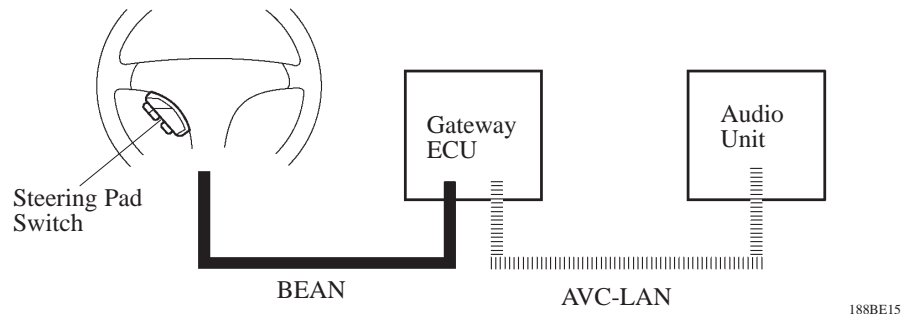


## ■ AUDIO

### 1. General

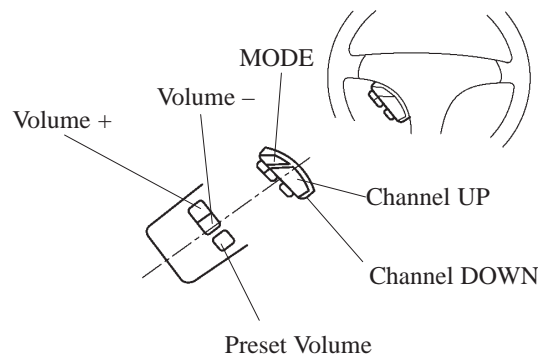
- A steering pad switch that operates the audio unit has been provided on the steering wheel of the '01 GS430. This steering pad switch, which contains frequently used audio switches, improves the ease of use of the audio unit.
- For LEXUS premium sound system, usual Nakamichi product has been discontinued and a new power amplifier and speaker of Mark Levinson products have been adopted.

#### ▶ System Diagram ◀



### 2. Steering Pad Switch

The steering pad switch contains frequently used audio switches (volume +, volume -, preset volume, mode, and channel up/down) to improve the ease of use of the audio unit. This switch has a built-in ECU that transmits the operating conditions of the switch to the gateway ECU via the BEAN (Body Electronics Area Network). The gateway ECU converts these into the transmission signals for the AVC-LAN (Audio Visual Communication - Local Area Network), which are then output to the audio unit.



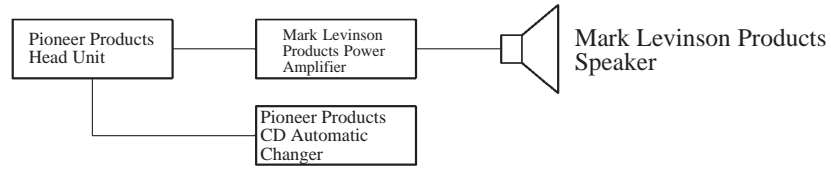
### 3. LEXUS Premium Sound System

Usual head unit, power amplifier, speaker and equalizer assembly of Nakamichi products used for LEXUS premium sound system have been discontinued and a new power amplifier and speaker of Mark Levinson products have been adopted. With this, LEXUS premium sound system can be selected in spite of whether or not it has a multi-information display.

