

5.3 Model 202 (with Bose® Sound 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

Complaint/Problem	Possible cause	Test step/Remedy ¹⁾
Loudspeaker system not functioning	Left/right audio power amplifier (N40/3) Radio (A2)	23 ⇒ 1.0
Left front door speaker (H4/5) not functioning	H4/5 Left/right audio power amplifier (N40/3) Radio (A2)	23 ⇒ 3.0 23 ⇒ 1.0
Left front speaker (H4/9) not functioning	H4/9 Left/right audio power amplifier (N40/3) Radio (A2)	23 ⇒ 4.0 23 ⇒ 1.0
Left rear door speaker (H4/3) not functioning	H4/3 Left/right audio power amplifier (N40/3) Radio (A2)	23 ⇒ 5.0 23 ⇒ 1.0
Left rear speaker (H4/7) not functioning	H4/7 Left/right audio power amplifier (N40/3) Radio (A2)	23 ⇒ 6.0 23 ⇒ 1.0
Right front door speaker (H4/6) not functioning	H4/6 Left/right audio power amplifier (N40/3) Radio (A2)	23 ⇒ 7.0 23 ⇒ 1.0

¹⁾ Observe Preparation for Test, see 22.

Diagnosis – Complaint Related Diagnostic Chart

Complaint/Problem	Possible cause	Test step/Remedy ¹⁾
Right front speaker (H4/10) not functioning	H4/10 Left/right audio power amplifier (N40/3) Radio (A2)	23 ⇒ 8.0 23 ⇒ 1.0
Right rear door speaker (H4/4) not functioning	H4/4 Left/right audio power amplifier (N40/3) Radio (A2)	23 ⇒ 9.0 23 ⇒ 1.0
Right rear speaker (H4/8) not functioning	H4/8 Left/right audio power amplifier (N40/3) Radio (A2)	23 ⇒ 10.0 23 ⇒ 1.0

¹⁾ Observe Preparation for Test, see 22.

