4.4 Models 163, 202 as of 01/97, 208 (except 208.465), 210

Diagnosis – Function Test

Function Test Explanation

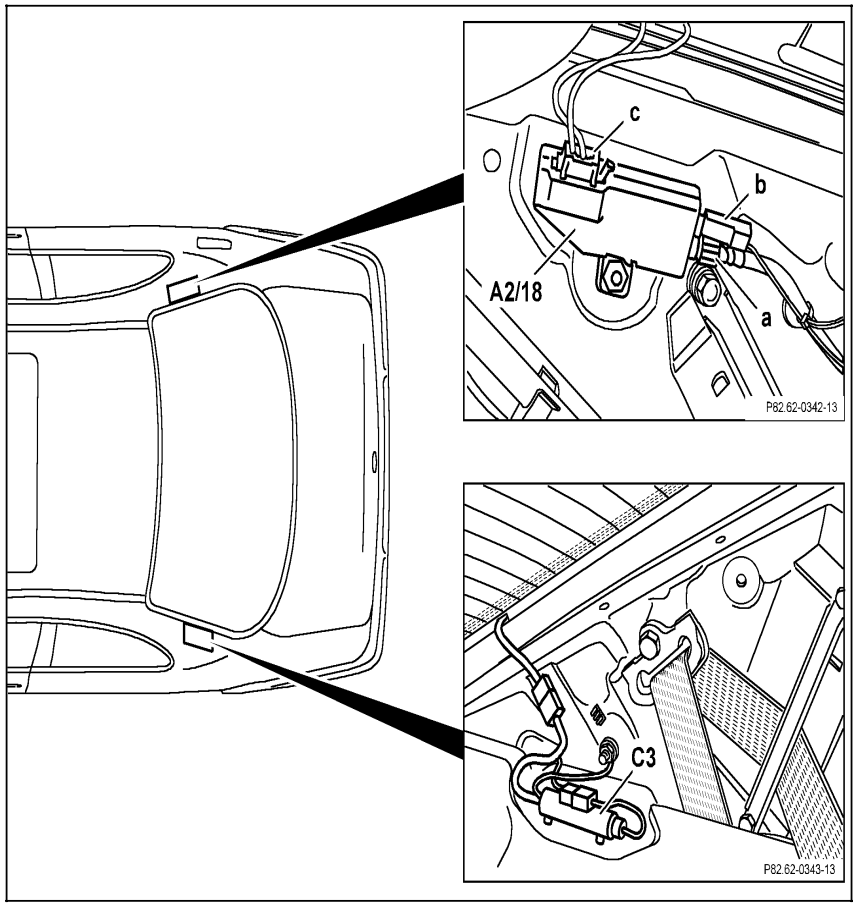
Function Test:

- Tune-in a weak radio station (music).
- Set fader, bass, treble and balance to center range (RESET reading in display window).
- Verify reception quality of AM and FM band by driving a 360° circle (in a large parking lot) while performing road test.
- Compare function test results against identical vehicle (with integrated antenna) from dealer stock. Tune-in **same radio station**, ensure that the settings are set to position 0 and perform same road test as above and over **same course**.
- If components are replaced, repeat entire function test.

Electrical Test Program – Component Locations

Models 202 as of 01/98, 208 (except Cabrio)

The illustration shows locations of components in model 208, model 202 is similar.



