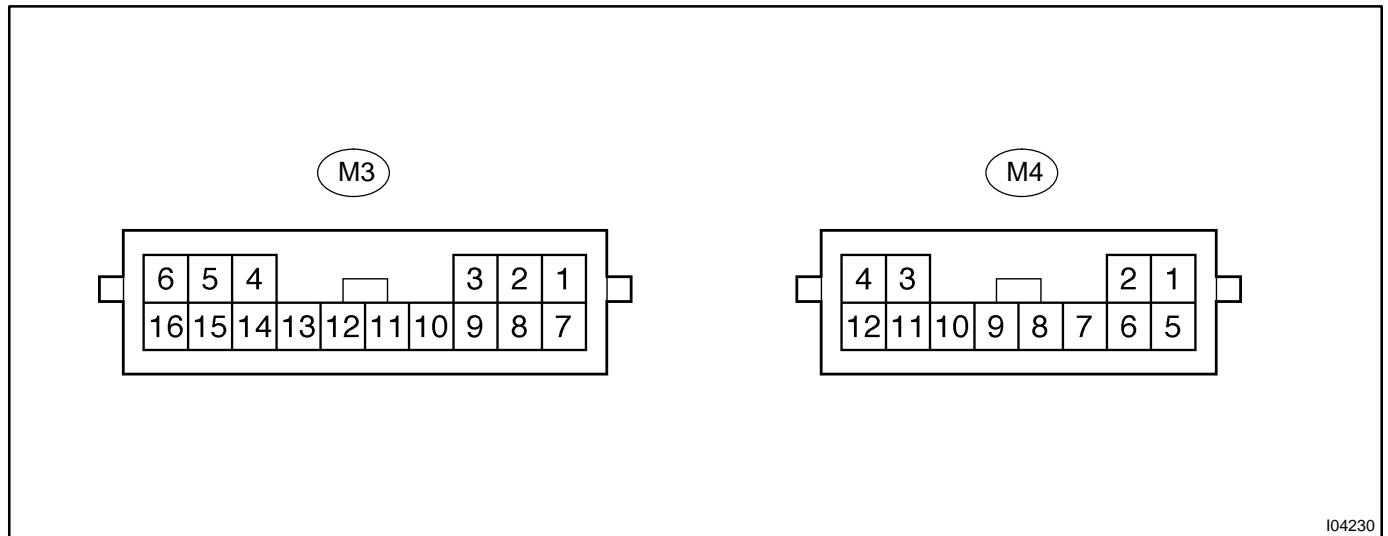


TERMINALS OF ECU

DISPLAY ECU

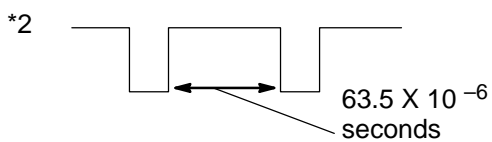
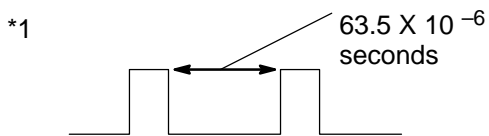


