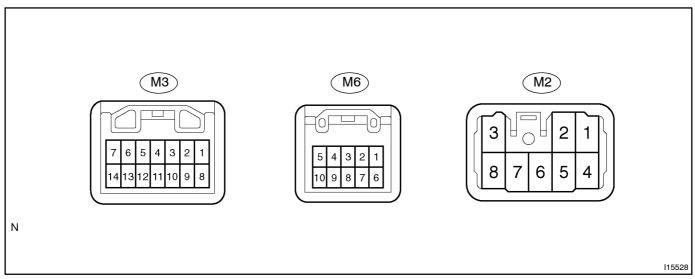
DI86D-01

# **TERMINALS OF ECU**

## **MULTI DISPLAY**

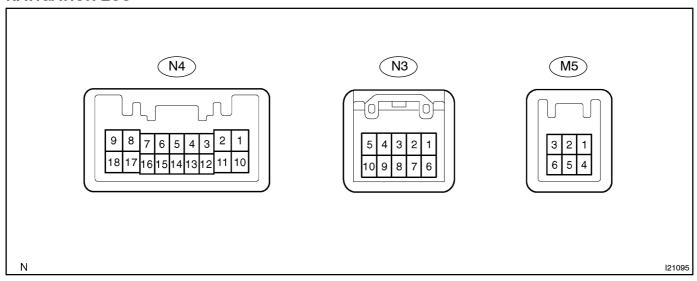


			ā
Symbols	Symbols (Terminal No.)  Condition  STD Voltage (V)		Problem symptom when open circuit is detected.
(Terminal No.)		Problem symptoms when short circuit is detected.	
+B ↔ GND1 (M2-1 ↔ M2-6)	Constant	10–14	Navigation system does not operate.
TX2 ↔ GND1 (M2-2 ↔ M2-6)	Ignition switch ON	10–14	Navigation system does not operate.
$\begin{array}{c} ACC \leftrightarrow GND1 \\ (M2-2 \leftrightarrow M2-6) \end{array}$	Ignition switch ACC	10–14	Navigation system does not operate.
GND1 ↔ Body ground (M2–6 ↔ Body ground)	Constant	Continuity	Audio system is normal.
TX1+ (M3-3)	AVC-LAN communication circuit	-	Navigation system does not operate.
SPD ↔ GND1 (M3-5 ↔ M2-6)	Ignition switch ON, and driving Repeatedly changes from below 1 to 9 V		Fuel efficiency cannot be calculated.
TX3+ ↔ GND1 (M3-4 ↔ M2-6)	Ignition switch ACC or ON	About 2.5	Screen is disorder.
TX1- (M3-10)	AVC-LAN communication circuit	-	Navigation system does not operate.
TX3- ↔ GND1 (M3-11 ↔ M2-6)	Ignition switch ACC or ON	About 2.5	Screen is disorder.
PKB ↔ GND1 (M3–13 ↔ M2–6)	Ignition switch ON, and parking brake switch ON (parking brake pedal released)	5	The system cannot enter Diagnostic system mode.
TC ↔ GND1	Ignition switch OFF and connect		Navigation system is normal.
(M3–14 ↔ M2–6)	terminals TC and E1 of check connector	Continuity	The system does not exit Service check mode.
VR ↔ VG (M6–1 ↔ M6–6)	Constant	Continuity	Screen noise or other types of noise occur.
R ↔ VG (M6-2 ↔ M6-6)	Diagnosis display check screen is white (Using an oscilloscope)	0.7 ± 0.1 *2	Screen color turns to blue

#### **DIAGNOSTICS** - LEXUS NAVIGATION SYSTEM

B ↔ VG (M6–3 ↔ M6–6)	Diagnosis display check screen is white (Using an oscilloscope)	0.7 ± 0.1 *2	Screen color turns to yellow
$G \leftrightarrow VG$ $(M6-7 \leftrightarrow M6-6)$	Diagnosis display check screen is white (Using an oscilloscope)	0.7 ± 0.1 *2	Screen color turns to red-purple.
SYVC ↔ VG (M6-8 ↔ M6-6)	Display ON (Using an oscilloscope)	0.5 – 1.3 *1	Screen is in disorder