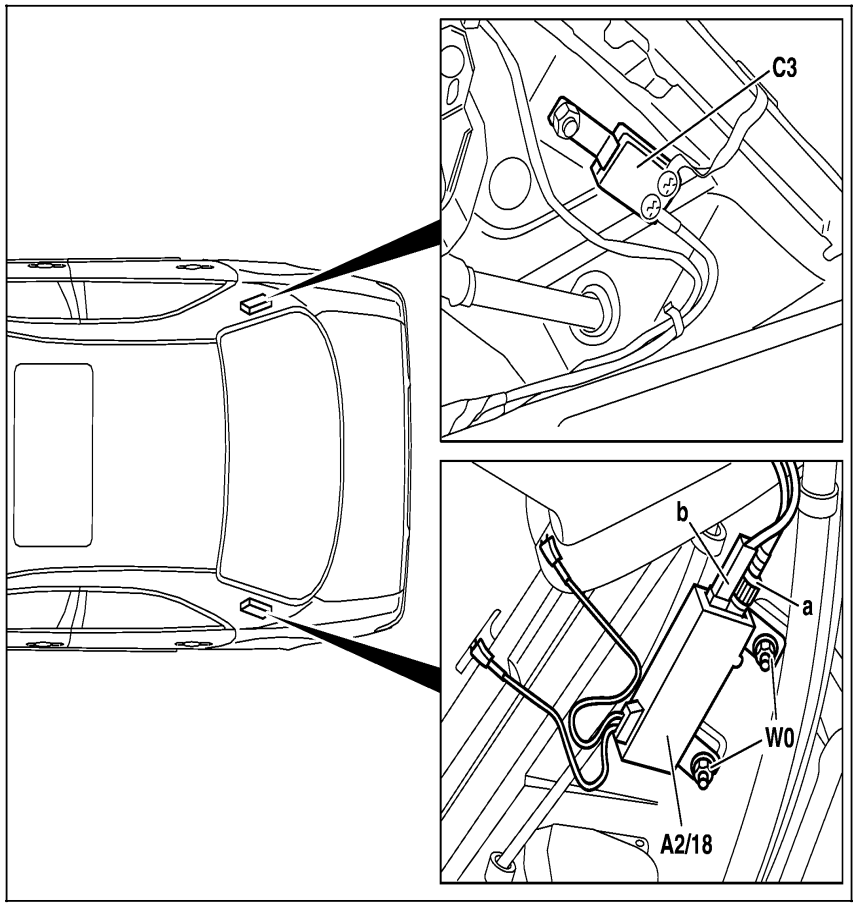
P82.62-0341-06

Figure 1

a	High frequency connection wire from FM/AM amplifier to radio (A2)
b	Voltage supply from radio (A2) to FM/AM amplifier (A2/18)
c	Signal from rear window antenna
A2/18	FM/AM amplifier
C3	not in US vehicles

