pulse generation *2
TX+ (N3-5) – GND (N2-17)	P – W-B	AVC-LAN communication signal	Turn ignition switch to ACC	2 to 3 V
VG (N3-6) – Body ground	Shielded – Body ground	Shielded ground	Always	Below 1 V
G (N3-7) – GND (N2-17)	W – W-B	Display signal (green)	Navigation display is on	Pulse generation *2
SYNC (N3-8) – GND (N2-17)	G – W-B	Display signal (synchronize)	Navigation display is on	Pulse generation *1
TX- (N3-10) – GND (N2-17)	L-B – W-B	AVC-LAN communication signal	Turn ignition switch to ACC	2 to 3 V

MIC+ (N4-3) – GND (N2-17)	B – W-B	Microphone voice signal	See "microphone check"	–
MIC- (N4-5) – GND (N2-17)	W – W-B	Microphone voice signal	See "microphone check"	–
SNSE (N4-7) – Body ground	W-B – Body ground	Ground	Always	Below 1 V

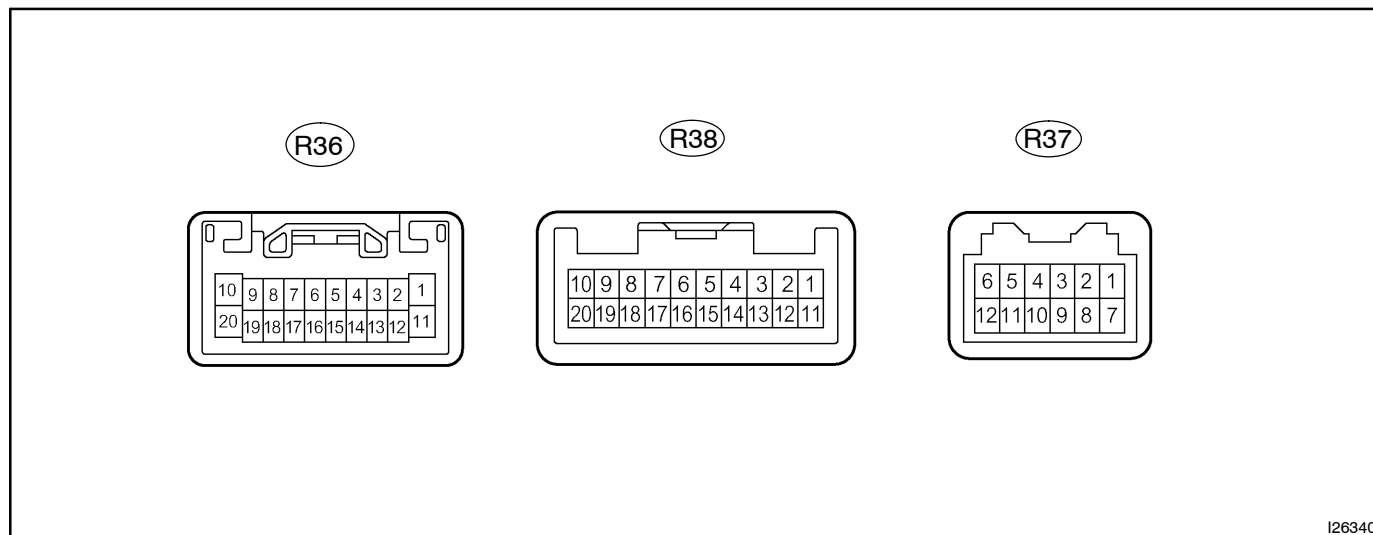


- *1: Oscilloscope wave
Terminal to be measured: SYNC – GND1
Setting for measurement: 500mV/DIV 10 μ s/DIV
Condition: Navigation display is displayed



- *2: Oscilloscope wave
Terminal to be measurement: R, G, B – GND1
Setting for measurement: 200mV/DIV 10 μ s/DIV
Condition: Navigation map is switched.