1

#### ► System Diagram ◀

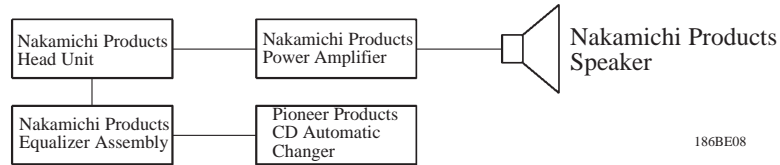
With and without multi display



186BE07

**'01 GS430/300**

Without multi display only



186BE08

**'00 GS400/300**

## AVC-LAN (Communication bus) Circuit

### CIRCUIT DESCRIPTION

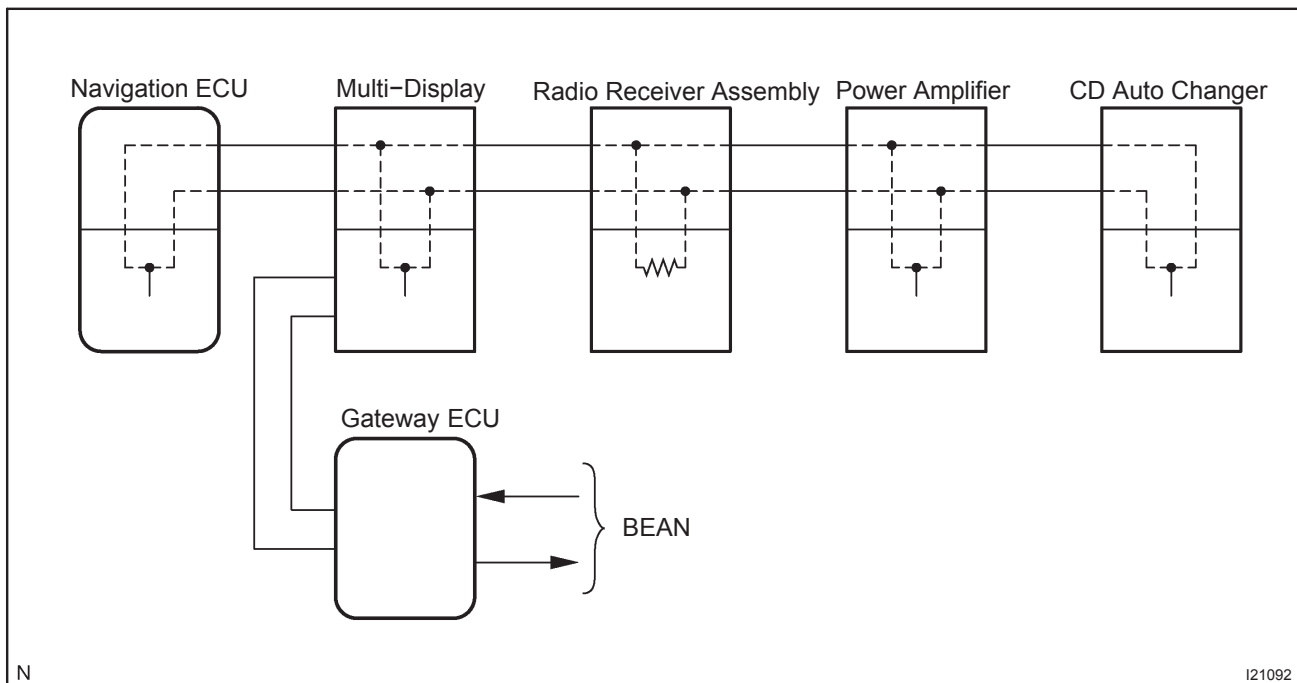
Each unit of LEXUS navigation system connected with AVC-LAN (communication bus) transfers the signal of each switch by communication.

When +B short and GND short occur in this AVC-LAN, LEXUS navigation system will not function normally as the communication is discontinued.