## **NAVIGATION ECU**

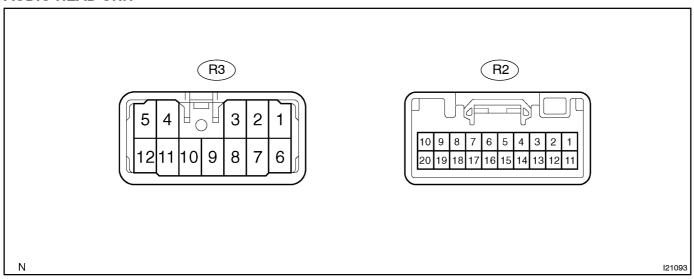


Symbols	Condition		Problem symptom when open circuit is detected.
(Terminal No.)		STD Voltage (V)	Problem symptom when short circuit is detected.
VR ↔ VG			Screen noise or other types of noise occur.
(N3−1 ↔ N3−6)	Constant	Continuity	Navigation system does not operate.
$R \leftrightarrow VG$ $(N3-2 \leftrightarrow N3-6)$	Diagnosis display check screen is white (Using an oscilloscope)	0.7 ± 0.1 *1	Screen color turns to blue.
B ↔ VG (N3–3 ↔ N3–6)	Diagnosis display check screen is white (Using an oscilloscope)	0.7 ± 0.1 *1	Screen color turns to yellow.
TX+ (N3-5)	AVC-LAN Communication circuit	-	Navigation system does not operate.
$G \leftrightarrow VG$ $(N3-7 \leftrightarrow N3-6)$	Diagnosis display check screen is white (Using an oscilloscope) 0.7 $\pm$ 0.1 *1		Screen color turns to red-purple.
SYNC ↔ VG (N3-8 ↔ N3-6)	Display ON (Using an oscilloscope)	0.5 – 1.3 *1	Screen is in disorder.
TX- (N3-10)	AVC-LAN Communication circuit	-	Navigation system does not operate.
AUI+ ↔ GND (N4-1 ↔ N4-17)	Radio switch ON	5 – 7	Driver's side speaker does not sound.
AUI+ ↔ GND (N4-2 ↔ N4-17)	Radio switch ON	5 – 7	Driver's side speaker does not sound.
SPD ↔ GND (N4-5 ↔ N4-17)	Ignition switch ON, and driving wheel rotated smoothly.	Repeatedly changes from below 1 to 9 V	Fuel efficiency cannot be calculated.
AUI- ↔ GND (N4-10 ↔ N4-17)	Radio switch ON	5 – 7	Driver's side speaker does not sound.
AUI- ↔ GND (N4-11 ↔ N4-17)	Radio switch ON	5 – 7	Driver's side speaker does not sound.
+B ↔ GND (N4-9 ↔ N4-17)	Constant	10 – 14	Navigation system does not operate.

#### **DIAGNOSTICS** - LEXUS NAVIGATION SYSTEM

REV ↔ GND (N4-11 ↔ N4-17)	A/T shift position R	5	The direction of advance of the vehicle is different from that of cursor.
	Radio switch ON	5	Pop sound etc.
MUTE ↔ GND (N4–15 ↔ N4–17)			Navigation system does not operate.
GND ↔ Body ground (N4–17 ↔ Body ground)	Constant	Continuity	Audio system is normal
ACC ↔ GND (N4-18 ↔ N4-17)	Ignition switch ACC	10 – 14	Navigation system does not operate.

