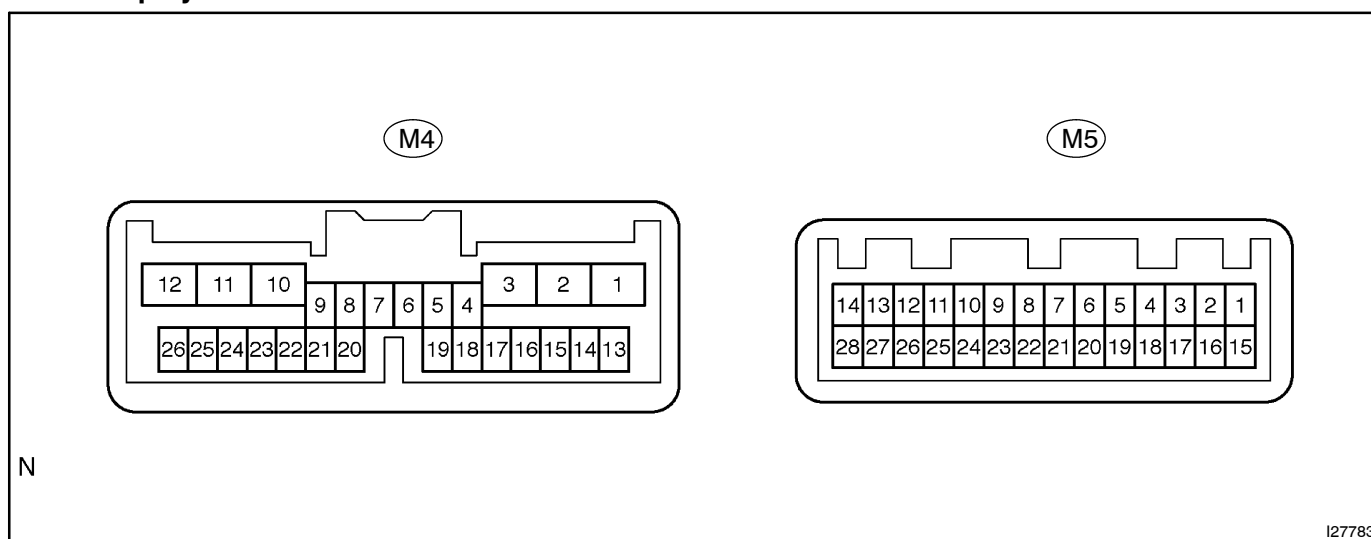


TERMINALS OF ECU

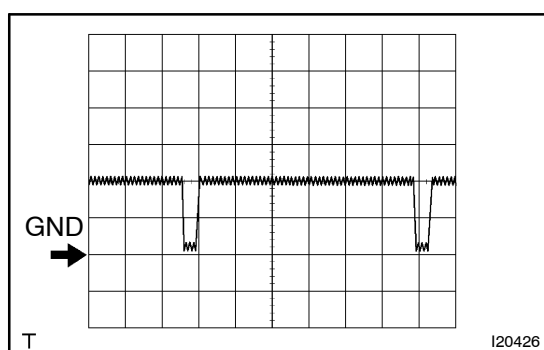
Multi-display:



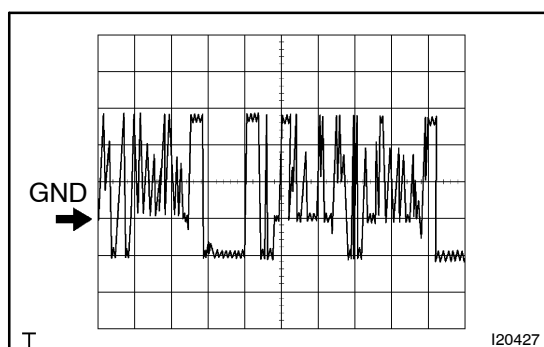
I27783

Symbols (Terminals No.)	Wiring Color	Terminal Description	Condition	Specification
GND1 (M4-3) – Body ground	W-B – Body ground	Ground	Always	Below 1 V
TX1+ (M4-4) – GND1 (M4-3)	P – W-B	AVC-LAN communication signal	Turn ignition switch to ON	2 to 3 V
TX1- (M4-5) – GND1 (M4-3)	L-B – W-B	AVC-LAN communication signal	Turn ignition switch to ON	2 to 3 V
TC (M4-7) – GND1 (M4-3)	P-B – W-B	Diagnosis ON signal	Turn ignition switch to the ON position	9 to 14 V
IG (M4-10) – GND1 (M4-3)	B-W – W-B	Ignition (ON)	Turn ignition switch OFF → ON	Below 1 V → 10 to 14 V
ACC (M4-11) – GND1 (M4-3)	GR – W-B	Accessory (ON)	Turn ignition switch OFF → ACC or ON	Below 1 V → 10 to 14 V
B1 (M4-12) – GND1 (M4-3)	L-W – W-B	Battery	Always	10 to 14 V
PKB (M4-16) – GND1 (M4-3)	R-W – W-B	Parking brake signal	Turn parking brake switch ON → OFF	Below 1 V → 10 to 14 V
SPD (M4-25) – GND1 (M4-3)	V – W-B	Speed signal from combination meter	See "vehicle signal check mode"	
SGND (M5-3) – GND1 (M4-3)	W-B – W-B	Screen noise or other types of noise occurs	Ignition switch OFF	Below 1 V
MIN+ (M5-4) – GND1 (M4-3)	B – W-B	Microphone voice signal	See "microphone check"	–
MIN- (M5-5) – Body ground	W – Body ground	Microphone voice signal	See "microphone check"	–
MACC (M5-6) – GND1 (M4-3)	Y-G – W-B	Microphone Accessory	Turn ignition switch OFF → ON	Below 1 V → 10 to 14 V
TX3+ (M5-11) – GND1 (M4-3)	P-L – W-B	AVC-LAN communication signal	Turn ignition switch to ON	2 to 3 V
TX3- (M5-12) – GND1 (M4-3)	P-B – W-B	AVC-LAN communication signal	Turn ignition switch to ON	2 to 3 V
TX+ (M5-13) – GND1 (M4-3)	P – W-B	AVC-LAN communication signal	Turn ignition switch to ON	2 to 3 V
TX- (M5-14) – GND1 (M4-3)	L – W-B	AVC-LAN communication signal	Turn ignition switch to ON	2 to 3 V

SGND (M5-17) – GND1 (M4-3)	Shielded – W-B	Screen noise or other types of noise occurs	Ignition switch OFF	Below 1 V
MCO+ (M5-18) – GND1 (M4-3)	B – W-B	Microphone voice signal	See "microphone check"	–
MCO– (M5-19) – GND1 (M4-3)	W – W-B	Microphone voice signal	See "microphone check"	–
IVO+ (M5-21) – GND1 (M4-3)	O – W-B	Telephone voice signal (buletooth)	See "microphone check"	–
IVO– (M5-22) – GND1 (M4-3)	W – W-B	Telephone voice signal (buletooth)	See "microphone check"	–
VR (M5-23) – GND1 (M4-3)	B – W-B	Video return signal	Turn ignition switch OFF	Below 1 V
R (M5-24) – GND1 (M4-3)	Y – W-B	Display signal (red)	Navigation display is on	Pulse generation *2
G (M5-25) – GND1 (M4-3)	W – W-B	Display signal (green)	Navigation display is on	Pulse generation *2
B (M5-26) – GND1 (M4-3)	R – W-B	Display signal (blue)	Navigation display is on	Pulse generation *2
SYNC (M5-27) – GND1 (M4-3)	G – W-B	Display signal (synchronize)	Navigation display is on	Pulse generation *1
VG (M5-28) – Body ground	Shielded – Body ground	Shielded ground	Always	Below 1 V

