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Service Category: Audio/Visual/Telematics		Section: Audio/Video
Model Year: 2008	Model: ES350	Doc ID: RM0000012CL022X
Title: AUDIO / VISUAL: AUDIO AND VISUAL SYSTEM: Speaker Circuit (2008 ES350)		

Speaker Circuit

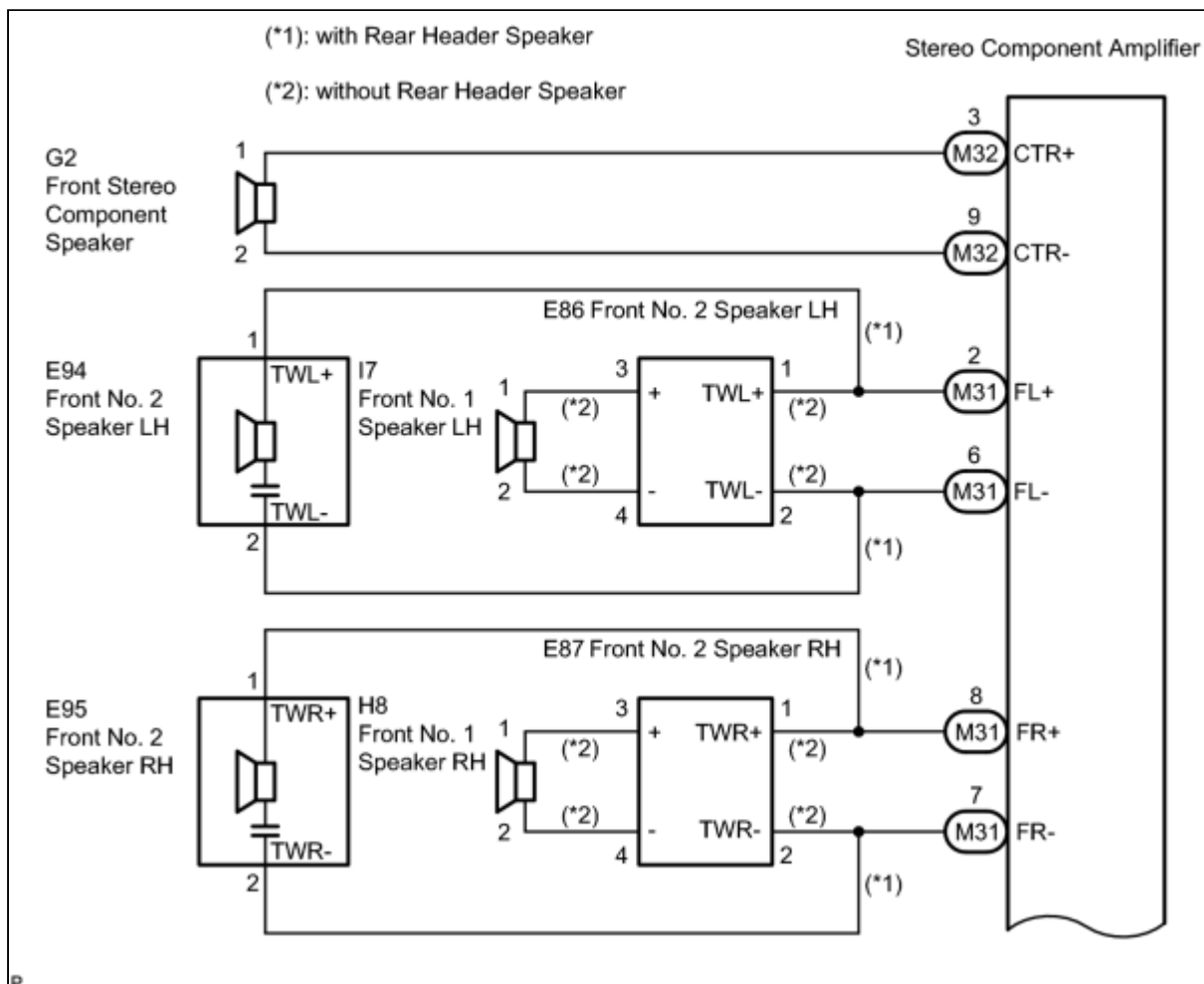
DESCRIPTION

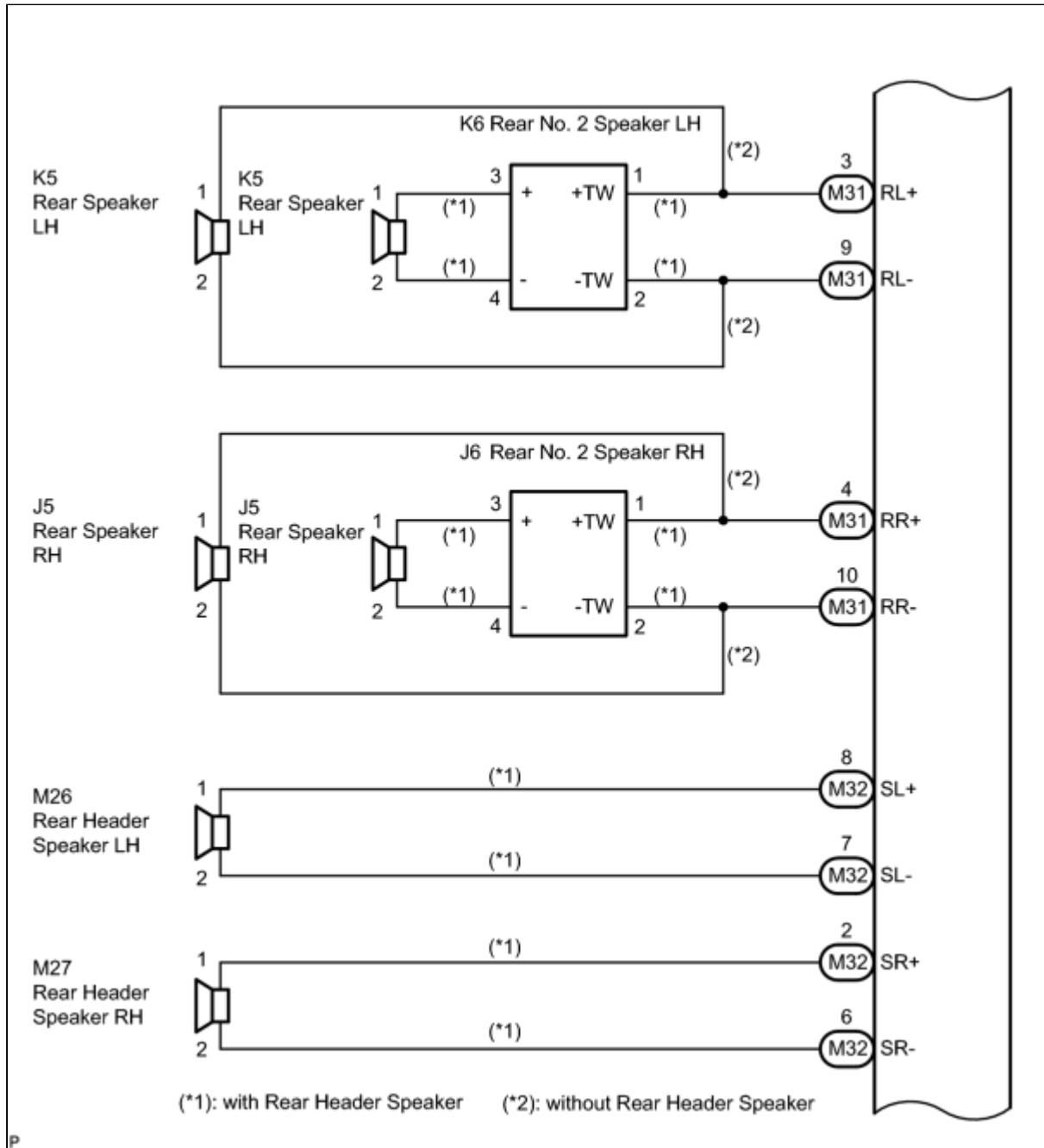
The sound signal that has been amplified by the stereo component amplifier is sent to the speakers from the stereo component amplifier through this circuit.

