

5.12 Models 163, 208 (with Standard Loudspeaker System)

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Diagnosis – Function Test

Function Test Explanation

For the Function Test, adjust the radio as follows:

- Tune-in a strong radio station (music), or play a cassette or CD.
- Set fader, bass, treble and balance to position 0 (reading in display window).
- Listen to each individual loudspeaker at the various locations.

Diagnosis – Complaint Related Diagnostic Chart model 208

Complaint/Problem	Possible cause	Test step/Remedy ¹⁾
Left front door speaker (H4/31) not functioning	H4/31 Radio (A2)	23 ⇒ 1.0
Left front door mirror triangle speaker (H4/23) not functioning	H4/23 Radio (A2)	23 ⇒ 2.0
Left door speaker (H4/5) not functioning	H4/5 Radio (A2)	23 ⇒ 3.0
Left rear speaker (H4/7) not functioning	H4/7 Radio (A2)	23 ⇒ 4.0
Right front door speaker (H4/30) not functioning	H4/30 Radio (A2)	23 ⇒ 5.0
Right front door mirror triangle speaker (H4/24) not functioning	H4/24 Radio (A2)	24 ⇒ 6.0
Right door speaker (H4/6) not functioning	H4/6 Radio (A2)	23 ⇒ 7.0
Right rear speaker (H4/8) not functioning	H4/8 Radio (A2)	23 ⇒ 8.0
Dual cone speaker (H4/28) not functioning	H4/28 Radio (A2)	23 ⇒ 9.0

¹⁾ Observe Preparation for Test, see 22.

Diagnosis – Complaint Related Diagnostic Chart model 163 (with Hi-Line Radio)

Complaint/Problem	Possible cause	Test step/Remedy ¹⁾
Left front door speaker (H4/5) not functioning	H4/5 Radio (A2)	24 ⇒ 1.0
Left rear door speaker (H4/3) not functioning	H4/3 Radio (A2)	24 ⇒ 2.0
Right front door speaker (H4/6) not functioning	H4/6 Radio (A2)	24 ⇒ 3.0
Right rear door speaker (H4/4) not functioning	H4/4 Radio (A2)	24 ⇒ 4.0

¹⁾ Observe Preparation for Test, see 22.