## **AUDIO HEAD UNIT**



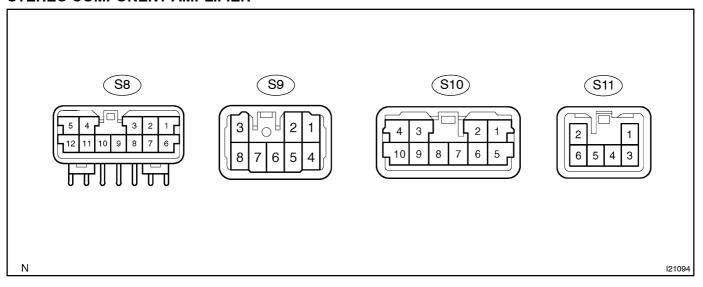
Symbols	Symbols (Terminal No.)  Condition  STD Voltage (V)		Problem symptom when open circuit is detected.
(Terminal No.)		Problem symptoms when short circuit is detected.	
B ↔ GND (R2–1 ↔ R2–20)	Constant	10 – 14	Audio system does not operate.
ILL+ ↔ GND	Light control switch TAIL	10 – 14	Audio head unit illumination does not light up.
(R2-2 ↔ R2-20)			Fuse is blown.
ANT ↔ GND (R2-4 ↔ R2-20)	Radio switch ON	10 – 14	Antenna does not extend.
BUS+ (R2-5)	AVC-LAN Communication circuit	-	Audio system does not operate.
MUTE ↔ GND	D. II. III. ON	_	Pop sound etc.
(R2-7 ↔ R2-20)	Radio switch ON	5	Audio system does not operate.
R+ ↔ GND (R2-8 ↔ R2-20)	Constant	10 – 14	Sound from right side speaker is small.
L+ ↔ GND (R2-9 ↔ R2-20)	Constant	10 – 14	Sound from left side speaker is small.
ACC ↔ GND (R2-11 ↔ R2-20)	Ignition switch ACC	10 – 14	Audio system does not operate.
ILL- ↔ GND	Light control switch TAIL	Below 0.5	Audio head unit illumination does not light up.
(R2-12 ↔ R2-20)			Fuse is blown.
ANTB ↔ GND (R2-13 ↔ R2-20)	Radio switch ON	10 – 14	Antenna does not extend.
ANTA ↔ GND (R2–14 ↔ R2–20)	Radio switch ON	10 – 14	Antenna does not extend.
BUS- (R2-15)	AVC-LAN Communication circuit	-	Audio system does not operate.
L- ↔ GND (R2-19 ↔ R2-20)	Constant	10 – 14	Sound from left side speaker is small.
GND ↔ Body ground (R2–20 ↔ Body ground)	Constant	Continuity	Audio system is normal.

LEXUS GS300/GS430 SUP (RM786E)

#### **DIAGNOSTICS** - LEXUS NAVIGATION SYSTEM

TX- (R3-9)	AVC-LAN Communication circuit	-	Audio system does not operate.
TX+ (R2-10)	AVC-LAN Communication circuit	-	Audio system does not operate.

## STEREO COMPONENT AMPLIFIER



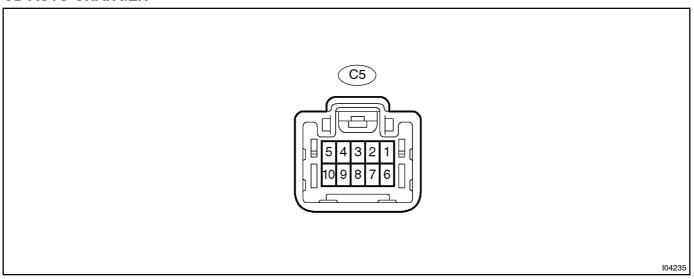
Symbols			Problem symptom when open circuit is detected.
(Terminal No.)	Condition	STD Voltage (V)	Problem symptoms when short circuit is detected.
R+ (S8-1)	-	-	RH side speaker does not sound.
L+ (S8-2)	-	-	LH side speaker does not sound.
MUTE ↔ E	Dealin avritale ON	_	Pop sound etc.
(S8-4 ↔ S10-7)	Radio switch ON	5	Audio system does not operate.
R- (S8-6)	-	-	RH side speaker does not sound.
L- (S8-7)	-	-	LH side speaker does not sound.
BUS+ (S8-9)	AVC-LAN Communication circuit	-	Audio system does not operate.
BUS- (S8-10)	AVC-LAN Communication circuit	-	Audio system does not operate.
ACC ↔ E (S8-12 ↔ S10-7)	Ignition switch ACC	10 – 14	Audio system does not operate.
TXM+ (S9-1)	AVC-LAN Communication circuit	-	Audio system does not operate.
CDR+ (S9-2)	-	-	Sound from right side speaker is small.
CDL+ (S9-3)	-	-	Sound from left side speaker is small.
TXM- ↔ E (S9-4)	AVC-LAN Communication circuit	-	Audio system does not operate.
CDR- (S9-5)	-	-	Sound from right side speaker is small.
MUTE ↔ E (S9-6 ↔ S10-7)			Pop sound etc.
	CD auto changer switch ON	5 – 7	Audio system does not operate.
CDL- (S9-8)	-	-	Sound from left side speaker is small.