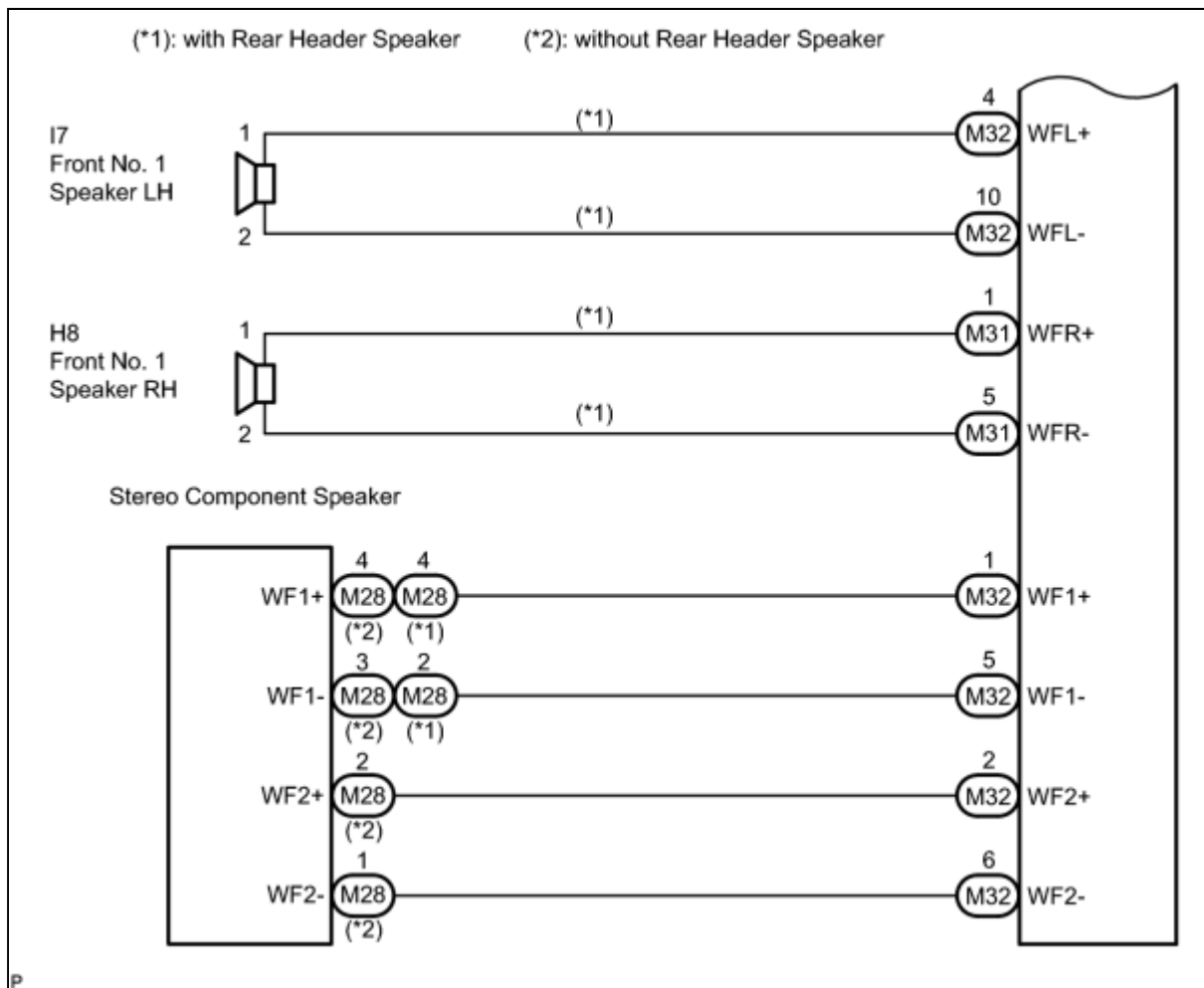
If there is a short in this circuit, the stereo component amplifier detects it and stops output to the speakers.

Thus, sound cannot be heard from the speakers even if there is no malfunction in the stereo component amplifier or speakers.