Electrical Test Program – Component Locations

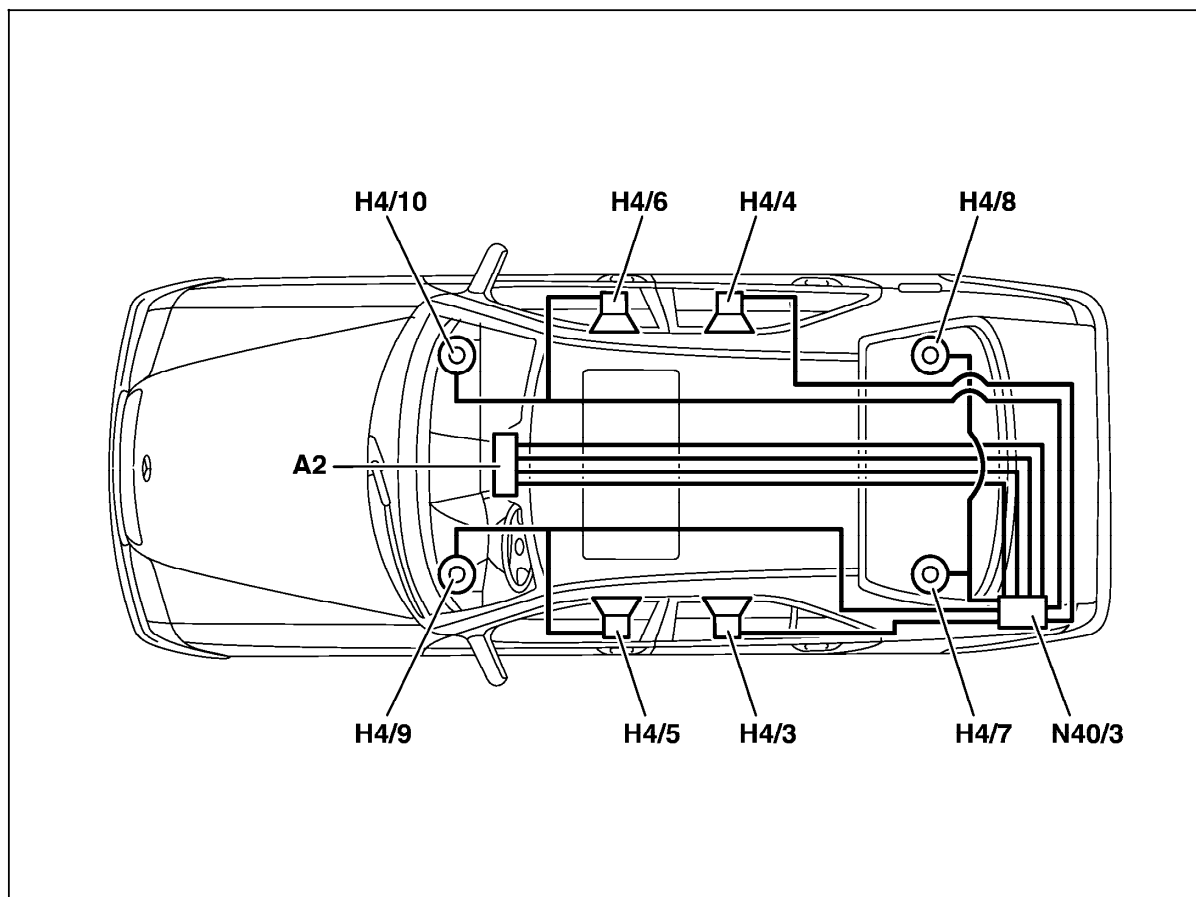


Figure 1
Model 202 as of 09/95 (with Bose ® Sound System)

- A2 Radio
- H4/3 Left rear door speaker
- H4/4 Right rear door speaker
- H4/5 Left front door speaker
- H4/6 Right front door speaker
- H4/7 Left rear speaker
- H4/8 Right rear speaker
- H4/9 Left front speaker
- H4/10 Right front speaker
- N40/3 Left/right audio power amplifier

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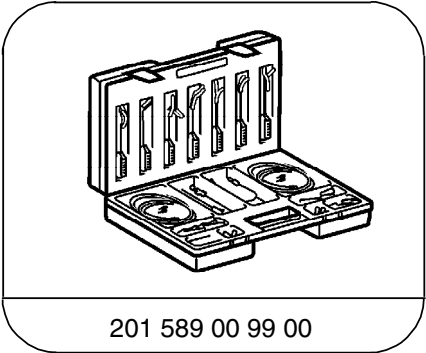
Electrical Test Program – Preparation for Test

- 1. Battery voltage 11–14 V.
- 2. Check fuses.
- 3. Radio OK.
- 4. Sound system speakers installed.

Electrical wiring diagrams :
Electrical Troubleshooting Manual, Model 202

Note:
To prevent damage to the radio and left/right audio power amplifier, the connectors must only be removed or installed with the ignition and radio **OFF**.

Special Tools



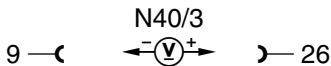
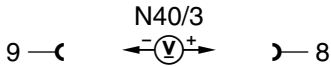
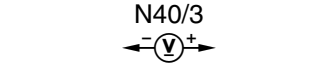
Electrical connecting set

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/right audio power amplifier (N40/3) Voltage supply		Remove radio (A2). Disconnect connector from Left/right audio power amplifier (N43/3).	11 – 14 V	Fuse F12 in fuse box (F1) Ground W6 (left wheelhousing in trunk) Wiring Values OK: ⇒ 1.1,
1.1	Control voltage from radio		Remove radio (A2). Disconnect connector from Left/right audio power amplifier (N43/3). Radio (A2): ON	11 – 14 V	Wiring A2 Values OK: ⇒ 2,
2.0	Left/right audio power amplifier (N40/3) Speaker signals from radio (A2) left front: right front: left rear: right rear:	 10 — 18 1 — 2 3 — 5 4 — 6	Disconnect connector from Left/right audio power amplifier (N43/3). Radio (A2): ON Set the audio volume to max.	>0.2 V Short surges permitted	Wiring, Radio (A2)

5.3 Loudspeaker System (LS)

Model 202 as of 09/95

Electrical Test Program – Test

⇒	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
3.0	Left front door speaker (H4/5)	H4/5 21 —  — 13 9 —  — 21 9 —  — 13	Connector on N40/3 disconnected. Radio (A2): OFF	1.5 – 2.5 Ω ∞ Ω ∞ Ω	Wiring, H4/5, Connectors, Values OK: N40/3.
4.0	Left front speaker (H4/9)	H4/9 1 —  — 2	Remove H4/9. Disconnect connector x1 on speaker. Perform measurement between speaker coil and capacitor (Figure 2). Radio (A2): OFF	7.5 – 8.5 Ω	H4/9. Values OK: Wiring, Radio (A2)
5.0	Left rear door speaker (H4/3)	H4/3 15 —  — 23 9 —  — 23 9 —  — 15	Connector on N40/3 disconnected Radio (A2): OFF	3.5 – 4.5 Ω ∞ Ω ∞ Ω	Wiring, H4/3, Values OK: N40/3.
6.0	Left rear speaker (H4/7)	H4/7 12 —  — 20 9 —  — 20 9 —  — 12	Connector on N40/3 unplugged. Radio (A2): OFF	1.5 – 2.5 Ω ∞ Ω ∞ Ω	Wiring, H4/7, Values OK: N40/3.

5.3 Loudspeaker System (LS)

Model 202 as of 09/95

Electrical Test Program – Test

⇒	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
7.0	Right front door speaker (H4/6)	H4/6 14 —  — 22 9 —  — 22 9 —  — 14	Connector on N40/3 disconnected. Radio (A2): OFF	1.5 – 2.5 Ω ∞ Ω ∞ Ω	Wiring, H4/6, Values OK: N40/3.
8.0	Right front speaker (H4/10)	H4/10 1 —  — 2	Remove H4/10. Disconnect connector x1 on speaker. Perform measurement between speaker coil and capacitor. Radio (A2): OFF	7.5 – 8.5 Ω	H4/10. Values OK: Wiring, Radio (A2)
9.0	Right rear door speaker (H4/4)	H4/4 17 —  — 25 9 —  — 25 9 —  — 17	Connector on N40/3 disconnected. Radio (A2): OFF	3.5 – 4.5 Ω ∞ Ω ∞ Ω	Wiring, H4/4, Values OK: N40/3.
10.0	Right rear speaker (H4/8)	H4/8 11 —  — 19 9 —  — 19 9 —  — 11	Connector on N40/3 disconnected. Radio (A2): OFF	1.5 – 2.5 Ω ∞ Ω ∞ Ω	Wiring, H4/8, Values OK: N40/3.

Electrical Test Program – Test

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)

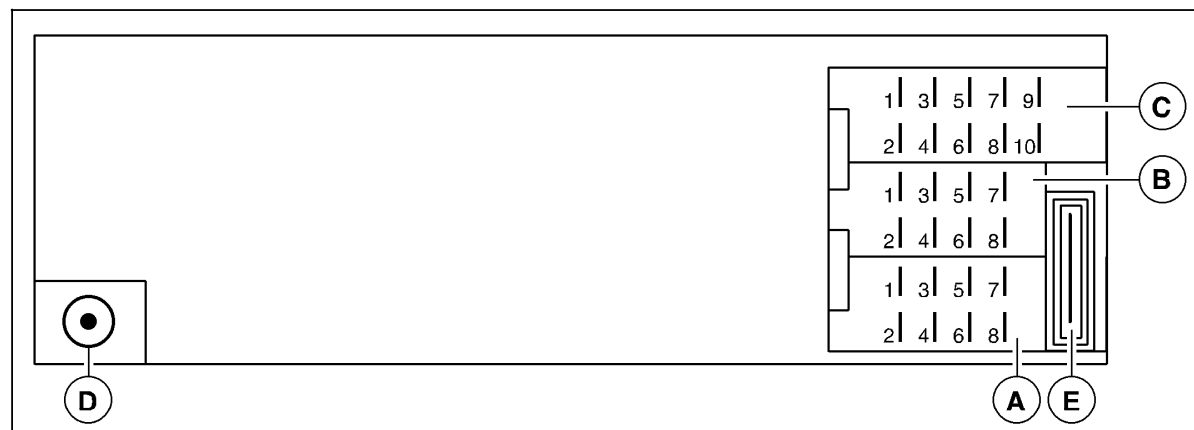
B

- 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)

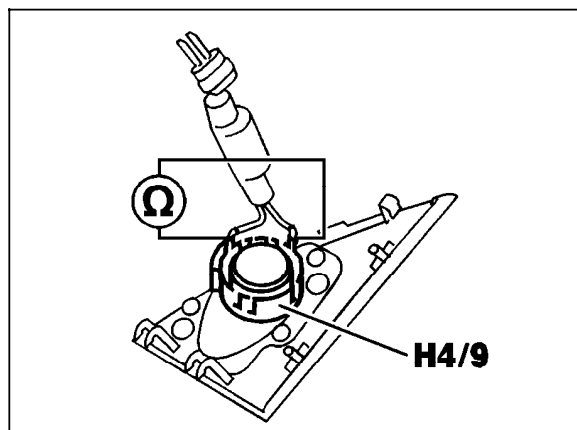
D Antenna jack

E Fuse



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Electrical Test Program – Test



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Figure 2

H4/9 Left front speaker