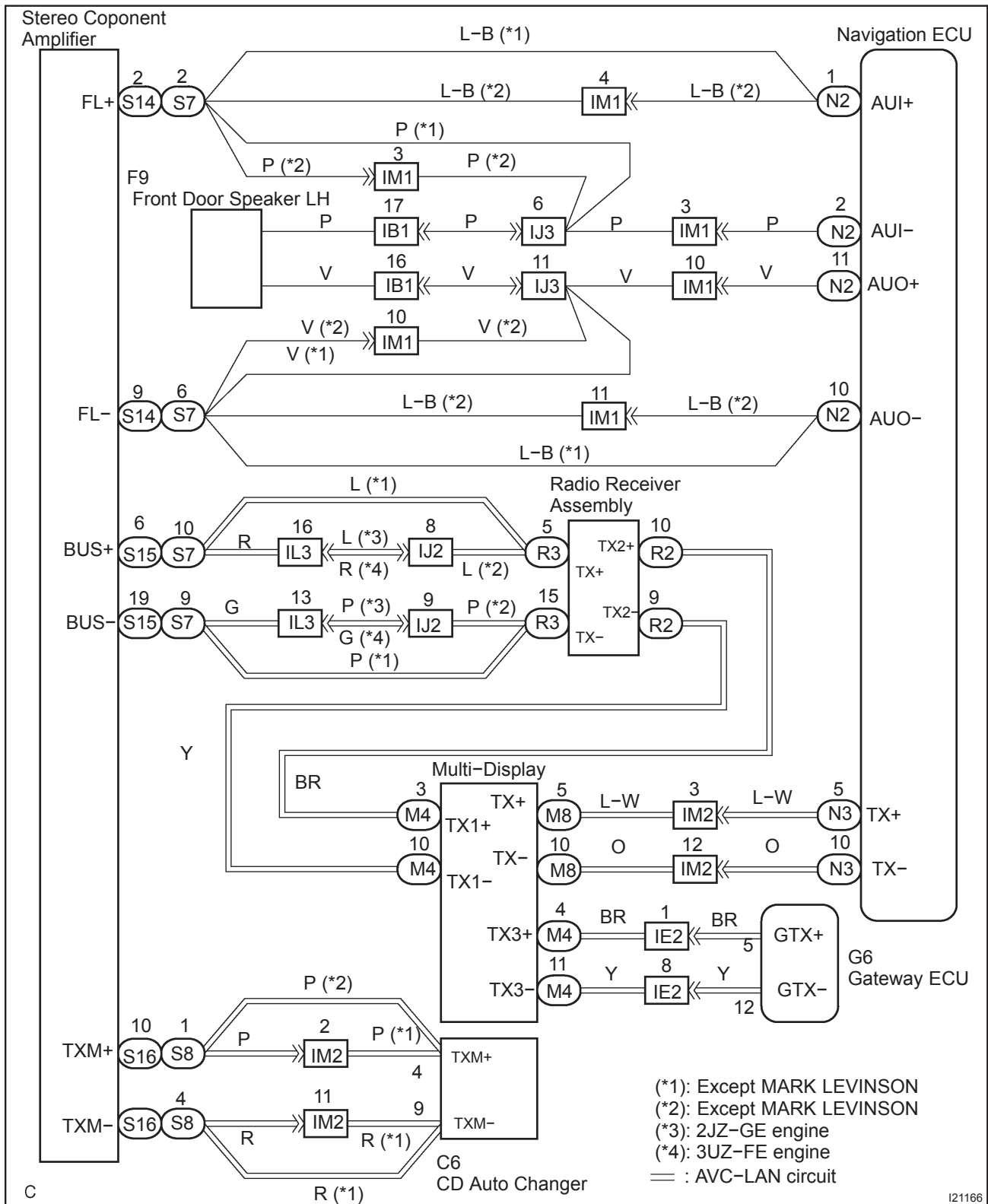
In this AVC-LAN, multi-display becomes the master of the communication, and the radio receiver assembly has a resistance necessary for transmitting the communication.

multi display is connected between Navigation ECU and radio receiver assembly, LEXUS navigation system has the structure that makes communication impossible without Navigation ECU, or radio receiver assembly.