WIRING DIAGRAM





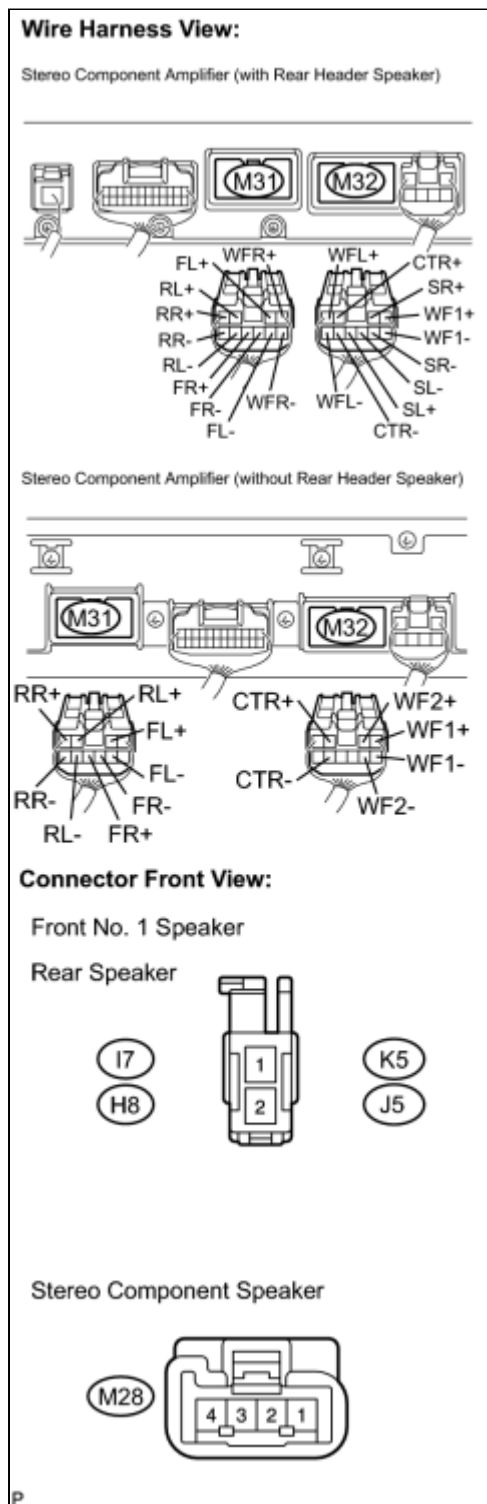


INSPECTION PROCEDURE

PROCEDURE

1.	CHECK HARNESS AND CONNECTOR
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(a) Disconnect the connectors shown in the illustration from the stereo component amplifier and speakers.



- (b) Measure the resistance between the front stereo component speaker and the stereo component amplifier to check for an open circuit in the wire harness.

Standard resistance:
Below 1 Ω

- (c) Measure the resistance between the front No. 2 speakers and stereo component amplifier to check for an open circuit in the wire harness.

Standard resistance:
Below 1 Ω

- (d) without Rear Header Speaker:

Measure the resistance between the front No. 2 speakers and front No. 1 speakers to check for an open circuit in the

wire harness.

Standard resistance:
Below 1 Ω

(e) without Rear Header Speaker:

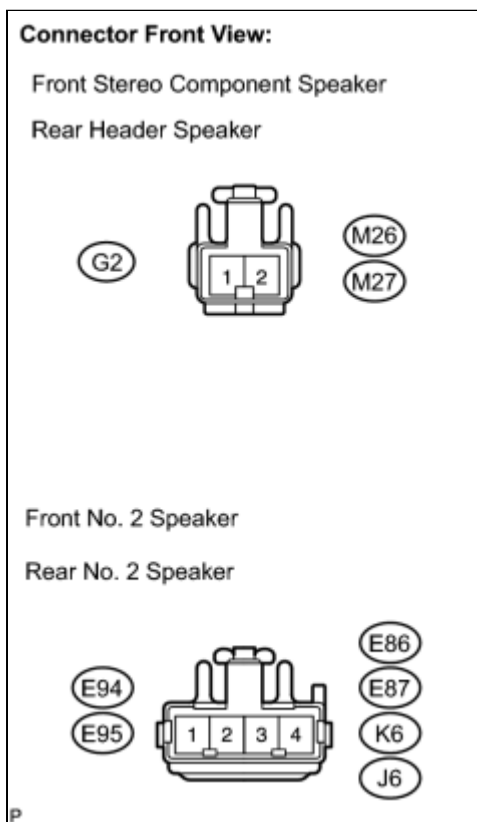
Measure the resistance between the rear speakers and stereo component amplifier to check for an open circuit in the wire harness.

Standard resistance:
Below 1 Ω

(f) with Rear Header Speaker:

Measure the resistance between the rear No. 2 speakers and stereo component amplifier to check for an open circuit in the wire harness.

Standard resistance:
Below 1 Ω



(g) with Rear Header Speaker:

Measure the resistance between the rear No. 2 speakers and rear speakers to check for an open circuit in the wire harness.

Standard resistance:
Below 1 Ω

(h) with Rear Header Speaker:

Measure the resistance between the rear header speakers and stereo component amplifier to check for an open circuit in the wire harness.

Standard resistance:
Below 1 Ω

(i) with Rear Header Speaker:

Measure the resistance between the front No. 1 speakers and stereo component amplifier to check for an open circuit in the wire harness.

Standard resistance:
Below 1 Ω

- (j) Measure the resistance between the stereo component speaker and stereo component amplifier to check for an open circuit in the wire harness.

Standard resistance:

Below 1 Ω

NG  **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK



2. CONFIRM MODEL

Result:

RESULT	PROCEED TO
with Rear Header Speaker	A
without Rear Header Speaker	B

B  **INSPECT FRONT STEREO COMPONENT SPEAKER**

A



3. INSPECT FRONT STEREO COMPONENT SPEAKER

- (a) Resistance check.