Radio receiver assembly



I26340

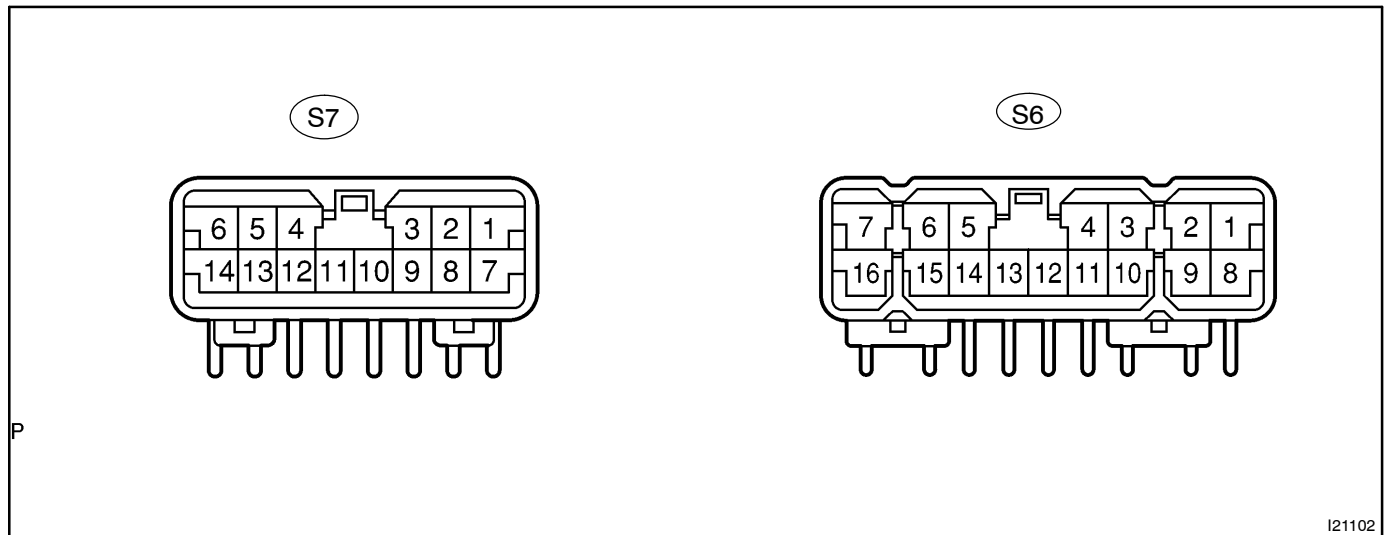
Symbols (Terminal No.)	Condition	Specified condition	Problem symptoms when short circuit is detected.
+B ↔ GND (R36-1 ↔ R36-20)	Constant	10 – 14 V	Audio system does not operate.
AMP ↔ GND (R36-3 ↔ R36-20)	–	–	–
MUTE ↔ GND (R36-7 ↔ R36-20)	–	–	Pop sound etc. Audio system does not operate.
FR ↔ GND (R36-8 ↔ R36-20)	Constant	10 – 14 V	Sound from front right speaker is small
FL ↔ GND (R36-9 ↔ R36-20)	Constant	10 – 14 V	Sound from front left speaker is small
ACC ↔ GND (R36-11 ↔ R36-20)	Ignition switch ACC	10 – 14 V	Audio system does not operate.
ANT+ ↔ GND (R36-13 ↔ R36-20)	Radio switch ON	10 – 14 V	Antenna does not extend.
RR ↔ GND (R36-18 ↔ R36-20)	Constant	10 – 14 V	Sound from rear right side speaker is small.
RL ↔ GND (R36-19 ↔ R36-20)	Constant	10 – 14 V	Sound from rear left side speaker is small.
GND ↔ Body ground (R36-20 ↔ Body ground)	Constant	Continuity	Audio system is normal.
CDR+ (R37-2)	–	–	Sound from right side speaker is small
CDR- (R37-3)	–	–	Sound from right side speaker is small
CDL+ (R37-4)	–	–	Sound from left side speaker is small
CDL- (R37-5)	–	–	Sound from left side speaker is small
MUTE ↔ GND (R37-6 ↔ R36-20)	–	–	Pop sound etc. Audio system does not operate.
TX+ ↔ GND (R37-9 ↔ R36-20)	AVC-LAN communication circuit	–	Audio system does not operate.