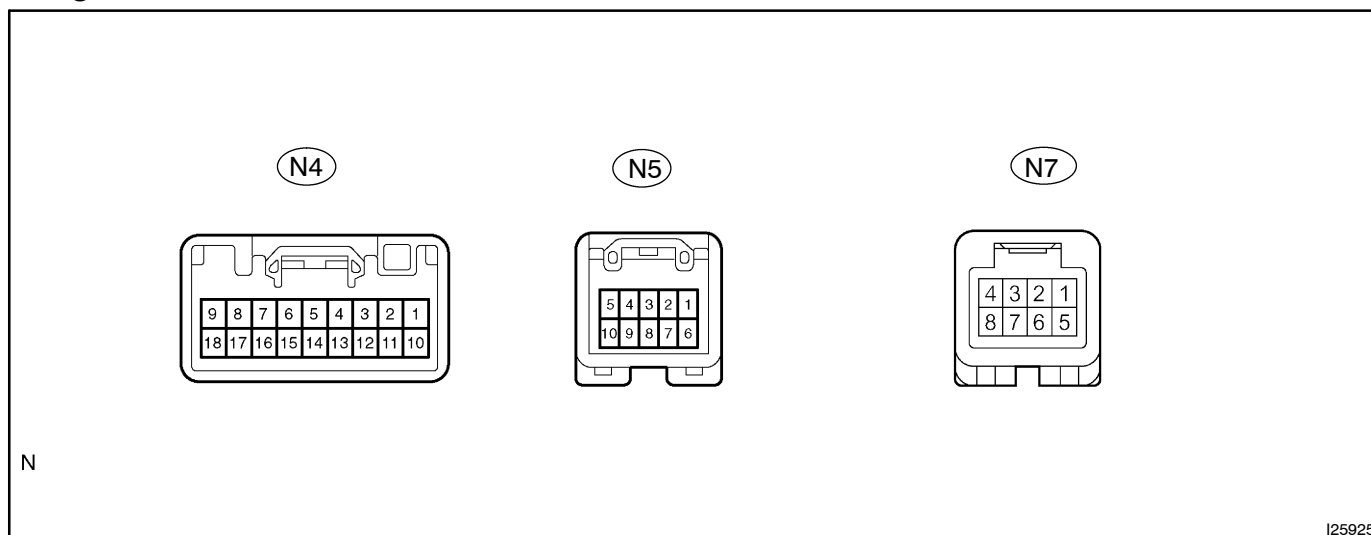


- *1: Oscilloscope wave
Terminal to be measured: SYNC – GND1
Setting for measurement: 500 mV/DIV 10 μ s/DIV
Condition: Navigation display is displayed.