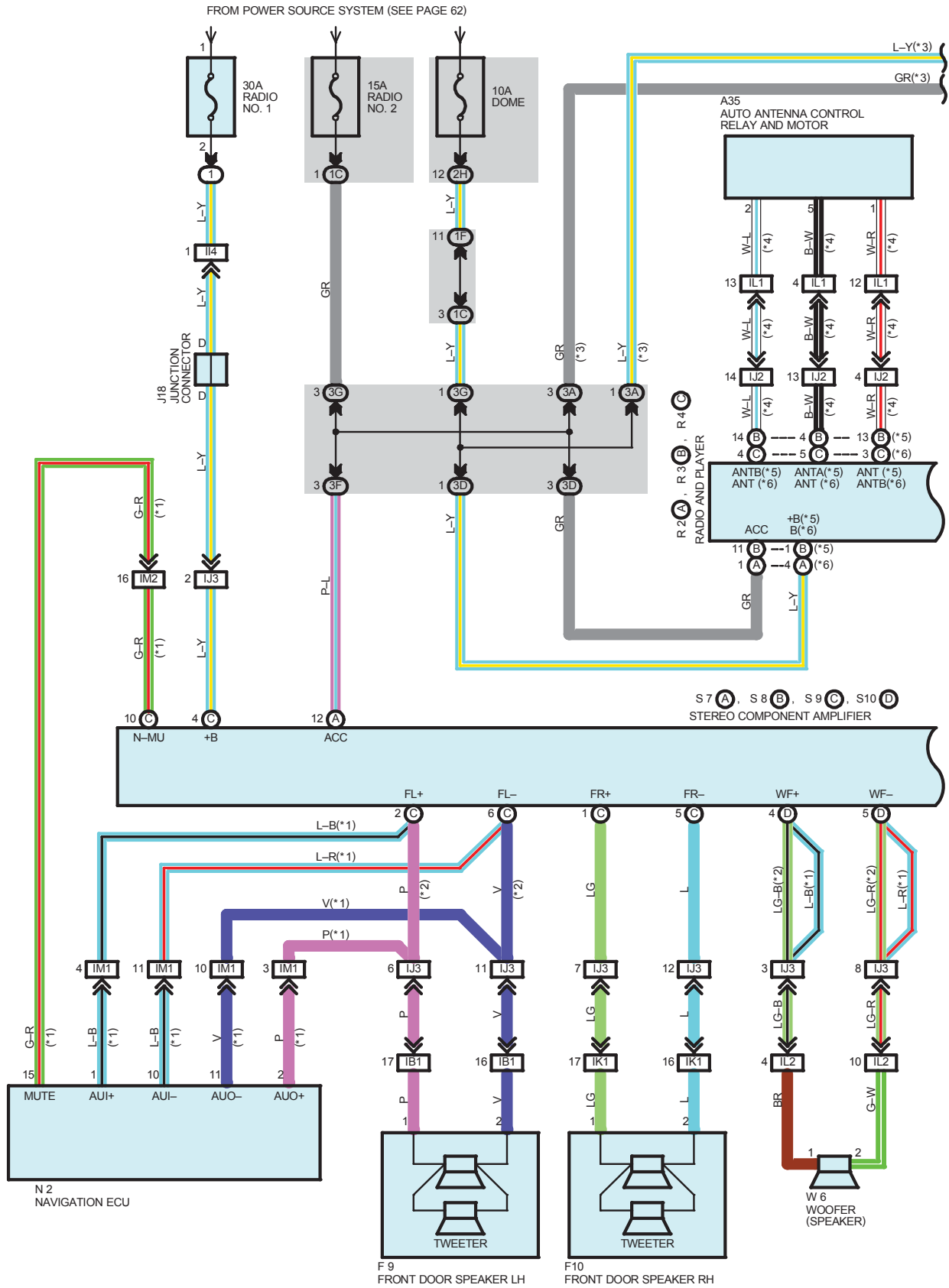
### AVC-LAN



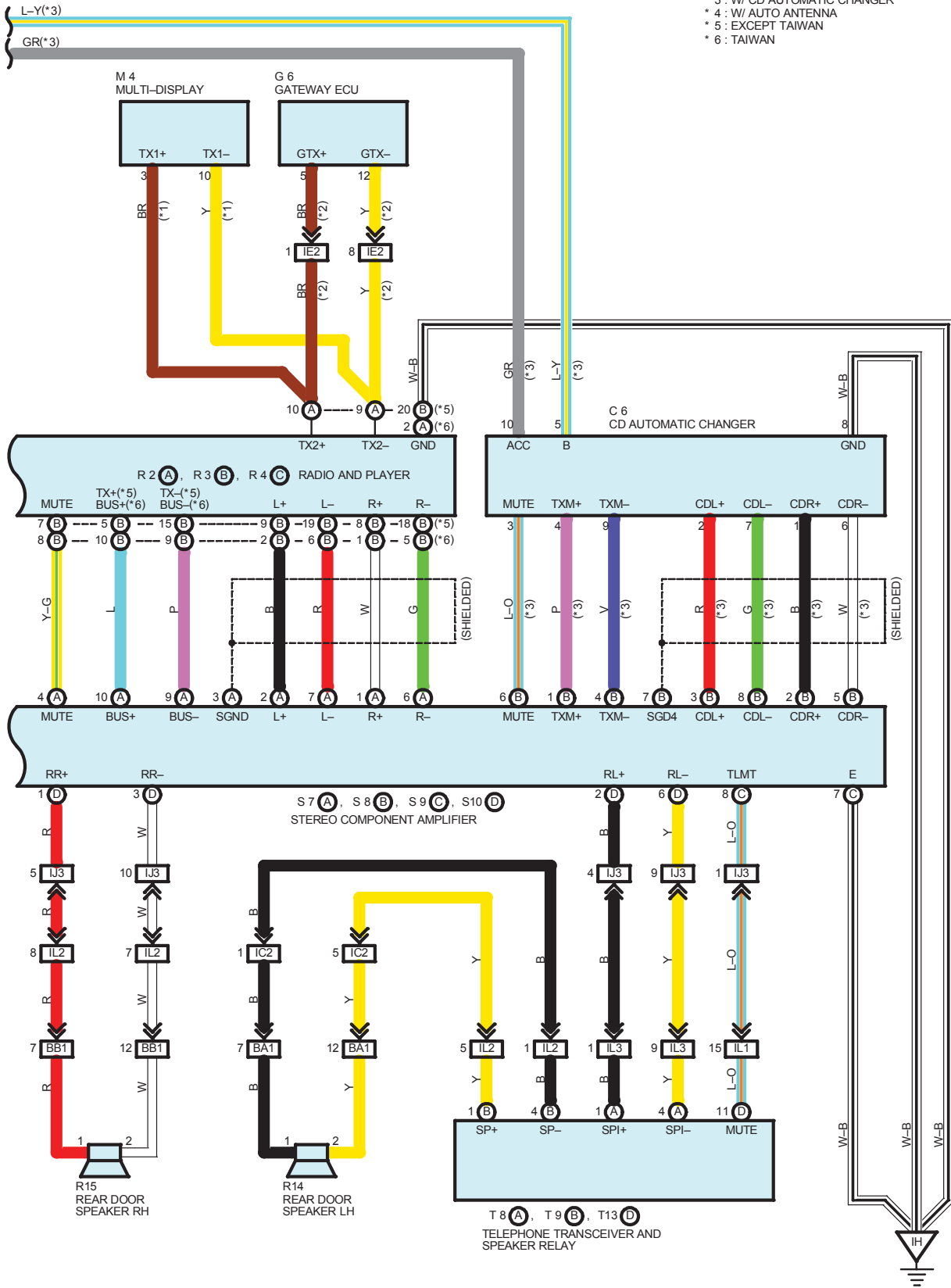
**WIRING DIAGRAM**



# RADIO