2004 LAND CRUISER (RM1071U)

DIAGNOSTICS – NAVIGATION SYSTEM

TX- (R37-10)	AVC-LAN communication circuit	-	Audio system does not operate.
TX+ (R38-9)	AVC-LAN Communication circuit	-	Audio system does not operate.
TX- (R38-10)	AVC-LAN Communication circuit	-	Audio system does not operate.

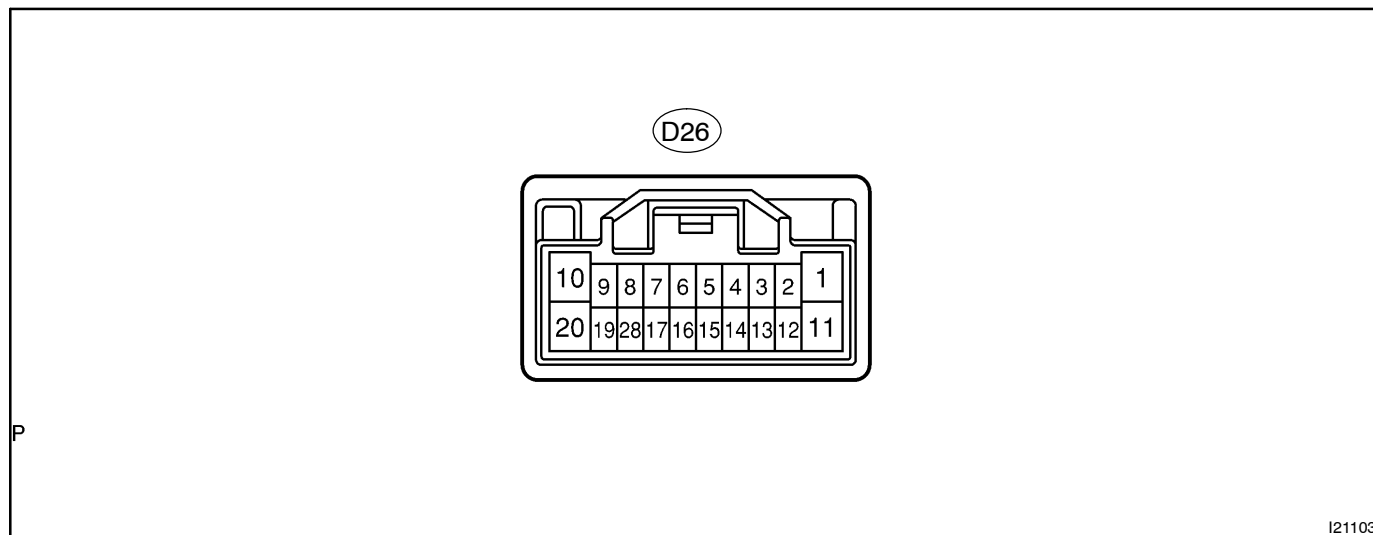
Stereo component amplifier



Symbols (Terminal No.)	Condition	Specified condition	Problem symptom when open circuit is detected.
FR+ ↔ E (S6-1 ↔ S6-12)	Radio switch ON	5 – 7 V	RH side speaker does not sound.
FL+ ↔ E (S6-2 ↔ S6-12)	Radio switch ON	5 – 7 V	LH side speaker does not sound.
RR+ ↔ E (S6-3 ↔ S6-12)	Radio switch ON	5 – 7 V	Rear RH side speaker does not sound.
RL+ ↔ E (S6-4 ↔ S6-12)	Radio switch ON	5 – 7 V	Rear LH side speaker does not sound.
WFR+ ↔ E (S6-5 ↔ S6-12)	Radio switch ON	5 – 7 V	Rear RH side speaker does not sound.
WFL+ ↔ E (S6-6 ↔ S6-12)	Radio switch ON	5 – 7 V	Rear LH side speaker does not sound.
+B ↔ E (S6-7 ↔ S6-12)	Constant	10 – 14 V	All speaker does not sound
FR- ↔ E (S6-8 ↔ S6-12)	Radio switch ON	5 – 7 V	RH side speaker does not sound.
FL- ↔ E (S6-9 ↔ S6-12)	Radio switch ON	5 – 7 V	LH side speaker does not sound.
RR- ↔ E (S6-10 ↔ S6-12)	Radio switch ON	5 – 7 V	Rear RH side speaker does not sound.
RL- ↔ E (S6-11 ↔ S6-12)	Radio switch ON	5 – 7 V	Rear LH side speaker does not sound.
E ↔ Body ground (S6-12 ↔ Body ground)	Constant	Continuity	–
GND2 ↔ Body ground (S6-13 ↔ Body ground)	Constant	Continuity	–
WFR- ↔ E (S6-14 ↔ S6-12)	Radio switch ON	5 – 7 V	Rear RH side speaker does not sound.
WFL- ↔ E (S6-15 ↔ S6-12)	Radio switch ON	5 – 7 V	Rear LH side speaker does not sound.
+B2 ↔ GND2 (S6-16 ↔ S6-13)	Constant	10 – 14 V	All speaker does not sound

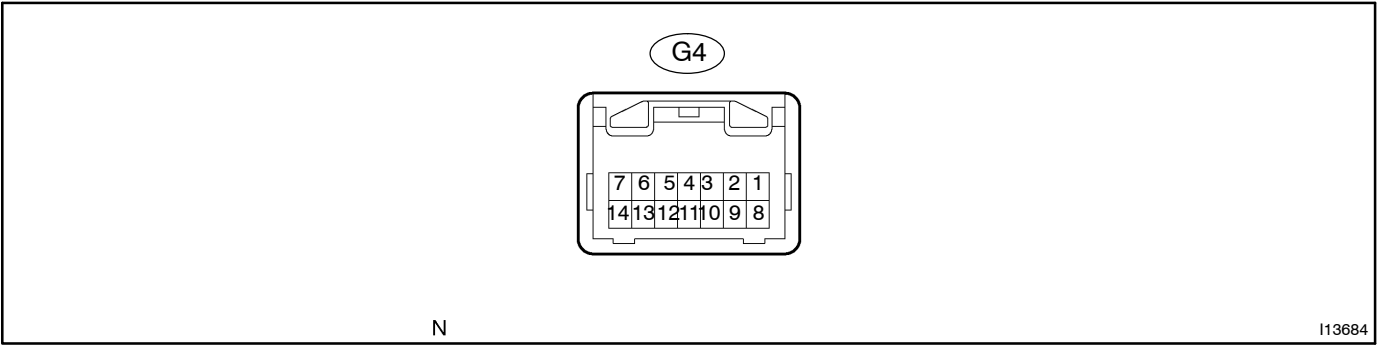
DIAGNOSTICS – NAVIGATION SYSTEM

AMP (S7-1)	–	–	–
ACC ↔ GND2 (S7-2 ↔ S6-13)	Ignition switch ACC	10 – 14 V	Audio system does not operate.
BEEP (S7-4)	–	–	LH side speaker does not sound.
F.L ↔ GND2 (S7-5 ↔ S6-13)	Constant	10 – 14 V	Sound from front LH speaker is small.
F.R ↔ GND2 (S7-6 ↔ S6-13)	Constant	10 – 14 V	Sound from front RH speaker is small.
SGND ↔ GND2 (S7-11 ↔ S6-13)	–	5 – 7 V	–
MUTE ↔ GND2 (S7-12 ↔ S6-13)	Radio switch ON	5 – 7 V	Audio system does not operate.
R.L ↔ GND2 (S7-13 ↔ S6-13)	Constant	10 – 14 V	Sound from rear LH speaker is small.
R.R ↔ GND2 (S7-14 ↔ S6-13)	Constant	10 – 14 V	Sound from rear RH speaker is small.