I04230

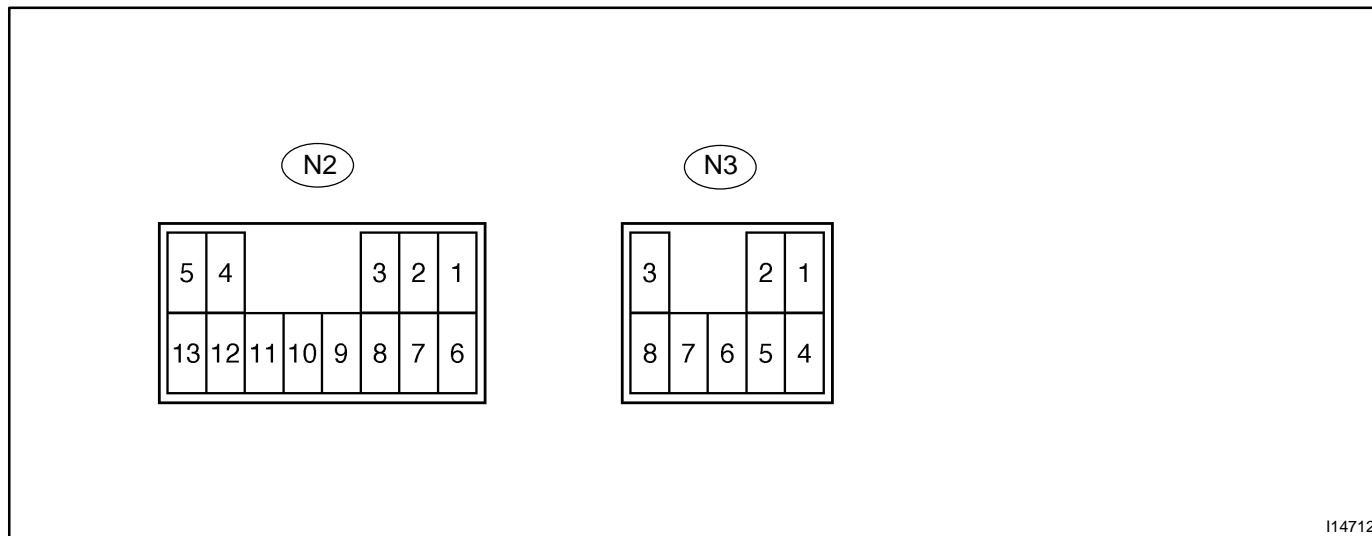
Symbols (Terminals NO.)	Condition	Specified value	Problem symptom when open circuit is detected.
			Problem symptom when short circuit is detected.
M3-1 – Body ground (GND1 – Body ground)	Constant	Continuity	Screen noise or other types of noise occur. LEXUS navigation system is normal.
M3-2 – M3-1 (MPX1 – GND1)	Ignition switch ACC or ON (Using an oscilloscope)	10 – 14 V 1 V or below	A/C does not operate.
M4-4 – M3-1 (TX1+ – GND1)	Ignition switch ACC or ON	2 – 3 V	LEXUS navigation system does not operate.
M3-6 – M3-1 (+B1 – GND1)	Constant	10 – 14 V	LEXUS navigation system does not operate. Fuse is blown.
M3-8 – M3-1 (MPX2 – GND1)	Ignition switch ACC or ON (Using an oscilloscope)	10 – 14 V 1 V or below	A/C system does not operate.
M4-2 – M3-1 (TX1- – GND1)	Ignition switch ACC or ON	2 – 3 V	LEXUS navigation system does not operate.
M3-16 – M3-1 (ACC – GND1)	Ignition switch ACC or ON	10 – 14 V	LEXUS navigation system does not operate. Fuse is blown. (LEXUS navigation system does not operate.)
M4-1 – M4-5 (VR – VG)	Constant	Continuity	Screen noise or other types of noise occur. LEXUS navigation system does not operate.
M4-2 – M4-5 (SYVC – VG)	Display ON (Using an oscilloscope)	0.5 – 1.3 V *2	Screen is in disorder.
M3-3 – M3-1 (TX+ – GND1)	Ignition switch ACC or ON	2 – 3 V	LEXUS navigation system does not operate.

DIAGNOSTICS – LEXUS NAVIGATION SYSTEM

M4-5 – M3-1 (VG – GND1)	Constant	Continuity	Screen noise or other types of noise occur.
			LEXUS navigation system is normal.
M4-6 – M4-5 (B – VG)	Diagnosis display check screen is white. (Using an oscilloscope)	$0.7\text{ V} \pm 0.1\text{ V}^*1$	Screen color turns to yellow.
M4-7 – M4-5 (G – VG)			Screen color turns to red-purple.
M4-8 – M4-5 (R – VG)			Screen color turns to light blue.
M3-9 – M3-1 (TX – GND1)	Ignition switch ACC or ON	2 – 3 V	Audio system does not operate.
			LEXUS navigation system does not operate.