Electrical Test Program – Component Locations

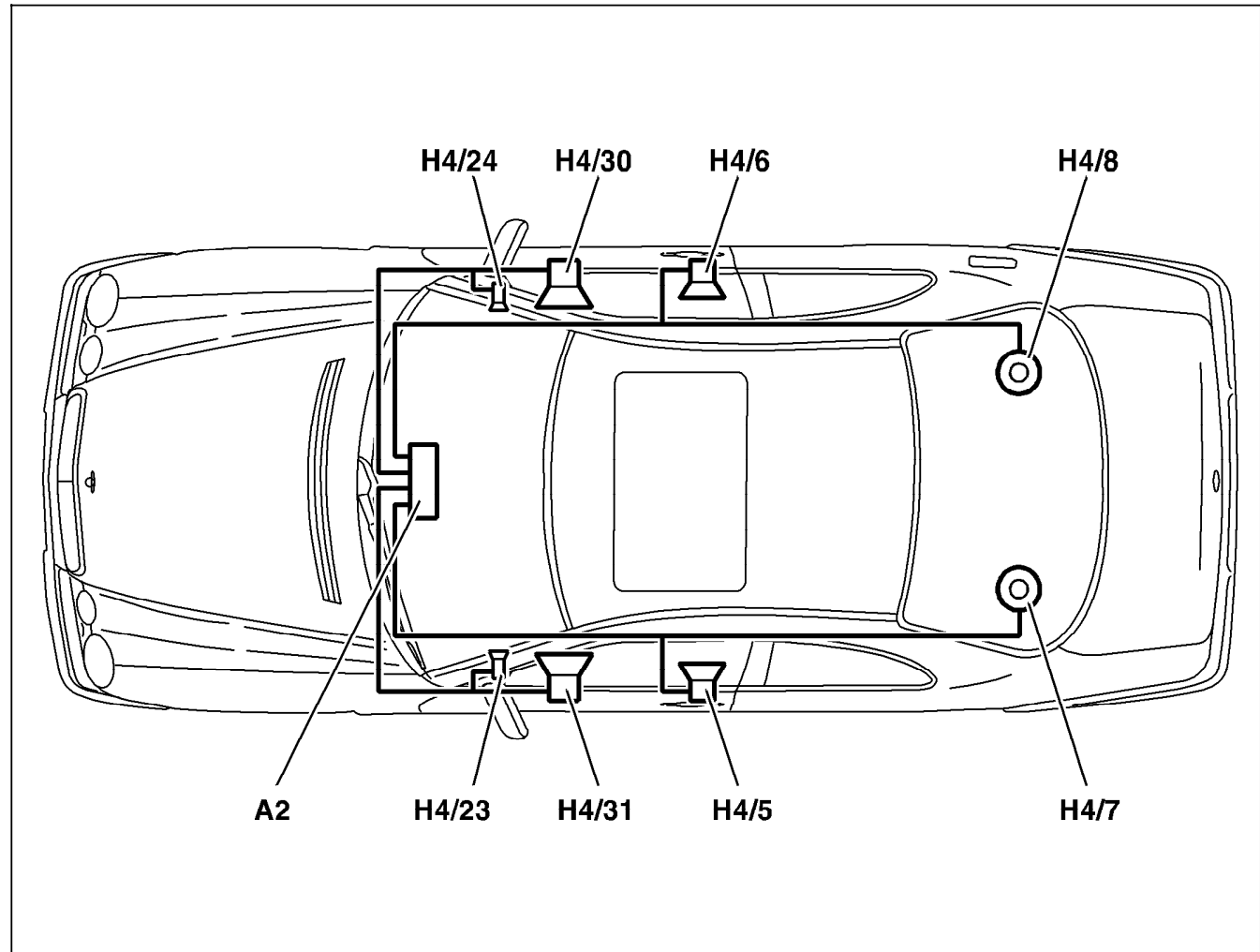


Figure 1
Model 208 (except cabrio)

- A2 Radio
- H4/5 Left door speaker
- H4/6 Right door speaker
- H4/7 Left rear speaker
- H4/8 Right rear speaker
- H4/23 Left front door mirror triangle speaker
- H4/24 Right front door mirror triangle speaker
- H4/30 Right front door speaker
- H4/31 Left front door speaker

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Electrical Test Program – Component Locations