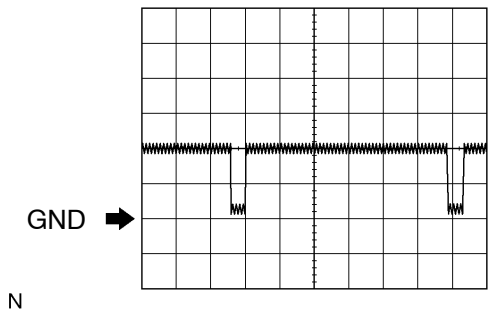
DVD auto changer:

Symbols (Terminal No.)	Condition	Specified condition	Problem symptom when open circuit is detected.
ACC ↔ GND (D26-1 ↔ D26-20)	Ignition switch ACC	10 – 14 V	DVD auto changer does not operate.
TXM+ ↔ GND (D26-3 ↔ D26-20)	AVC-LAN communication circuit	–	Audio system does not operate.
CDR+ (D26-5)	–	–	Sound from right side speaker is small.
CDL+ (D26-6)	–	–	Sound from left side speaker is small.
NTSC (D26-9)	–	–	–
+B ↔ GND (D26-10 ↔ D26-20)	Constant	10 – 14 V	DVD auto changer does not operate.
MUTE ↔ GND (D26-11 ↔ D26-20)	DISC switch ON	5 – 7 V	Audio system does not operate.
TXM- ↔ GND (D26-13 ↔ D26-20)	AVC-LAN communication circuit	–	Audio system does not operate.
CDR- (D26-15)	–	–	Sound from right side speaker is small.
CDL- (D26-16)	–	–	Sound from left side speaker is small.

Gateway ECU:



Symbols (Terminals No.)	Wiring Color	Condition	Specified condition
IG ↔ GND (G4-2 ↔ G4-14)	B-W ↔ W-B	Ignition switch ON.	10 – 14 V
MPD1 (G4-4)	B	Communication circuit (Gateway ECU and Center ECU)	–
GTX+ (G4-5)	P-L	AVC-LAN communication circuit	–
CG ↔ Body ground (G4-7 ↔ Body ground)	BR ↔ Body ground	Constant	Continuity
BATT ↔ GND (G4-8 ↔ G4-14)	L-W ↔ W-B	Constant	10 – 14 V
MPD2 (G4-11)	P-B	Communication circuit (Gateway ECU and Center ECU)	–
GTX- (G4-12)	P-B	AVC-LAN communication circuit	–
GND ↔ Body ground (G4-7 ↔ Body ground)	BR ↔ Body ground	Constant	Continuity

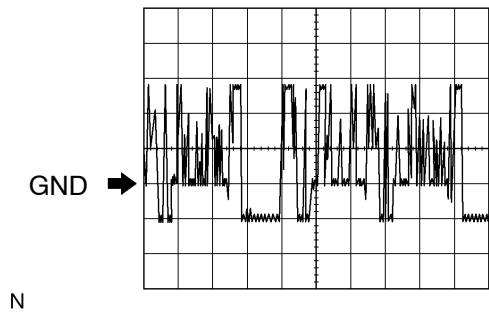


Oscilloscope

*1: wave1

- Measure terminal: SYNC ↔ GND1
- Measure set: 500 mV/DIV 10 μs/DV
- Condition: Navigation display is displayed

I15531



Oscilloscope

*1: wave1

- Measure terminal: R, G, B ↔ GND1
- Measure set: 200 mV/DIV 10 μs/DV
- Condition: Navigation map is switched

I15532