Electrical Test Program – Component Locations

Models 210.0



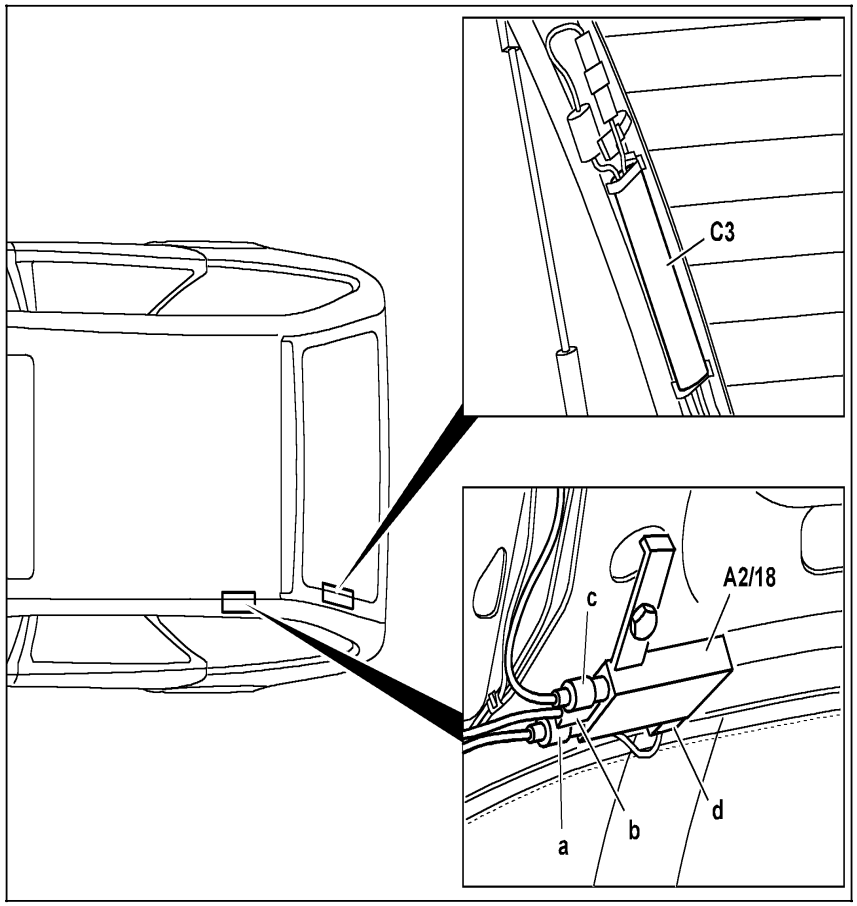
P82.62-2019-06

Figure 2

a	High frequency connection wire from FM/AM amplifier to radio (A2)
b	Voltage supply from radio (A2) to FM/AM amplifier (A2/18)
A2/18	FM/AM amplifier
C3	not in US vehicles
W0	Ground

Electrical Test Program – Component Locations

Models 210.2



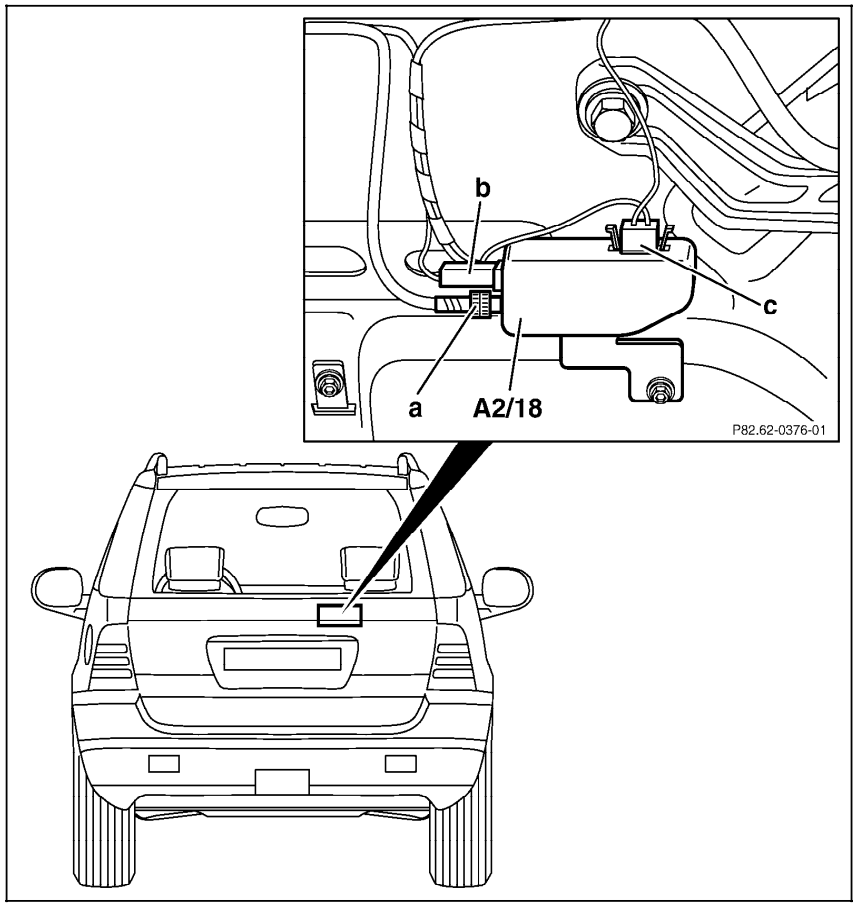
P82.62-0335-06

Figure 3

a	High frequency connection wire from FM/AM amplifier to radio (A2)
b	Voltage supply from radio (A2) to FM/AM amplifier (A2/18)
c	not in US vehicles
d	Signal wire from side window antenna
A2/18	FM/AM amplifier
C3	not in US vehicles

Electrical Test Program – Component Locations

Model 163



P82.62-0374-12

Figure 4

a	High frequency connection wire from FM/AM amplifier to radio (A2)
b	Voltage supply from radio (A2) to FM/AM amplifier (A2/18)
c	Signal wire from antenna
A2/18	FM/AM amplifier