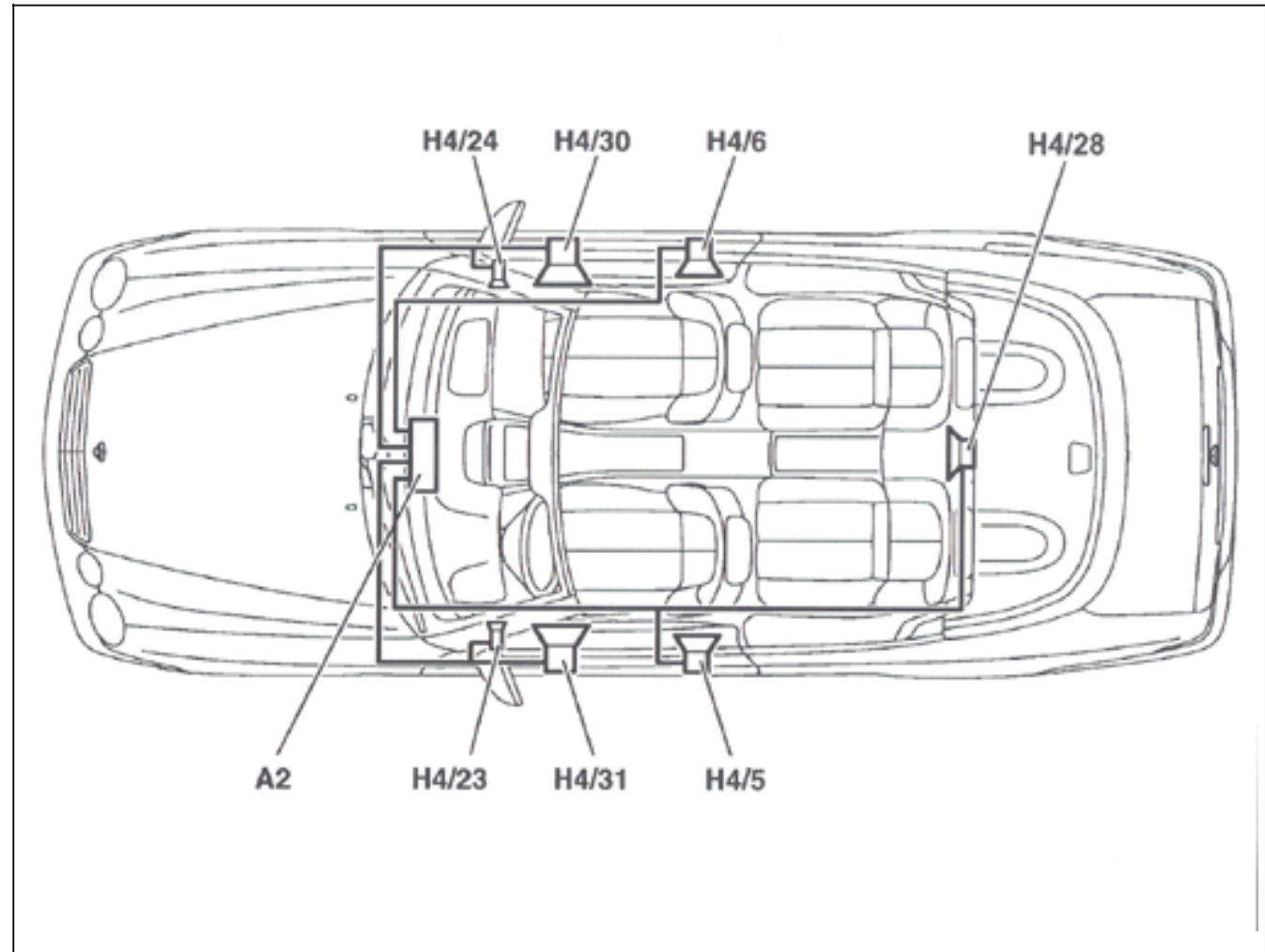


Figure 2

Model 208.4 (cabrio)

A2	Radio
H4/5	Left door speaker
H4/6	Right door speaker
H4/23	Left front door mirror triangle speaker
H4/24	Right front door mirror triangle speaker
H4/28	Dual cone speaker
H4/30	Right front door speaker
H4/31	Left front door speaker

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Electrical Test Program – Component Locations