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

Navigation ECU

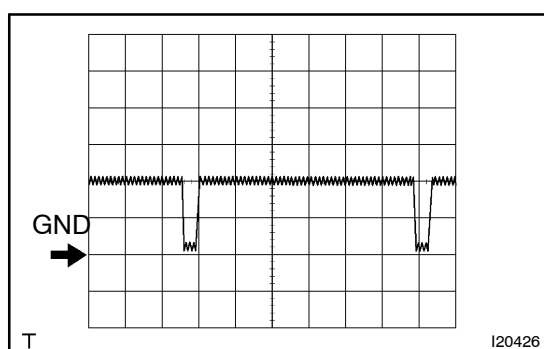


Symbols (Terminals No.)	Wiring Color	Terminal Description	Condition	Specification
AUI+ (N4-1) – GND (N4-17)	P – W-B*1 LG – W-B*2	Sound signal (input)	Audio system is playing	–
AUO+ (N4-2) – GND (N4-17)	P – W-B*1 LG – W-B*2	Sound signal (output)	Audio system is playing	–
SLD1 (N4-3) – Body ground	Shielded – Body ground	Shielded ground	Always	Below 1.0 V
SPD (N4-5) – GND1 (N4-17)	V – W-B	Speed signal from combination meter	See "Vehicle Signal Check Mode" (see page DI-175)	–
+B (N4-9) – GND (N4-17)	L-Y – W-B	Battery	Always	10 to 14 V
AUI- (N4-10) – GND (N4-17)	V – W-B*1 L – W-B*2	Sound signal (input)	Audio system is playing	–
AUO- (N4-11) – GND (N4-17)	V – W-B*1 L – W-B*2	Sound signal (output)	Audio system is playing	–
VOI+ (N4-12) – Body ground	O – Body ground	Telephone voice signal (buletooth)	See "microphone check"	–
VOI- (N4-13) – Body ground	W – Body ground	Telephone voice signal (buletooth)	See "microphone check"	–
REV (N4-14) – GND (N4-17)	R-B – W-B	Reverse signal from combination meter	See "Vehicle Signal Check Mode" (see page DI-175)	–
GND (N4-17) – Body ground	W-B – Body ground	Ground	Always	Below 1 V
ACC (N4-18) – GND (N4-17)	GR – W-B	Accessory (ON)	Turn ignition switch OFF → ACC or ON	Below 1 V → 10 – 14 V
VR (N5-1) – GND (N4-17)	B – W-B	Video return signal	Turn ignition switch OFF	Below 1 V
R (N5-2) – GND (N4-17)	Y – W-B	Display signal (red)	Navigation display is on	Pulse generation *2
B (N5-3) – GND (N4-17)	R – W-B	Display signal (blue)	Navigation display is on	Pulse generation *2
TX+ (N5-5) – GND (N4-17)	P – W-B	AVC-LAN communication signal	Turn ignition switch to ACC	2 to 3 V
VG (N5-6) – Body ground	Shielded – Body ground	Shielded ground	Always	Below 1 V
G (N5-7) – GND (N4-17)	W – W-B	Display signal (green)	Navigation display is on	Pulse generation *2

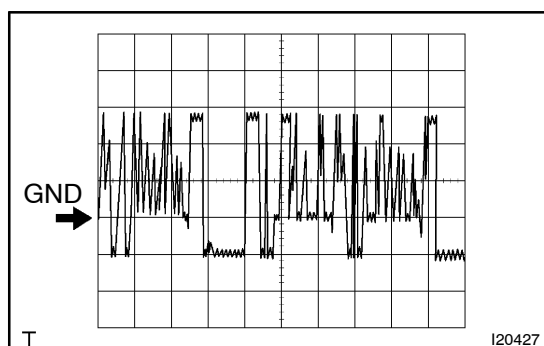
SYNC (N5-8) – GND (N4-17)	G – W-B	Display signal (synchronize)	Navigation display is on	Pulse generation *1
TX- (N5-10) – GND (N4-17)	L-B – W-B	AVC-LAN communication signal	Turn ignition switch to ACC	2 to 3 V
MIC+ (N7-3) – GND (N4-17)	B – W-B	Microphone voice signal	See "microphone check"	–
MIC- (N7-5) – GND (N4-17)	W – W-B	Microphone voice signal	See "microphone check"	–