AND PLAYER (EXCEPT MARK LEVINSON)

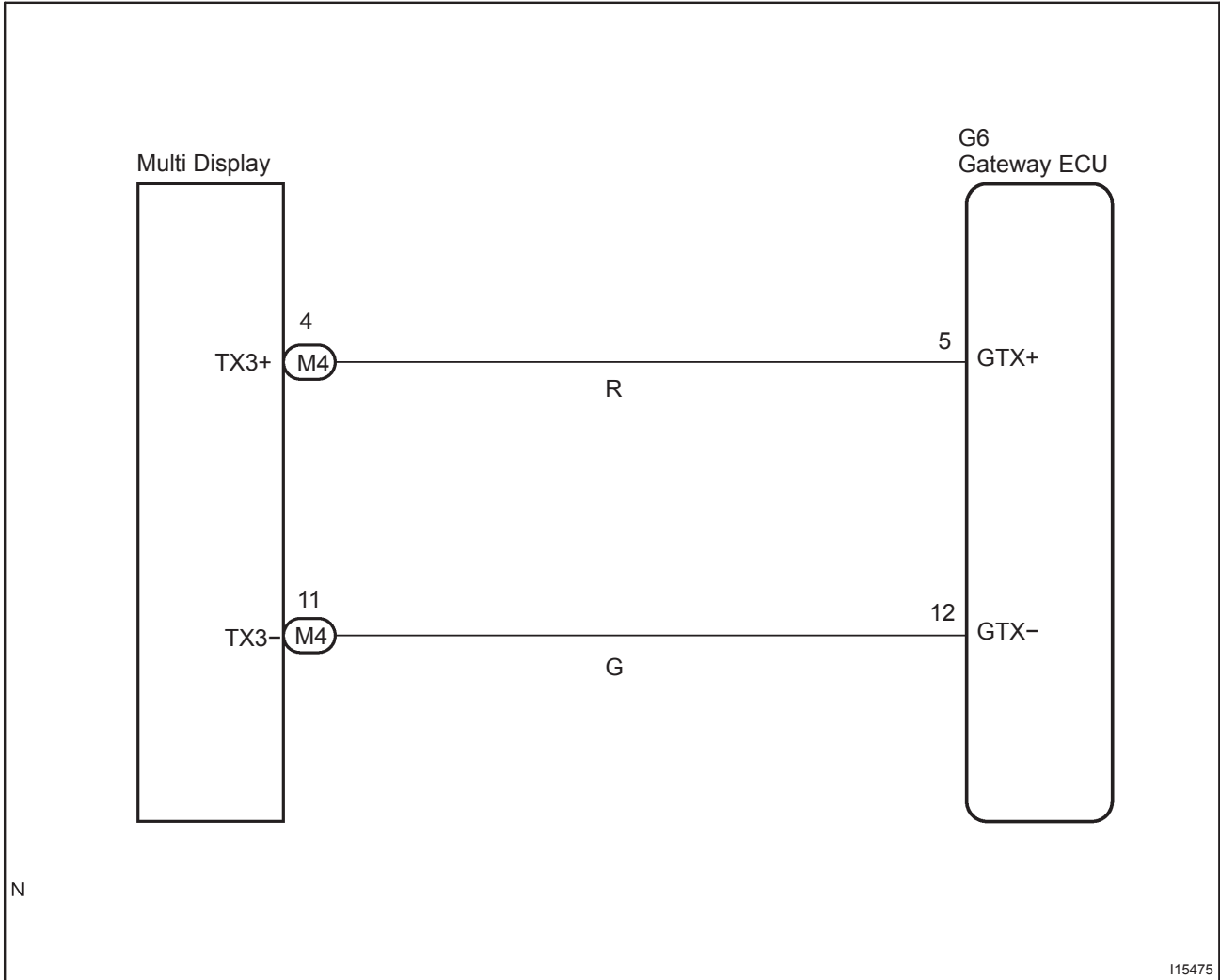


- \* 1 : W/ LEXUS NAVIGATION SYSTEM
- \* 2 : W/O LEXUS NAVIGATION SYSTEM
- \* 3 : W/ CD AUTOMATIC CHANGER
- \* 4 : W/ AUTO ANTENNA
- \* 5 : EXCEPT TAIWAN
- \* 6 : TAIWAN