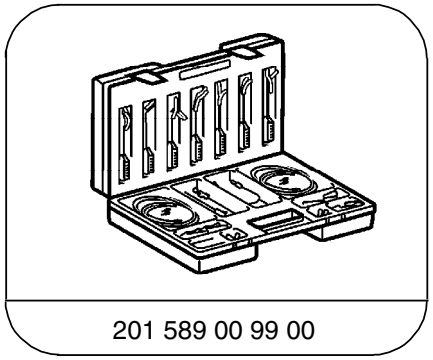
Electrical Test Program – Preparation for Test

1. Battery voltage 11–14 V.
2. Check fuses.
3. Radio OK.
4. No physical damage to the rear bumper.

Electrical wiring diagrams:

Electrical Troubleshooting Manual, Model 170, Group 82
Electrical Troubleshooting Manual, Models 202/208, Group 82
Electrical Troubleshooting Manual, Model 210, Group 82
Electrical Troubleshooting Manual, Model 163 in WIS

Special Tools



201 589 00 99 00

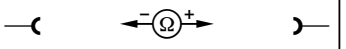
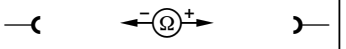
Electrical connecting set

Conventional tools, test equipment

Description	Brand, model, etc.
Digital multimeter [1)]	Fluke Models 23, 77 III, 83, 85, 87, 88

1) Available through the MBUSA Standard Equipment Program.

Electrical Test Program – Test

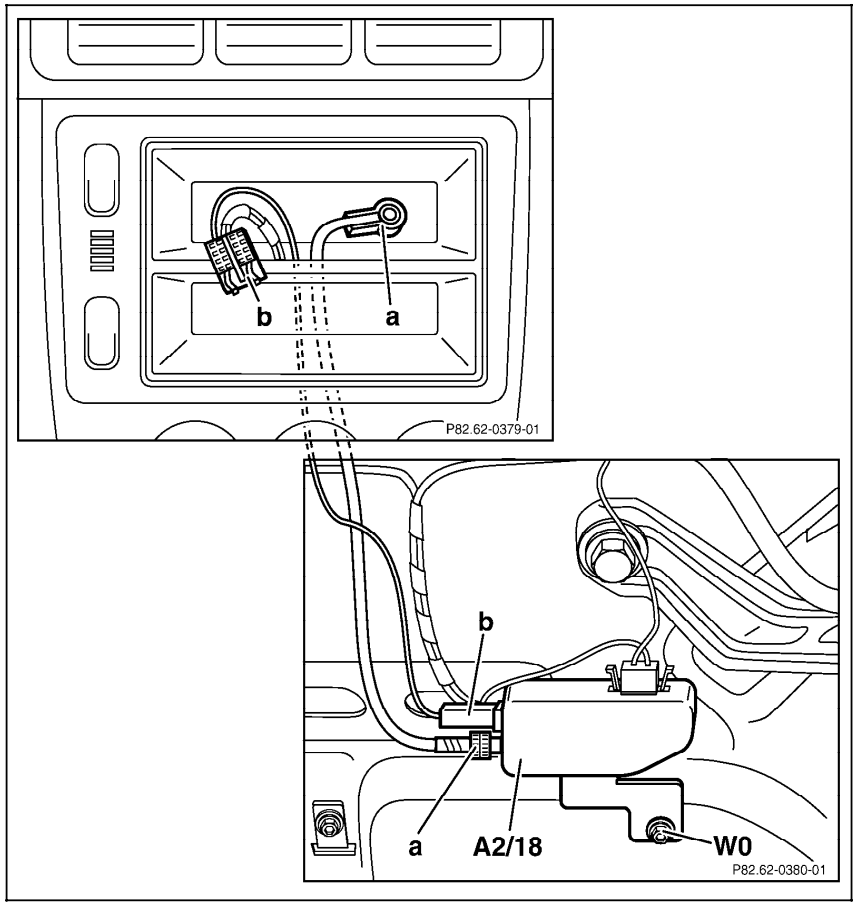
⇒	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
1.0	**Electrolytic capacitor (rear glass noise suppressor C3)** Function Model 163		Ignition: **OFF** Radio (A2): **ON** Tune radio to weak station reception on AM band Start engine and run at idle. Engine: **at idle**	No change in radio reception	Capacitor (C3)
2.0	**High frequency connection wire** from FM/AM amplifier (A2/18) to radio (A2) Continuity Short circuit (inner shielding/signal wire)		Radio (2): **OFF** Disconnect antenna cable from radio (A2) and FM/AM amplifier (A2/18), see Figure 1 - model 163 Figure 2 - model 202, 208 Figure 3 model 210.0	< 10 Ω ∞ Ω	Wiring. ⇒ 3.0,
3.0	**High frequency connection wire** from FM/AM amplifier (A2/18) to rear window antenna (A2/32) Continuity Short circuit (inner shielding/signal wire)		Radio (A2): **OFF** Disconnect wire from AM/FM amplifier (A2/18) and rear window antenna (2/32)	< 10 Ω ∞ Ω	Wiring,

Electrical Test Program – Test

⇒	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
4.0	**Radio (A2)** Control voltage	W0 ⊥ — (V) — A2/18 b	Disconnect connector at FM/AM amplifier (A2/18), see Figure 1, 2 or 3 Radio (A2): **ON**	11 – 14 V	Wiring, Radio (RD), 3.1 23 AD82.60 in WIS
5.0	**FM/AM amplifier (A2/18)** Current draw	A2/18 ⎓ — (A) — A2 b	Connect ampmeter between (A2/18) and control voltage wire from radio (A2), see Figure 1, 2 or 3 Radio (A2): **ON**	Model 163: 54 – 64 mA Model 202: 59 – 69 mA Model 208: 65 – 75 mA Model 210: 52 – 80 mA	A2/18, W0 ground connection ⇒ 6.0, If nominal value is ok, but poor reception quality continues: Swap A2/18 with known good unit and perform 11 Function Test.
6.0	**Ground** FM/AM amplifier (A2/18)	⊥ — (Ω) — A2/18	Radio (A2): **OFF** **Hint:** Do not loosen mounting connection on A2/18. Mounting connection also serves as ground.	< 1 Ω	Contact resistance at ground.

Electrical Test Program – Test

Connection diagram
Model 163



P82.62-0375-12

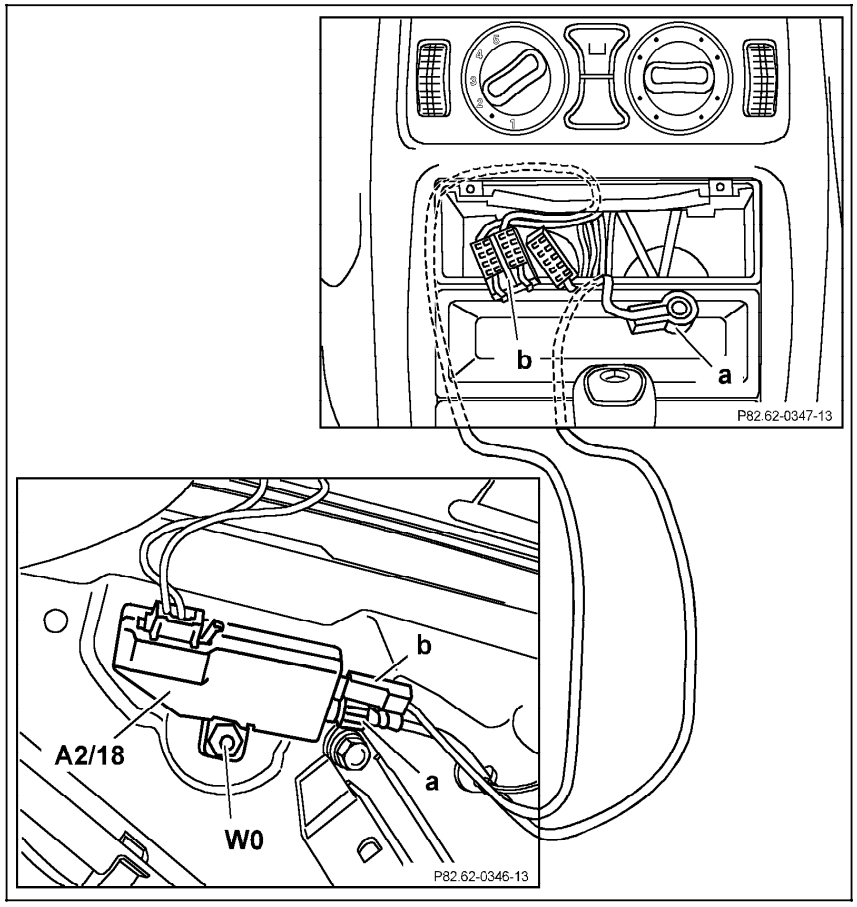
Figure 1

a	High frequency connection wire from FM/AM amplifier to radio (A2)
b	Voltage supply from radio (A2) connector 2 pin 5 for automatic antenna, FM/AM amplifier (A2/18) and sound system amplifier control module
A2/18	FM/AM amplifier
WO	Ground and mounting point

Electrical Test Program – Test

Connection diagram
Models 202 as of 01/97, 208 (except 208.465)

The illustration shows connection diagram in model 208, model 202 with rear window antenna is similar.



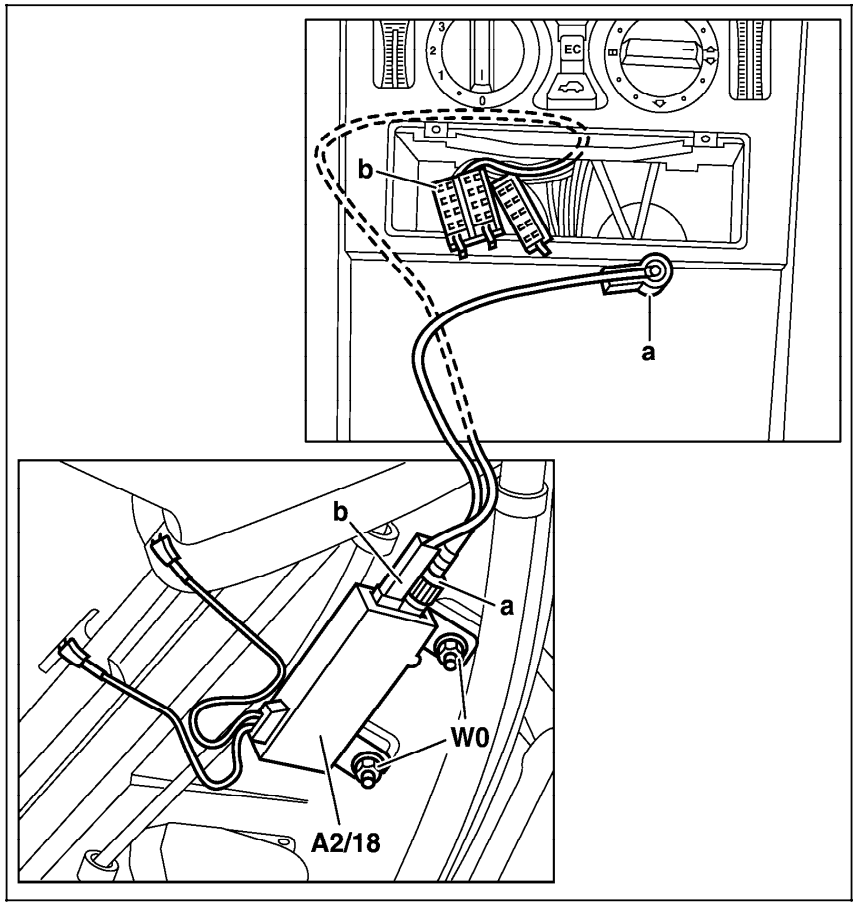
P82.62-0336-12

Figure 2

a	High frequency connection wire from FM/AM amplifier to radio (A2)
b	Voltage supply from radio (A2) connector 2 pin 5 for automatic antenna, FM/AM amplifier (A2/18) and sound system amplifier control module
A2/18	FM/AM amplifier
WO	Ground and mounting point

Electrical Test Program – Test

Connection diagram
Model 210.0



P82.62-2020-12

Figure 3

a	High frequency connection wire from FM/AM amplifier to radio (A2)
b	Voltage supply from radio (A2) connector 2 pin 5 for automatic antenna, FM/AM amplifier (A2/18) and sound system amplifier control module
A2/18	FM/AM amplifier
WO	Ground and mounting point