*1: LHD

*2: RHD

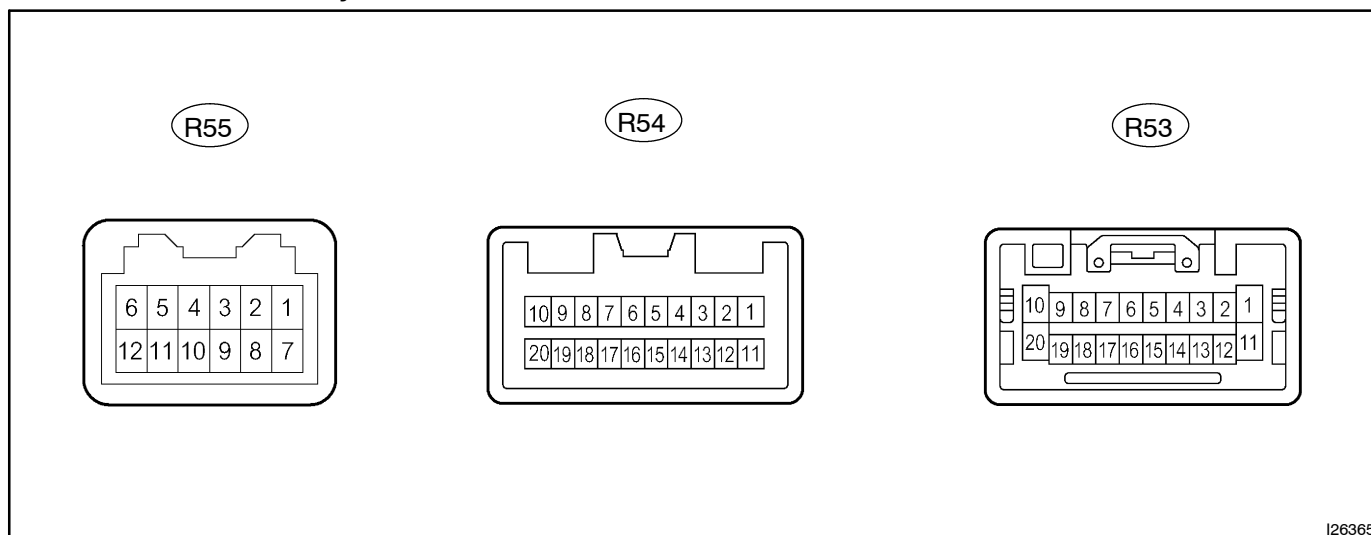


- *1: Oscilloscope wave
Terminal to be measured: SYNC – GND1
Setting for measurement: 500mV/DIV 10 μ s/DIV
Condition: Navigation display is displayed