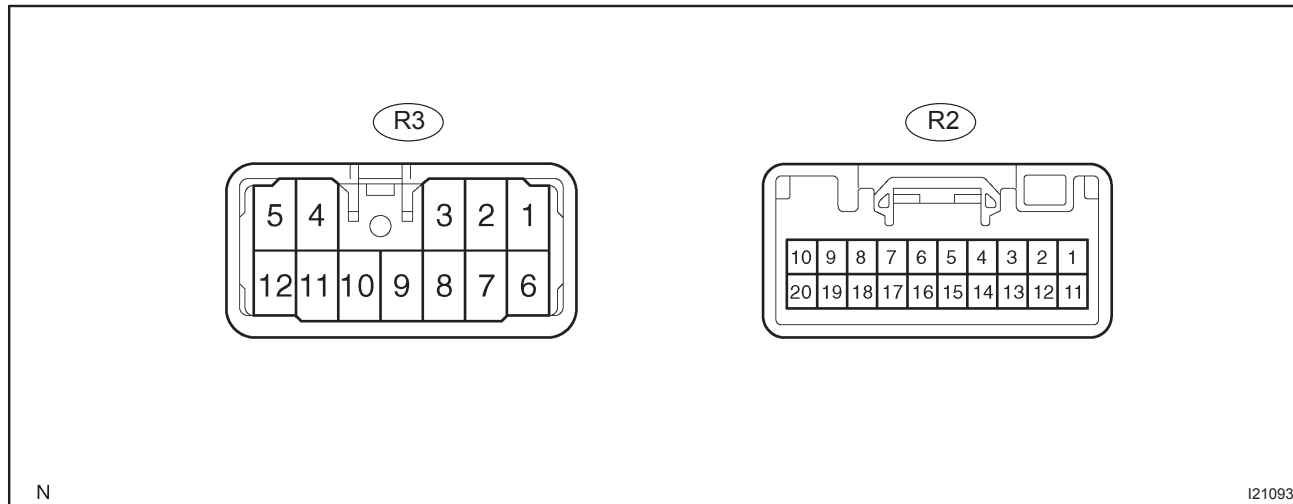
# Gateway ECU (AVC-LAN adapter) circuit

## WIRING DIAGRAM



115475

## AUDIO HEAD UNIT



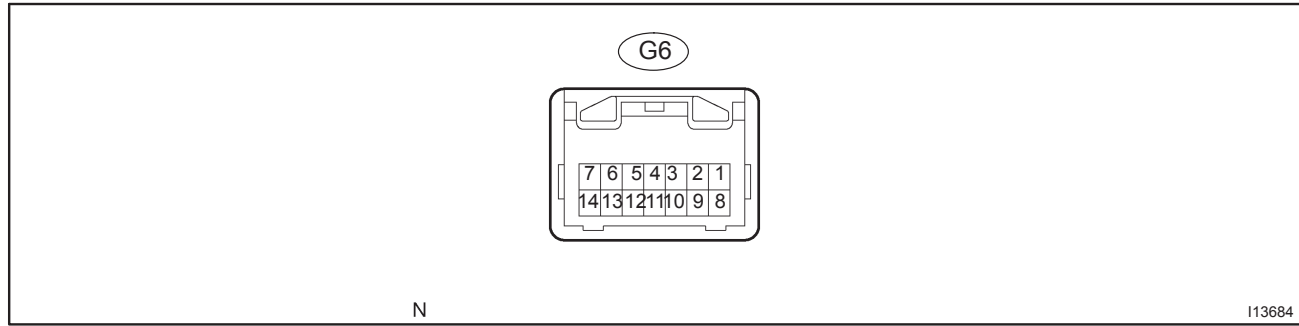
Symbols (Terminal No.)	Condition	STD Voltage (V)	Problem symptom when open circuit is detected.
			Problem symptoms when short circuit is detected.
B ↔ GND (R2-1 ↔ R2-20)	Constant	10 - 14	Audio system does not operate.
ILL+ ↔ GND (R2-2 ↔ R2-20)	Light control switch TAIL	10 - 14	Audio head unit illumination does not light up.
			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 (R2-7 ↔ R2-20)	Radio switch ON	5	Pop sound etc.
			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 (R2-12 ↔ R2-20)	Light control switch TAIL	Below 0.5	Audio head unit illumination does not light up.
			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.