LEXUS GS300/GS430 SUP (RM786E)

#### **DIAGNOSTICS** – LEXUS NAVIGATION SYSTEM

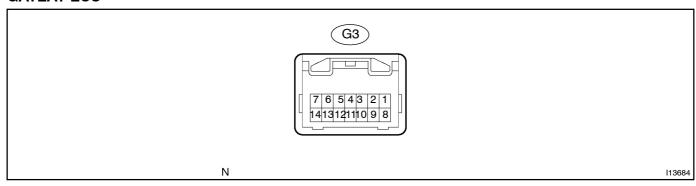
FR+ ↔ E (S10-1 ↔ S10-7)	Radio switch ON	5 – 7	RH side speaker does not sound.
FL+ ↔ E (S10-2 ↔ S10-7)	Radio switch ON	5 – 7	LH side speaker does not sound.
FR- ↔ E (S10-5 ↔ S10-7)	Radio switch ON	5 – 7	RH side speaker does not sound.
FL- ↔ E (S10-6 ↔ S10-7)	Radio switch ON	5 – 7	LH side speaker does not sound.
E ↔ Body ground (S10–7 ↔ Body ground)	Constant	Continuity	
N-MU (S10-10)	AVC-LAN Communication circuit	_	
RR+ ↔ E (S11-1 ↔ S10-7)	Radio switch ON	5 – 7	Rear RH side speaker does not sound.
RL+ ↔ E (S11-2 ↔ S10-7)	Radio switch ON	5 – 7	Rear LH side speaker does not sound.
RR- ↔ E (S11-3 ↔ S10-7)	Radio switch ON	5 – 7	Rear RH side speaker does not sound.
WF+ ↔ E (S11-4 ↔ S10-7)	Radio switch ON	5 – 7	Woofer does not sound.
WF- ↔ E (S11-5 ↔ S10-7)	Radio switch ON	5 – 7	Woofer does not sound.
RL- ↔ E (S11-6 ↔ S10-7)	Radio switch ON	5 – 7	Rear LH side speaker does not sound.

## **CD AUTO CHANGER**

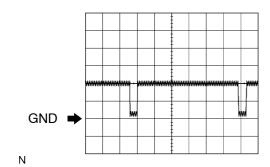


Symbols (Terminal No.)	Condition		Problem symptom when open circuit is detected.
		STD Voltage (V)	Problem symptoms when short circuit is detected.
CDR+ (C5-1)	-	-	Sound from right side speaker is small.
CDL+ (C5-2)	-	-	Sound from left side speaker is small.
MUTE ↔ GND	B !: "   ON	_	Pop sound etc.
(C5–3 ↔ C5–8)	Radio switch ON	5	Audio system does not operate.
TXM+ ↔ GND (C5–3 ↔ C5–8)	Ignition switch ON	2 – 3	Audio system does not operate.
B ↔ GND Constant	Constant	10 – 14	CD auto changer does not operate.
(C5–5 ↔ C5–8)			Audio system does not operate.
CDR- (C5-6)	-	-	Sound from right side speaker is small.
CDL- (C5-7)	-	-	Sound from left side speaker is small.
GND ↔ Body ground (C5–8 ↔ Body ground)	Constant	Continuity	Audio system does not operate.
TXM- ↔ GND (C5-3 ↔ C5-8)	Ignition switch ON	2 - 3	Audio system does not operate.
ACC ↔ E (C5-10 ↔ C5-8)	Ignition switch ACC	10 – 14	CD auto changer does not operate.

## **GATEAY ECU**



Symbols (Terminals No.)	Wiring Color	Condition	STD Voltage (V)
IG ↔ GND (G3-2 ↔ G3-14)	GR ↔ W-B	Ignition switch ON	10 – 14
MPD1 (G3-2)	W	Multiplex communication circuit	-
GTX+ (G3-5)	BR	AVC-LAN communication circuit	-
CG ↔ BOdy ground (G3-7 ↔ Body ground)	W-B ↔ Body ground	Constant	Continuity
BATT ↔ GND (G3-8 ↔ G3-14)	G–W ↔ W–B	Constant	10 – 14
ACC ↔ GND (G3-9 ↔ G3-14)	GR ↔ W-B	Ignition switch ACC	10 – 14
MPD2 (G3-11)	W	Multiplex communication circuit	-
GTX- (G3-12)	Υ	AVC-LAN communication circuit	-
GND ↔ Body ground (G3–14 ↔ Body ground)	W-B ↔ Body ground	Constant	Continuity

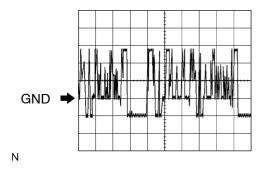


#### Oscilloscope

\*1: wave1

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

l15531



#### Oscilloscope

\*1: wave1

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

115532