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

Radio receiver assembly



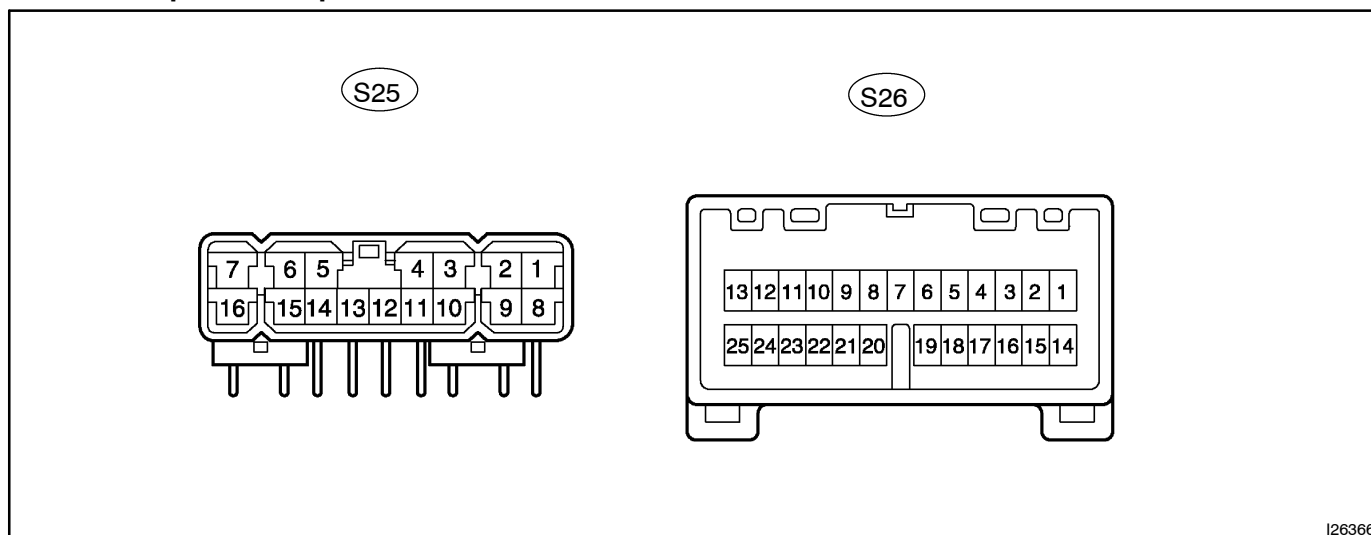
I26365

Symbols (Terminal No.)	Condition	STD Voltage (V)	Problem symptom when open circuit is detected.
			Problem symptoms when short circuit is detected.
BU ↔ GND (R53-1 ↔ R53-20)	Always	10 – 14 V	Audio system does not operate.
ILL+ ↔ GND (R53-2 ↔ R53-20)	Light control switch TAIL	10 – 14 V	Audio head unit illumination does not come on.
TX+ (R53-5)	AVC-LAN Communication circuit	–	Audio system does not operate.
MUTE ↔ GND (R53-7 ↔ R53-20)	–	–	–
R+ ↔ GND (R53-8 ↔ R53-20)	Always	10 – 14 V	Sound from right speaker is small
L+ ↔ GND (R53-9 ↔ R53-20)	Always	10 – 14 V	Sound from left speaker is small
ACC ↔ GND (R53-11 ↔ R53-20)	Ignition switch ACC	10 – 14 V	Audio system does not operate.
ILL- ↔ GND (R53-12 ↔ R53-20)	Light control switch TAIL	Below 0.5 V	Audio head unit illumination does not come on.
ANT ↔ GND (R53-13 ↔ R53-20)	Radio switch ON	10 – 14 V	Antenna does not extend.
TX- (R53-15)	AVC-LAN Communication circuit	–	Audio system does not operate.
R- ↔ GND (R53-18 ↔ R53-20)	Always	10 – 14 V	Sound from right side speaker is small.
L- ↔ GND (R53-19 ↔ R53-20)	Always	10 – 14 V	Sound from left side speaker is small.
GND ↔ Body ground (R53-20 ↔ Body ground)	Always	Continuity	Audio system is normal.
TX+ (R54-9)	Ignition Switch ACC	2 – 3 V	Navigation system does not operate.
TX- (R54-10)	Ignition Switch ACC	2 – 3 V	Navigation system does not operate.

DIAGNOSTICS – NAVIGATION SYSTEM

R+ (R55-2)	–	–	Sound from right side speaker is small
R– (R55-3)	–	–	Sound from right side speaker is small
L+ (R55-4)	–	–	Sound from left side speaker is small
L– (R55-5)	–	–	Sound from left side speaker is small
MUTE (R55-6)	–	–	Pop sound etc.
			Speaker does not sound
TX+ (R55-9)	Ignition Switch ACC	2 – 3 V	Audio system does not operate.
TX– (R55-10)	Ignition Switch ACC	2 – 3 V	Audio system does not operate.

Stereo component amplifier

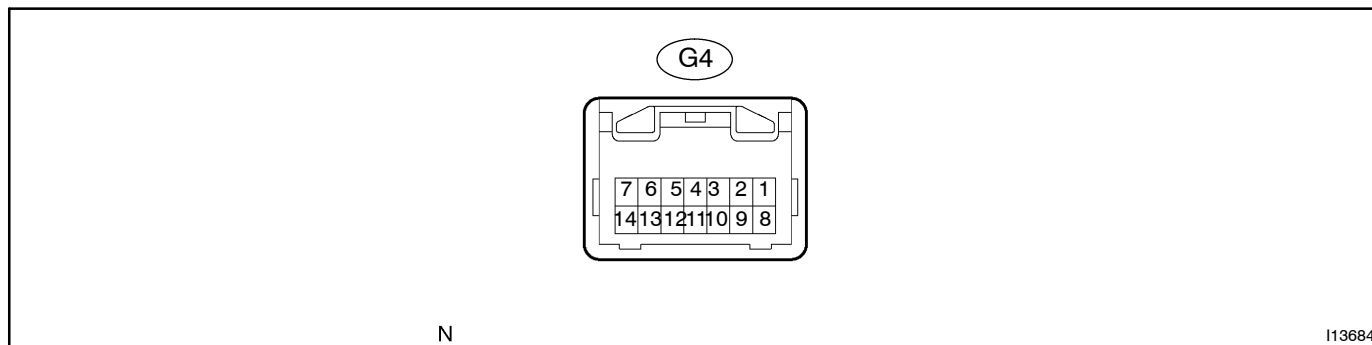


I26366

Symbols (Terminal No.)	Condition	STD Voltage (V)	Problem symptom when open circuit is detected.
FR+ ↔ E (S25-1 ↔ S25-12)	Radio switch ON	5 – 7 V	RH side speaker does not sound.
FL+ ↔ E (S25-2 ↔ S25-12)	Radio switch ON	5 – 7 V	LH side speaker does not sound.
RR+ ↔ E (S25-3 ↔ S25-12)	Radio switch ON	5 – 7 V	Rear RH side speaker does not sound.
RL+ ↔ E (S25-4 ↔ S25-12)	Radio switch ON	5 – 7 V	Rear LH side speaker does not sound.
WFR+ ↔ E (S25-5 ↔ S25-12)	Radio switch ON	5 – 7 V	Woofer speaker does not sound.
WFL+ ↔ E (S25-6 ↔ S25-12)	Radio switch ON	5 – 7 V	Woofer speaker does not sound.
+B ↔ E (S25-7 ↔ S25-12)	Always	10 – 14 V	All speakers do not sound
FR- ↔ E (S25-8 ↔ S25-12)	Radio switch ON	5 – 7 V	RH side speaker does not sound.
FL- ↔ E (S25-9 ↔ S25-12)	Radio switch ON	5 – 7 V	LH side speaker does not sound.
RR- ↔ E (S25-10 ↔ S25-12)	Radio switch ON	5 – 7 V	Rear RH side speaker does not sound.
RL- ↔ E (S25-11 ↔ S25-12)	Radio switch ON	5 – 7 V	Rear LH side speaker does not sound.
E ↔ Body ground (S25-12 ↔ Body ground)	Always	Continuity	–
GND2 ↔ Body ground (S25-13 ↔ Body ground)	Always	Continuity	–
WFR- ↔ E (S25-14 ↔ S25-12)	Radio switch ON	5 – 7 V	Woofer speaker does not sound.
WFL- ↔ E (S25-15 ↔ S25-12)	Radio switch ON	5 – 7 V	Woofer side speaker does not sound.
+B2 ↔ GND2 (S25-16 ↔ S25-13)	Always	10 – 14 V	All speakers do not sound

DIAGNOSTICS – NAVIGATION SYSTEM

TX+ (S26-5)	Ignition switch ACC	2 – 3 V	Audio system does not operate.
N-MU ↔ E (S26-9 ↔ S25-12)	Radio switch ON	5 – 7 V	Audio system does not operate.
R+ ↔ E (S26-11 ↔ S25-12)	Always	10 – 14 V	Sound from RH speaker is small.
L+ ↔ E (S26-12 ↔ S25-12)	Always	10 – 14 V	Sound from LH speaker is small.
SPD – E (S26-13 – S25-12)	–	–	–
TX- (S26-18)	Ignition switch ACC	2 – 3 V	Audio system does not operate.
ACC ↔ E (S26-20 ↔ S25-12)	Ignition switch ACC	10 – 14 V	Audio system does not operate.
MUTE ↔ E (S26-21 ↔ S25-12)	Radio switch ON	5 – 7 V	Audio system does not operate.
ASGD ↔ E (S26-22 ↔ S25-12)	–	–	–
R- ↔ E (S26-23 ↔ S25-12)	Always	10 – 14 V	Sound from RH speaker is small.
L- ↔ E (S26-24 ↔ S25-12)	Always	10 – 14 V	Sound from LH speaker is small.

Gateway ECU:

Symbols (Terminals No.)	Wiring Color	Condition	STD Voltage (V)
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	Ignition switch ACC	2 – 3 V
CG ↔ Body ground (G4-7 ↔ Body ground)	BR ↔ Body ground	Always	Continuity
BATT ↔ GND (G4-8 ↔ G4-14)	L-W ↔ W-B	Always	10 – 14 V
MPD2 (G4-11)	P-B	Communication circuit (Gateway ECU and Center ECU)	–
GTX- (G4-12)	P-B	Ignition switch ACC	2 – 3 V
GND ↔ Body ground (G4-14 ↔ Body ground)	W-B ↔ Body ground	Always	Continuity