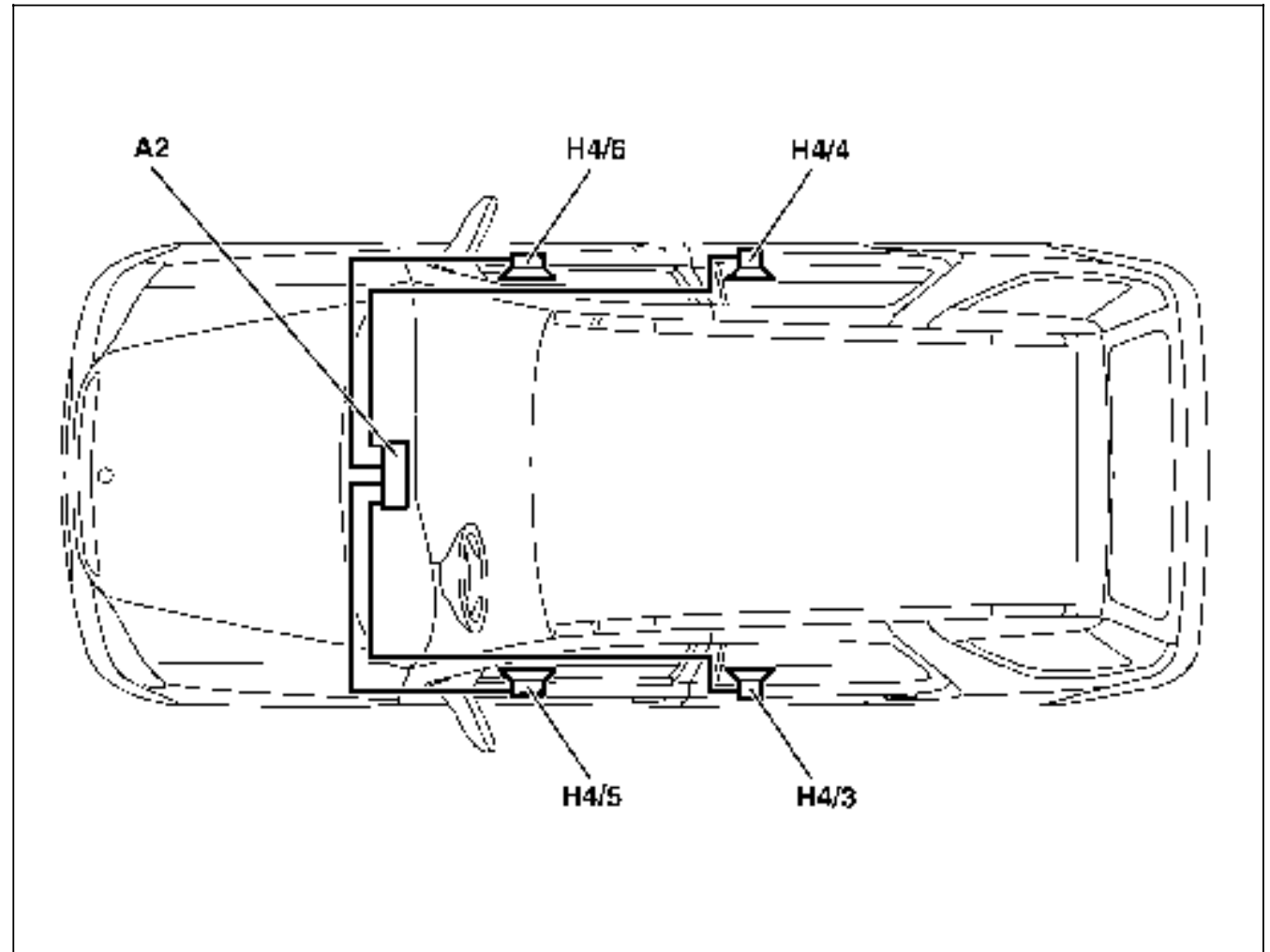


Figure 3

Model 163

A2	Radio
H4/3	Left rear door speaker
H4/4	Right rear door speaker
H4/5	Left door speaker
H4/6	Right door speaker

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Electrical Test Program – Preparation for Test

1. Battery voltage 11–14 V
2. Check fuses.
3. Radio OK.

Electrical wiring diagrams:

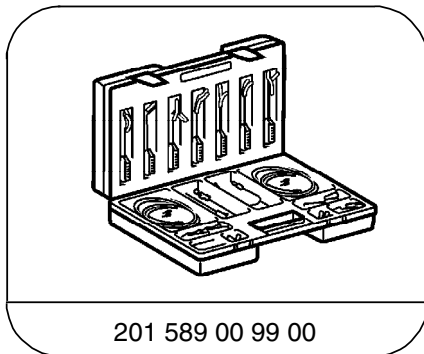
Electrical Troubleshooting Manual, Model 202/208

Wiring diagrams model 163 in WIS

Note:

To prevent damage to the radio , the connectors must only be removed or installed with the ignition and radio **OFF**.

Special Tools



201 589 00 99 00


Electrical connecting set

Conventional tools, test equipment




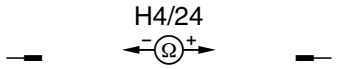

Description	Brand, model, etc.
Multimeter ¹⁾	Fluke Models 23, 77 III, 83, 85, 87, 88
Signal generator ¹⁾	SUN DTR-8416

¹⁾ Available through the MBUSA Standard Equipment Program.




Electrical Test Program – Test

⇒	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
1.0	Left front door speaker (H4/31)	<p>H4/31 6 — (B.6) ← ⊗ ⊕ → — 5 (B.5)</p>	Remove radio (A2) Disconnect connector B (Figure 1)	3.5 – 4.5 Ω	Wiring, Connectors, H4/31 Values OK: A2, ⇒ 3.1 23 or AD82.60 in WIS
2.0	Left front door mirror triangle speaker (H4/23)	<p>H4/23 — ← ⊗ ⊕ → —</p>	Remove radio (A2)  Remove speaker and disconnect speaker connector (H4/23x1). Measure directly on speaker between speaker coil and capacitor	7.5 – 8.5 Ω	H4/23 Values OK: Wiring, Connectors, A2, ⇒ 3.1 23 or AD82.60 in WIS
3.0	Left door speaker (H4/5)	<p>H4/5 8 — (B.8) ← ⊗ ⊕ → — 7 (B.7)</p>	Remove radio (A2) Disconnect connector B (Figure 1)	3.5 – 4.5 Ω	Wiring, Connectors, H4/5 Values OK: A2, ⇒ 3.1 23 or AD82.60 in WIS

Electrical Test Program – Test

⇒	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
4.0	Left rear speaker (H4/7)		Remove radio (A2)  Remove speaker and disconnect speaker connector (H4/7x1). Measure directly on speaker.	3.5 – 4.5 Ω	H4/7 Values OK: Wiring, Connectors, A2, ⇒ 3.1 23 or AD82.60 in WIS
5.0	Right front door speaker (H4/30)		Remove radio (A2) Disconnect connector B (Figure 1)	3.5 – 4.5 Ω	Wiring, Connectors, H4/30 Values OK: A2, ⇒ 3.1 23or AD82.60 in WIS
6.0	Right front door mirror triangle speaker (H4/24)		Remove radio (A2)  Remove speaker (H4/24) and disconnect speaker connector (H4/24x1). Measure directly on speaker between speaker coil and capacitor	7.5 – 8.5 Ω	H4/24. Values OK: Wiring, Connectors, A2, ⇒ 3.1 23 or AD82.60 in WIS

Electrical Test Program – Test

⇒	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
7.0	Right door speaker (H4/6)	<p>H4/6 2 — (B.2) ← ⊗ ⊕ → 1 — (B.1)</p>	Remove radio (A2) Disconnect connector B (Figure 1)	3.5 – 4.5 Ω	Wiring, Connectors, H4/6 Values OK: A2, ⇒ 3.1 23 or AD82.60 in WIS
8.0	Right rear speaker (H4/8)	<p>H4/8 — ← ⊗ ⊕ → —</p>	Remove radio (A2)  Remove speaker and disconnect speaker connector (H4/8x1). Measure directly on speaker.	3.5 – 4.5 Ω	H4/8. Values OK: Wiring, Connectors, A2, ⇒ 3.1 23 or AD82.60 in WIS
9.0	Dual cone speaker (H4/28)	<p>H4/28 — ← ⊗ ⊕ → —</p>	Remove radio (A2)  Remove speaker and disconnect speaker connector (H4/28x1). Measure directly on speaker.  H4/28 has two separate moving coils	around 4 Ω	H4/28. Values OK: Wiring, Connectors, A2, ⇒ 3.1 23 or AD82.60 in WIS

Electrical Test Program – Component Locations

Connections on back of Radio

Figure 1

A

- 1 Speed-sensitive volume control
- 2 Diagnostic connection (as of MY 1998)
- 3 Muting for telephone system
- 4 Battery voltage (circuit 30)
- 5 Automatic antenna control output, FM/AM amplifier voltage supply and control signal for sound system control module
- 6 Illumination (circuit 58)
- 7 Switched battery power (circuit 15)
- 8 Ground (circuit 31)

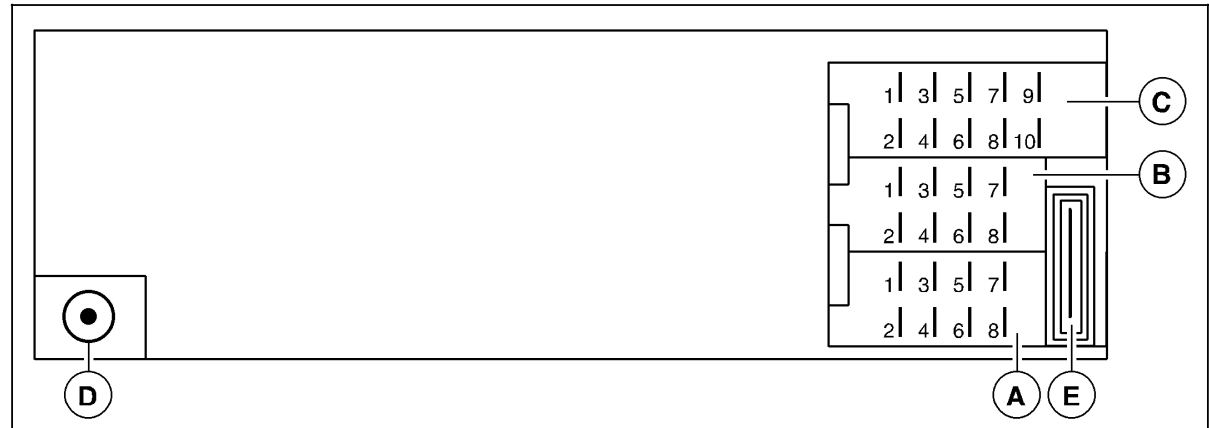
B

- 1 Right rear loudspeaker +
- 2 Right rear loudspeaker –
- 3 Right front loudspeaker +
- 4 Right front loudspeaker –
- 5 Left front loudspeaker +
- 6 Left front loudspeaker –
- 7 Left rear loudspeaker +
- 8 Left rear loudspeaker –