- (1) Measure the resistance between the terminals of the speaker.

Standard resistance:

Approximately 8 Ω

NG  **REPLACE FRONT STEREO COMPONENT SPEAKER**

OK



4. INSPECT FRONT NO. 1 SPEAKER

- (a) Resistance check.

- (1) Measure the resistance between the terminals of the speaker.

Standard resistance:

Approximately 8 Ω

NG  **REPLACE FRONT NO. 1 SPEAKER**

OK



5. INSPECT FRONT NO. 2 SPEAKER

(a) Check that the malfunction disappears when another speaker in good condition is installed.

OK:

Malfunction disappears.

HINT:

- Connect all the connectors to the front No. 2 speaker.
- When there is a possibility that either the right or left front speaker is defective, inspect by interchanging the right one with the left one.
- Perform the above inspection on both LH and RH sides.

NG  REPLACE FRONT NO. 2 SPEAKER

OK



6.	INSPECT REAR SPEAKER
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(a) Resistance check.

(1) Measure the resistance between the terminals of the speaker.

Standard resistance:

Approximately 8 Ω

NG  REPLACE REAR SPEAKER

OK



7.	INSPECT REAR NO. 2 SPEAKER
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(a) Check that the malfunction disappears when another speaker in good condition is installed.

OK:

Malfunction disappears.

HINT:

- Connect all the connectors to the rear No. 2 speaker.
- When there is a possibility that either the right or left rear speaker is defective, inspect by interchanging the right one with the left one.
- Perform the above inspection on both LH and RH sides.

NG  REPLACE REAR NO. 2 SPEAKER

OK



8.	INSPECT REAR HEADER SPEAKER
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(a) Resistance check.

(1) Measure the resistance between the terminals of the speaker.

Standard resistance:
Approximately 8 Ω

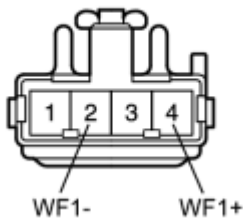
NG ▶ REPLACE REAR HEADER SPEAKER

OK



9. INSPECT STEREO COMPONENT SPEAKER

Connector Front View:



(a) Resistance check.

(1) Measure the resistance between the terminals of the speaker.

Standard resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
WF1+ - WF1-	Always	Approximately 8 Ω

NG ▶ REPLACE STEREO COMPONENT SPEAKER

OK ▶ PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE

10. INSPECT FRONT STEREO COMPONENT SPEAKER

(a) Resistance check.

(1) Measure the resistance between the terminals of the speaker.

Standard resistance:
Approximately 10 Ω

NG ▶ REPLACE FRONT STEREO COMPONENT SPEAKER

OK



11. INSPECT FRONT NO. 1 SPEAKER

(a) Resistance check.

(1) Measure the resistance between the terminals of the speaker.

Standard resistance:
Approximately 4 Ω

NG ▶ REPLACE FRONT NO. 1 SPEAKER

OK



12. INSPECT FRONT NO. 2 SPEAKER

(a) Check that the malfunction disappears when another speaker in good condition is installed.

Standard:

Malfunction disappears.

HINT:

- Connect all the connectors to the front No. 2 speaker.
- When there is a possibility that either the right or left front speaker is defective, inspect by interchanging the right one with the left one.
- Perform the above inspection on both LH and RH sides.

NG ▶ REPLACE FRONT NO. 2 SPEAKER

OK



13. INSPECT REAR SPEAKER

(a) Resistance check.

(1) Measure the resistance between the terminals of the speaker.

Standard resistance:

Approximately 4 Ω

NG ▶ REPLACE REAR SPEAKER

OK



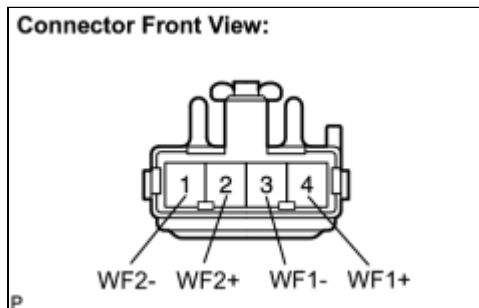
14. INSPECT STEREO COMPONENT SPEAKER

(a) Resistance check.

(1) Measure the resistance between the terminals of the speaker.

Standard resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
WF1+ - WF1-	Always	Approximately 2.5 Ω
WF2+ - WF2-	Always	Approximately 2.5 Ω



NG ▶ REPLACE STEREO COMPONENT SPEAKER

OK ▶ PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE