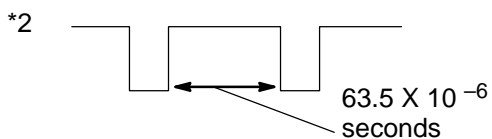
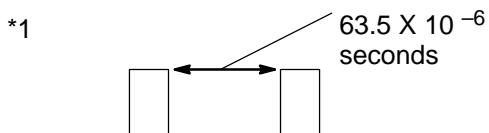
NAVIGATION ECU



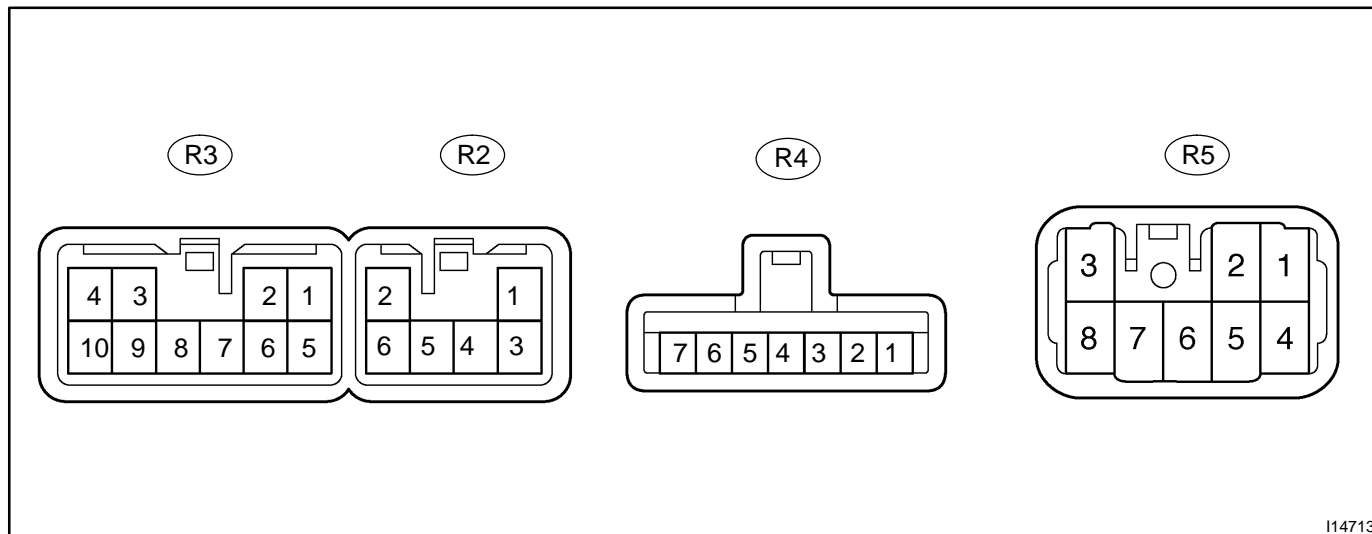
Symbols (Terminals No.)	Condition	Specified value	Problem symptom when open circuit
			Problem symptom when short circuit
N2-1 – N2-8 (AUI+ – GND1)	Radio switch ON	5 – 7 V	Driver's side speaker does not sound.
N2-2 – N2-8 (AUO+ – GND1)	Radio switch ON	5 – 7 V	Driver's side speaker does not sound.
N2-5 – N2-8 (+B – GND1)	Constant	10 – 14 V	The set route can not be memo- rized. (The route disappears by turning the ignition switch OFF.)
			Fuse is blown.
N2-6 – N2-8 (AUI- – GND1)	Radio switch ON	5 – 7 V	Driver's side speaker does not sound.
N2-7 – N2-8 (AUO- – GND1)	Radio switch ON	5 – 7 V	Driver's side speaker does not sound.
N2-8 – Body ground (GND1 – Body ground)	Constant	Continuity	LEXUS navigation system does not operate.
			LEXUS navigation system is nor- mal.
N2-12 – N2-8 (SPD – GND1)	Ignition switch ON and driving wheel rotated slowly.	Repeatedly changes from below 1 V to 9 V	Navigation operation is available during driving, or a cursor on pres- ent site does not move.
N2-13 – N2-8 (ACC – GND1)	Ignition switch ACC	10 – 14 V	LEXUS navigation system does not operate.
			Fuse is blown.
N3-1 – N3-6 (R – VR)	Diagnosis display check screen is white. (Using an oscilloscope)	$0.7\text{ V} \pm 0.1\text{ V}^*1$	Screen color turns to light blue.
N3-2 – N3-6 (SYNC – VR)	Ignition switch ACC or ON (Using an oscilloscope)	$0.5 - 1.3\text{ V}^*2$	Screen is in disorder.
N3-3 – N2-8 (TX+ – GND1)	Ignition switch ACC or ON	2 – 3 V	LEXUS navigation system does not operate.

DIAGNOSTICS – LEXUS NAVIGATION SYSTEM

N3-4 – N3-6 (G – VR)	Diagnosis display check screen is white. (Using an oscilloscope)	0.7 V ± 0.1 V *1	Screen color turns to red-purple.
N3-5 – N3-6 (B – VR)			Screen color turns to yellow.
N3-6 – N3-7 (VR – VG)	Constant	Continuity	Screen noise or other types of noise occur. LEXUS navigation system does not operate.
N3-7 – N2-8 (VG – GND1)	Constant	Continuity	Screen noise or other types of noise occur. LEXUS navigation system does not operate.
N3-8 – N2-8 (TX- – GND1)	Ignition switch ACC or ON	2 – 3 V	LEXUS navigation system does not operate.
E1 (GPS)	-	-	-
E2 – Body ground (GND1 – Body ground)	Constant	Continuity	GPS signal reception error



AUDIO HEAD UNIT



I14713

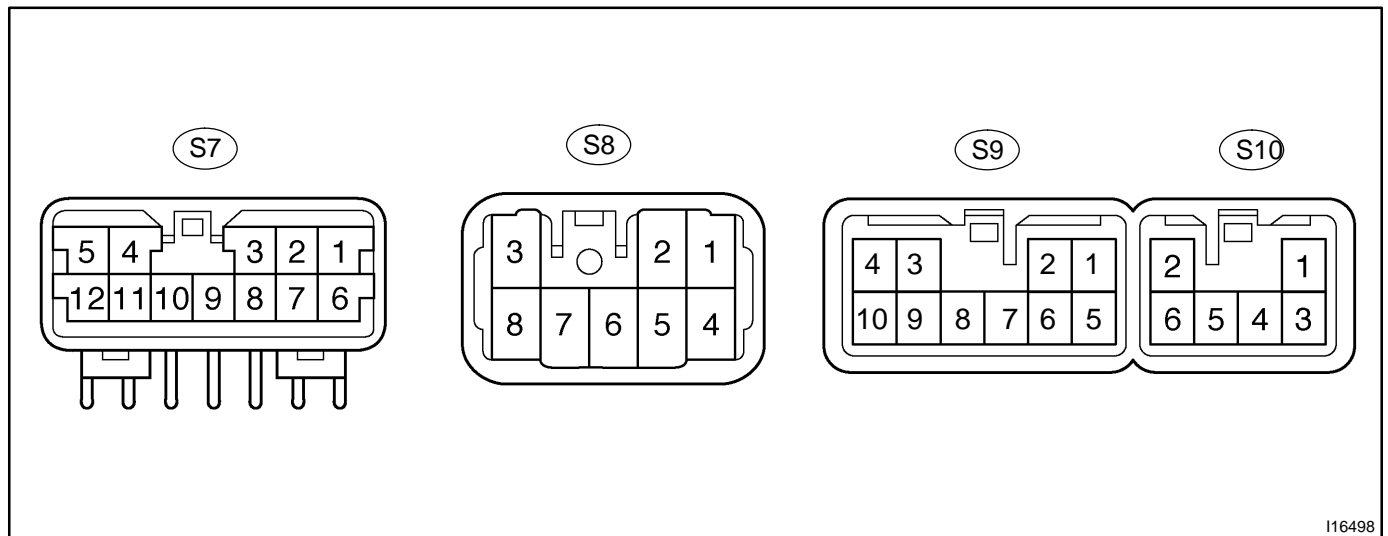
Symbols (Terminals No.)	Condition	Specified value	Problem symptom when open circuit
			Problem symptom when short circuit
R4-9*1, R4-1*2 – R5-3*1, R2-2*2 (TXM-*1, TX-*2 – E*1, GND*2)	Ignition switch ACC or ON	2 – 3 V	LEXUS navigation system does not operate.
R4-2*2 – R5-3*1, R2-2*2 (TMX+ – E*1, GND)	Ignition switch ACC or ON	2 – 3 V	LEXUS navigation system does not operate.
R4-10*1, R4-3*2 – R2-2*2 (ANTB – GND)	Radio switch ON	10 – 14 V	Antenna does not extend.
R4-4*2 – R2-2*2 (ANTA – GND)	Radio switch ON	10 – 14 V	Antenna does not extend.
R4-5*2 – R2-2*2 (ANT – GND)	Radio switch ON	10 – 14 V	Antenna does not extend.
R5-1*1, R2-1*2 – R5-3*1, R2-2*2 (ACC – E*1, GND)	Ignition switch ACC or ON	10 – 14 V	Audio system does not sound.
R2-2*1, R5-3*1 – Body ground (E*1, GND*2 – Body ground)	Constant	Continuity	Audio system is normal.
R3-10*1 – Body ground (GND – Body ground)	Constant	Continuity	Audio system is normal.
R5-4*1, R2-4*2 – R5-3*1, R2-2*2 (B – E*1, GND*2)	Light control switch TAIL	10 – 14 V	Audio head unit illumination does not light up. Fuse is blown.
R5-5*1, R2-5*2 – R5-3*1, R2-2*2 (ILL+ – E*1, GND*2)	Constant	10 – 14 V	Audio system does not operate. Fuse is blown.
R5-6*1, R2-6*1 – R5-3*1, R2-2*2 (ILL– – E*1, GND)	Light control switch TAIL	10 – 14 V	Audio head unit illumination does not light up.
		0.5 V or below	Light control rheostat does not operate.
R3-1*2, R4-1*1 (R+*2, CDR+*1)	–	–	Sound from right side speaker is small.

*1: NAKAMICHI

*2: Except NAKAMICHI

DIAGNOSTICS – LEXUS NAVIGATION SYSTEM

R4-2*1, R3-2*2 (CDL+*1, L+*2)	-	-	Sound from left side speaker is small.
	-	-	Sound from left side speaker is small.
R3-3*1,*2 – R5-3*1, R2-2*2 (ACC – E*1, GND*2)	Radio switch ON	10 – 14 V	Audio system does not sound.
R4-6*1, R3-5*2 (R-*2, CDR-*1)	-	-	Sound from right side speaker is small.
R4-7*1, R3-6*2 (L-*2, CDL-*1)	-	-	Sound from left side speaker is small.
R3-9*1, R3-8*2 – R5-3*1, R2-2*2 (MUTE – E*1, GND*2)	Radio switch ON	5 V	Pop sound etc., during key operation.
R4-4*1, R3-9*2 – R5-3*1, R2-2*2 (BUS– – GND)	Ignition switch ACC or ON	2 – 3 V	Audio system does not operate.
			LEXUS navigation system does not operate.
R3-10*2 – R2-2*2 (BUS+ – GND)	Ignition switch ACC or ON	2 – 3 V	LEXUS navigation system does not operate.
R3-4*1, R5-3*1 (AMP – E)	Ignition switch ACC	10 – 14 V	Audio system does not sound
R2-5*1 – R5-3*1 (TLMT – E)	Cellular hone system is switched	5 V	Pop sound
R2-2*1 (FL+)	-	-	Sound from FL side speaker is small
R2-6*1 (FL-)	-	-	Sound from FL side speaker is small
R3-2*1 (FR+)	-	-	Sound from FR side speaker is small
R3-6*1 (FR-)	-	-	Sound from FR side speaker is small
R2-1*1 (RL+)	-	-	Sound from RL side speaker is small
R2-3*1 (RL-)	-	-	Sound from RL side speaker is small
R3-1*1 (RR+)	-	-	Sound from RR side speaker is small
R3-5*1 (RR-)	-	-	Sound from RR side speaker is small
3R-7*1 – R5-3*1 (SGND – E)	Constant	Continuity	Audio system is normal