C Connector for CD changer, coding (via wiring harness)

D Antenna jack

E Fuse



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Electrical Test Program – Test

⇒	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
1.0	Left front door speaker (H4/5)	<p>6 — — 5 (B.6) (B.5)</p>	Remove radio (A2) Disconnect connector B (Figure 1)	3.5 – 4.5 Ω	Wiring, Connectors, H4/5 Values OK: AD82.60 in WIS
2.0	Left rear door speaker (H4/3)	<p>6 — — 7 (B.8) (B.7)</p>	Remove radio (A2) Disconnect connector B (Figure 1)	3.5 – 4.5 Ω	Wiring, Connectors, H4/3 Values OK: AD82.60 in WIS
3.0	Right frontdoor speaker (H4/6)	<p>4 — — 3 (B.4) (B.3)</p>	Remove radio (A2) Disconnect connector B (Figure 1)	3.5 – 4.5 Ω	Wiring, Connectors, H4/6 Values OK: AD82.60 in WIS
4.0	Right rear door speaker (H4/4)	<p>2 — — 1 (B.2) (B.1)</p>	Remove radio (A2) Disconnect connector B (Figure 1)	3.5 – 4.5 Ω	Wiring, Connectors, H4/4 Values OK: AD82.60 in WIS

Electrical Test Program – Component Locations

Connections on back of Radio

Figure 1

A

- 1 Speed-sensitive volume control
- 2 Diagnostic connection (as of MY 1998)
- 3 Muting for telephone system
- 4 Battery voltage (circuit 30)
- 5 Automatic antenna control output, FM/AM amplifier voltage supply and control signal for sound system control module
- 6 Illumination (circuit 58)
- 7 Switched battery power (circuit 15)
- 8 Ground (circuit 31)

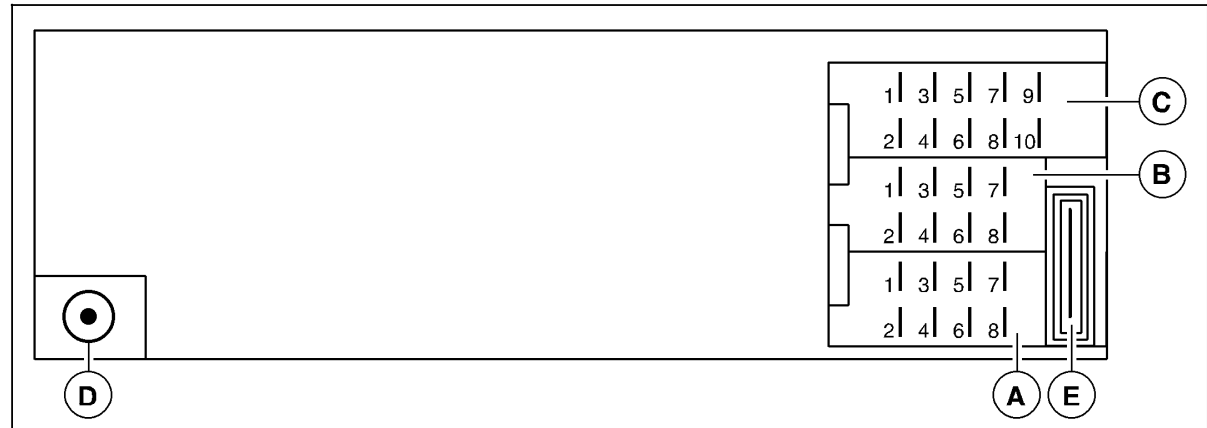
B

- 1 Right rear loudspeaker +
- 2 Right rear loudspeaker –
- 3 Right front loudspeaker +
- 4 Right front loudspeaker –
- 5 Left front loudspeaker +
- 6 Left front loudspeaker –
- 7 Left rear loudspeaker +
- 8 Left rear loudspeaker –

C Connector for CD changer, coding (via wiring harness)

D Antenna jack

E Fuse



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