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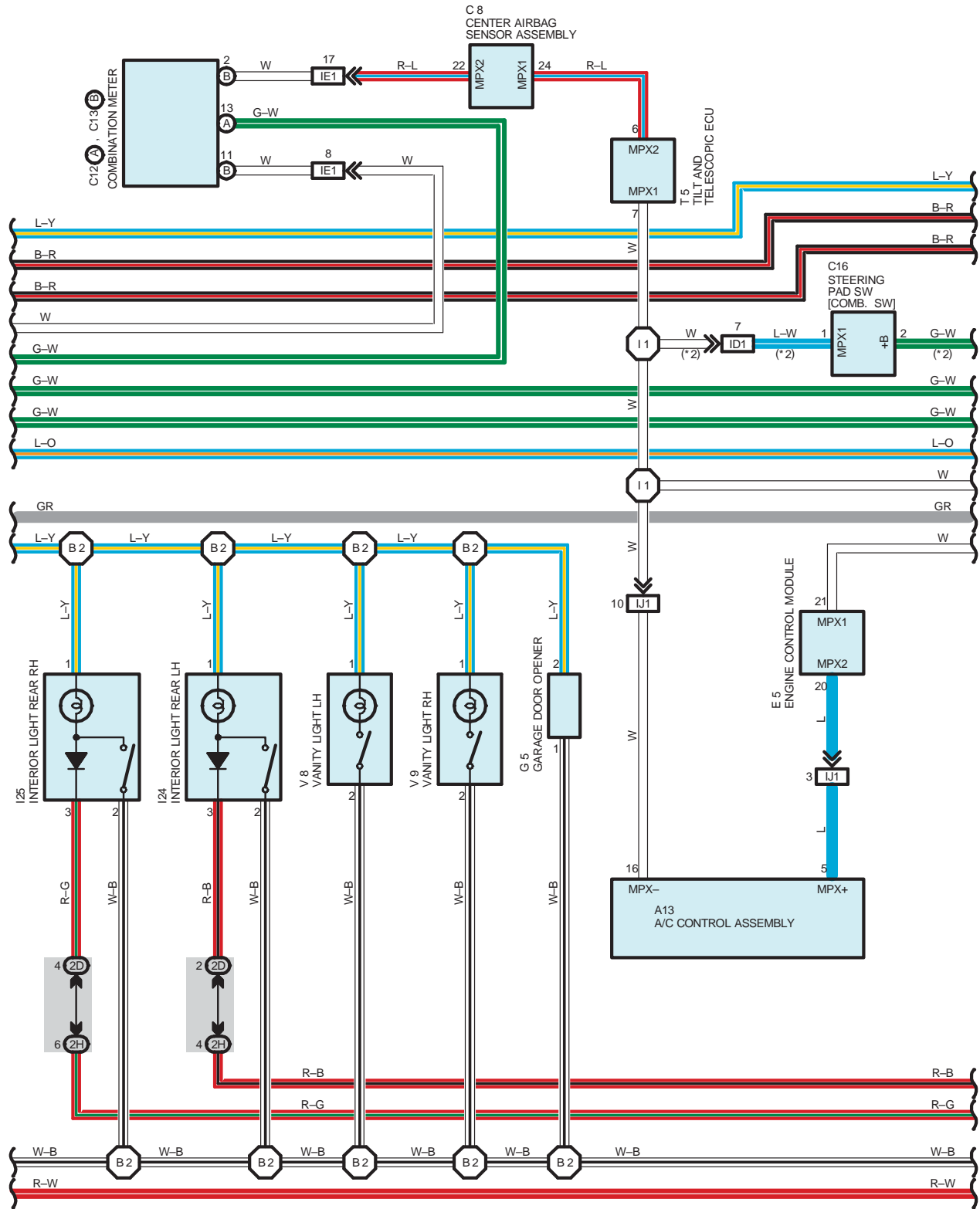
TX- (R3-9)	AVC-LAN Communication circuit	-	Audio system does not operate.
TX+ (R2-10)	AVC-LAN Communication circuit	-	Audio system does not operate.

## GATEAY ECU



Symbols (Terminals No.)	Wiring Color	Condition	STD Voltage (V)
IG ↔ GND (G6-2 ↔ G6-14)	GR ↔ W-B	Ignition switch ON	10 - 14
MPD1 (G6-2)	W	Multiplex communication circuit	-
GTX+ (G6-5)	BR	AVC-LAN communication circuit	-
CG ↔ BOdy ground (G6-7 ↔ Body ground)	W-B ↔ Body ground	Constant	Continuity
BATT ↔ GND (G6-8 ↔ G6-14)	G-W ↔ W-B	Constant	10 - 14
ACC ↔ GND (G6-9 ↔ G6-14)	GR ↔ W-B	Ignition switch ACC	10 - 14
MPD2 (G6-11)	W	Multiplex communication circuit	-
GTX- (G6-12)	Y	AVC-LAN communication circuit	-
GND ↔ Body ground (G6-14 ↔ Body ground)	W-B ↔ Body ground	Constant	Continuity

# MULTIPLEX COMMUNICATION SYSTEM



- \* 2 : 3UZ-FE
- \* 3 : 2JZ-GE
- \* 4 : W/ LEXUS NAVIGATION SYSTEM
- \* 5 : W/O LEXUS NAVIGATION SYSTEM