+POWER AMPLIFIER - 1

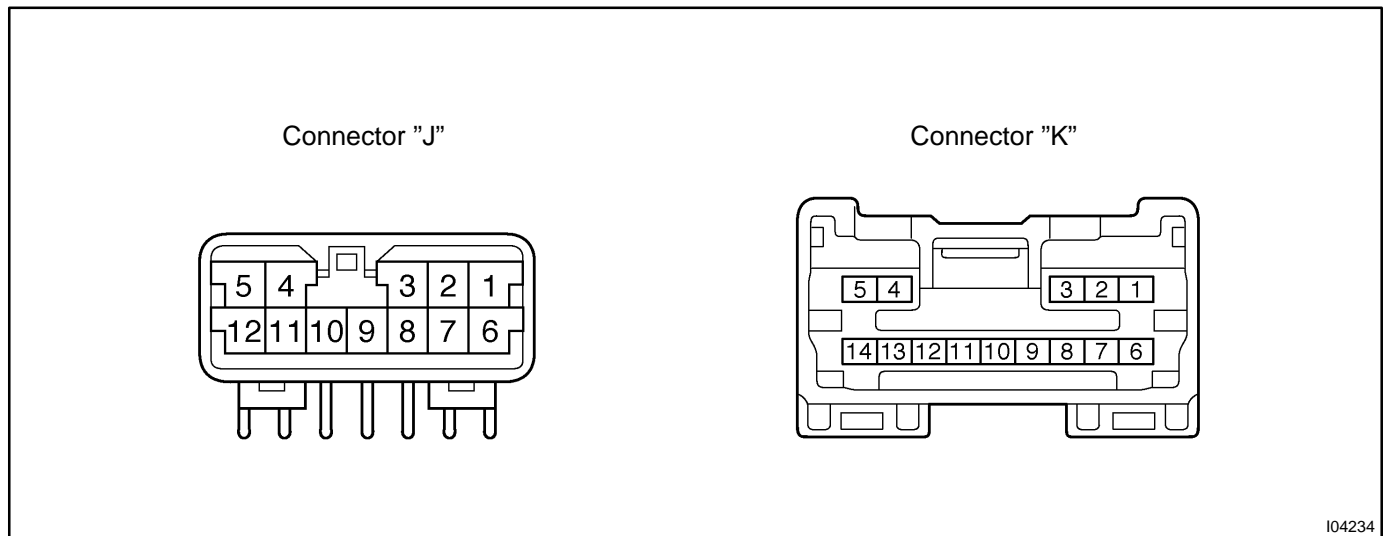
I16498

Symbols (Terminals No.)	Condition	Specified value	Problem symptom when open circuit
			Problem symptom when short circuit
S8-1 - S9-7 (TXM+ - E)	Ignition switch ACC or ON	2 - 3 V	Audio system does not operate. LEXUS navigation system does not operate.
S8-2 (CDR+)	-	-	Sound from right side speaker is small.
S8-3 (CDL+)	-	-	Sound from left side speaker is small.
S8-4 - S9-7 (TXM- - E)	Ignition switch ACC or ON	2 - 3 V	Audio system does not operate. LEXUS navigation system does not operate.
S8-5 (CDR-)	-	-	Sound from right side speaker is small.
S8-6 - S9-7 (MUTE - E)	CD auto changer operation	5 V	Pop sound etc..
S7-3 - Body ground (SGND - Body ground)	Constant	Continuity	Audio system is normal.
S-8 (CDL-)	-	-	Sound from left side speaker is small.
S10-1 - S9-7 (RR+ - E)	Radio switch ON	5 - 7 V	Rear RH speaker does not sound. Rear speaker does not sound.
S10-2 - S9-7 (RL+ - E)	Radio switch ON	5 - 7 V	Rear LH speaker does not sound. Rear speaker does not sound.
S10-3 - S9-7 (SRR- - E)	Radio switch ON	5 - 7 V	Rear RH speaker does not sound. Rear speaker does not sound.
S10-4 - S9-7 (WF+ - E)	Radio switch ON	5 - 7 V	Woofer does not sound.
S10-5 - S9-7 (WF- - E)	Radio switch ON	5 - 7 V	Woofer does not sound.

DIAGNOSTICS – LEXUS NAVIGATION SYSTEM

S10-6 – S9-7 (RL- – E)	Radio switch ON	5 – 7 V	Rear LH speaker does not sound.
			Rear speaker does not sound.
S9-1 – S9-7 (FR+ – E)	Radio switch ON	5 – 7 V	Rear RH speaker does not sound.
			Rear speaker does not sound.
S9-2 – S9-7 (FL+ – E)	Radio switch ON	5 – 7 V	Rear LH speaker does not sound.
			Rear speaker does not sound.
S9-4 – S9-7 (+B – E)	Constant	10 – 14 V	Audio system does not sound.
			Fuse is blown.
S9-5 – S9-7 (FR- – E)	Radio switch ON	5 – 7 V	Rear RH speaker does not sound.
			Rear speaker does not sound.
S9-6 – S9-7 (FL- – E)	Radio switch ON	5 – 7 V	Rear LH speaker does not sound.
			Rear speaker does not sound.
S9-7 – Body ground (E – Body ground)	Constant	Continuity	Audio system is normal.
S9-8 – S9-7 (TLMT – E)	Cellular phone system is switched.	5 V	Pop sound.
I16 – I13 (NVMT – E)	LEXUS navigation system is switched.	5 V	Pop sound.
			No navigation voice.
S8-7 – S9-7 (SGD4 – E)	Constant	Continuity	Audio system is normal
S7-12 – S9-7 (ACC – E)	Radio switch ON	10 – 14 V	Audio system does not sound
S7-4 – S9-7 (MOTE – E)	Radio switch ON	5 V	Pop sound etc., during key operation
S8-9 – S9-7 (BUS – E)	Ignition switch ACC or ON	2 – 3 V	LEXUS navigation system does not operate
S8-10 – S9-7 (BUS+ – E)	Ignition switch ACC or ON	2 – 3 V	LEXUS navigation system does not operate
S7-6 (R-)	–	–	Sound from right side speaker is small
S7-7 (L-)	–	–	Sound from left side speaker is small
S7-1 (R+)	–	–	Sound from right side speaker is small
S7-2 (R+)	–	–	Sound from left side speaker is small

POWER AMPLIFIER – 2



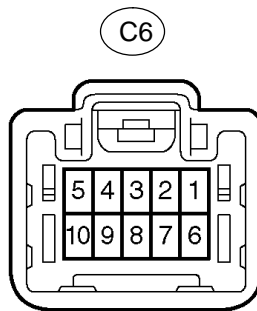
Symbols (Terminals No.)	Condition	Specified value	Problem symptom when open circuit is detected.
			Problem symptom when short circuit is detected.
S17-6 – S17-1, 4 (ACC1 – GND4, 5)	Ignition switch ACC or ON	10 – 14 V	Audio system does not sound
S17-2 – S17-1, 4 (+B1 – GND4, 5)	Constant	10 – 14 V	Audio system does not sound
			Fuse is blown
S17-5 – S17-1, 4 (+B2 – GND4, 5)	Constant	10 – 14 V	Audio system does not sound
			Fuse is blown
S17-7 – S17-1, 4 (MUTE – GND4, 5)	Radio switch ON	5 V	Pop sounded., during key operation
S14-6 – S17-1, 4 (AMP+ – GND4, 5)	Ignition switch ON		Audio system does not sound
S14-1 – Body ground (GND – Body ground)	Constant	Continuity	Audio system does not sound
S14-10 (FL+)	–	–	Sound from FL side speaker is small
S14-9 (FL–)	–	–	Sound from FL side speaker is small
S14-3 (FR+)	–	–	Sound from FR side speaker is small
S14-8 (FR–)	–	–	Sound from FR side speaker is small
S14-4 (RL+)	–	–	Sound from RL side speaker is small
S14-13 (RL–)	–	–	Sound from RL side speaker is small
S14-5 (RR+)	–	–	Sound from RR side speaker is small
S14-14 (RR–)	–	–	Sound from RR side speaker is small
S16-2 (FL+)	Radio switch ON	5 – 7 V	Front LH

DIAGNOSTICS – LEXUS NAVIGATION SYSTEM

S14-7 (FL-)	Radio switch ON	5 – 7 V	Front LH speaker does not sound
			Front speaker does not sound
S14-1 (FR+)	Radio switch ON	5 – 7 V	Front RH speaker does not sound
S14-6 (FR-)	Radio switch ON	5 – 7 V	Front RH speaker does not sound
S15-1 – S17-1, 4 (WF+ – GND4, 5)	Radio switch ON	5 – 7 V	Woofer does not sound
S15-2 – S17-1, 4 (WF- – GND4, 5)	Radio switch ON	5 – 7 V	Woofer does not sound
S16-4 (RR+)	Radio switch ON	5 – 7 V	Rear RH speaker does not sound
			Rear speaker does not sound
S16-12 (RR-)	Radio switch ON	5 – 7 V	Rear RH speaker does not sound
			Rear speaker does not sound
S16-5 (RL+)	-	-	Sound from RL side speaker is small
S16-13 (RL-)	-	-	Sound from RL side speaker is small
S14-7 (BEEP)	-	-	

CD AUTO CHANGER

EXCEPT NAKAMICHI:



I04235

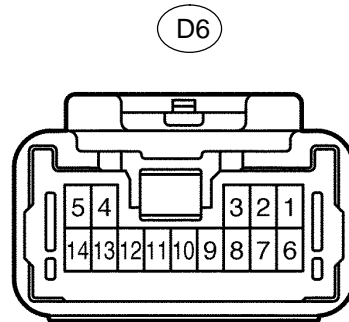
Symbols (Terminals)	Condition	Specified value	Problem symptom when open circuit is detected.
			Problem symptom when short circuit is detected.
C6-1 (CDR+)	–	–	Sound from right side speaker is small.
C6-2 (CDL+)	–	–	Sound from left side speaker is small.
C6-3 – C6-8 (MUTE – GND)	Radio switch ON	5 V	Pop sound etc.. Audio system does not sound.
C6-4 – C6-8 (TXM+ – GND)	Ignition switch ACC or ON	2 – 3 V	CD auto changer does not operate. LEXUS navigation system does not operate.
C6-5 – C6-8 (B – GND)	Constant	10 – 14 V	CD auto changer does not operate. Fuse is blown.
C6-6 (CDR–)	–	–	Sound from right side speaker is small.
C6-7 (CDL–)	–	–	Sound from left side speaker is small.
C6-8 – Body ground (GND – Body ground)	Constant	Continuity	Audio system is normal.
C6-9 – C6-8	Ignition switch ACC or ON	2 – 3 V	CD auto changer does not operate.
(TXM– – GND)			LEXUS navigation system does not operate.
C6-10 – C6-8	Ignition switch ACC or ON	10 – 14 V	CD auto changer does not operate.
(ACC – GND)			Fuse is blown.
D6-11 (DL–)	–	–	Sound from left side speaker is small
D6-12 (DL+)	–	–	Sound from left side speaker is small

DIAGNOSTICS – LEXUS NAVIGATION SYSTEM

D6-9 (DR-)	-	-	Sound from right side speaker is small
D6-10 (DR+)	-	-	Sound from right side speaker is small
C6-2 – Body ground (SGND – Body ground)	Constant	Continuity	Audio system does not sound
D6-7 – D6-14 (TXM+ – E)	Radio switch ON	5 V	Pop sound etc.
			Audio system does not sound
D6-1 – D6-14 (TXM+ – E)	Ignition switch ACC or ON	2 – 3 V	CD auto changer does not operate
			LEXUS navigation system does not operate
D6-6 – D6-14 (TXM – –E)	Ignition switch ACC or ON	2 – 3 V	CD auto changer does not operate
			LEXUS navigation system does not operate
D6-5 – D6-14 (+B – E)	Constant	10 – 14 V	CD auto changer does not operate
			Fuse is blown
D6-4 – D6-14 (ACC – E)	Constant	10 – 14 V	CD auto changer does not operate
			Fuse is blown
D6-14 – Body ground (E – Body ground)	Constant	Continuity	Audio system is normal

CD AUTO CHANGER

NAKAMICHI:



I16499

Symbols (Terminals)	Condition	Specified value	Problem symptom when open circuit is detected.
			Problem symptom when short circuit is detected.
D6-11 (DL-)	-	-	Sound from left side speaker is small.
D6-12 (DL+)	-	-	Sound from left side speaker is small.
D6-9 (DR-)	-	-	Sound from right side speaker is small.
D6-10 (DR+)	-	-	Sound from right side speaker is small.
D6-2 – Body ground (SGND – Body ground)	Constant	Continuity	Audio system does not sound.
D6-7 – D6-14 (MUTE – E)	Radio switch ON	5 V	Pop sound etc..
			Audio system does not sound.
D6-1 – D6-14 (TXM+ – E)	Ignition switch ACC or ON	2 – 3 V	CD auto changer does not operate.
			LEXUS navigation system does not operate.
D6-6 – D6-14 (TXM- – E)	Ignition switch ACC or ON	2 – 3 V	CD auto changer does not operate.
			LEXUS navigation system does not operate.
D6-5 – D6-14 (+B – E)	Constant	10 – 14 V	CD auto changer does not operate.
			Fuse is blown.
D6-4 – D6-14 (ACC – E)	Constant	10 – 14 V	CD auto changer does not operate.
			Fuse is blown.
D6-14 – Body ground (E – Body ground)	Constant	Continuity	Audio system is normal.