

**PCM2.1 & BOSE Amplifier Spare Parts Requirements**

Section - 9, Electrical System.

This bulletin replaces bulletin, Group 9, 7/04, dated 4-26-05.

Vehicle Type: **911 Carrera (997)/911 Carrera S (997)**

Model Year: **2005 (5)**

Equipment: **PCM2.1 (min. PCM2.1 Basic Module - I No. 665)  
BOSE Sound Package (I No. 680)**

Concerns: **PCM2.1 and BOSE Amplifier spare parts requirements and new software versions for the PCM2.1 and BOSE amplifier.**

Information: The PCM2.1 system software and the BOSE amplifier software have been modified as of the date of introduction mentioned below (see section "Introduction").

If one of the above-mentioned units needs to be replaced, only a PCM2.1 or BOSE amplifier with the new software version will be supplied by the parts department for vehicles manufactured before the date of introduction once existing inventory of the PCM2.1 or BOSE amplifiers are used up.

Due to the situation of using existing supplies for the PCM2.1 and the BOSE amplifier, the part number of the delivered spare part needs to be noted before installing. Depending on the components installed in the vehicle and the part numbers of replacement part, a software update is necessary for the installed components.

**PCM2.1 Spare Parts Requirements**

Depending on the part number of the PCM2.1 delivered and of the installed BOSE amplifier, the installed BOSE amplifier must either be replaced, or be updated to software version 00017500 with the PIWIS Tester and installed test software V6.0 (or higher) (see allocation table starting on page 5).

**BOSE Amplifier Spare Parts Requirements**

Depending on the part number of the BOSE amplifier delivered, the installed PCM2.1 must be updated to the Update of existing models A software (software version 04202JD1) with an update CD (see allocation table on page 5).

**Vehicles with PCM2.1 Navigation (I No. 670):**

After installing a PCM2.1 with software version 04202JD1 (Update of existing models A software) or after the PCM2.1 system network has been updated to Update of existing models A software, only the new navigation DVDs can be used (see section "Parts Information").

Introduction: **New PCM2.1 system and BOSE amplifier software on October 08, 2004 as of following VINs**  
99 75S 71 6131 911 Carrera/USA  
99 75S 74 1124 911 Carrera S/USA

Parts Information: **PCM2.1**

<b>Part Number</b>	<b>Description</b>
997.642.101.11.FMH	New/Control Module PCM2.1 with driver
<b>997.642.101.BX.FMH *</b>	<b>Remanufactured/Control Module PCM2.1 w/driver</b>
997.642.131.05.FMH	Previous, ditto, USA, no longer available once existing supplies are used up
<b>997.642.131.X.FMH *</b>	<b>Remanufactured/Control Module PCM2.1 w/driver, Prev. Version</b>
997.642.131.06.FMH	Previous, ditto, USA, no longer available once existing supplies are used up
<b>997.642.131.AX.FMH *</b>	<b>Remanufactured/Control Module PCM2.1 w/driver, Prev. Version</b>
997.642.103.11.FMH	New/Control Module PCM2.1 without driver
<b>997.642.103.BX.FMH *</b>	<b>Remanufactured/Control Module PCM2.1 without driver</b>
997.642.133.06.FMH	Previous, ditto, USA, no longer available once existing supplies are used up
<b>997.642.133.AX.FMH *</b>	<b>Remanufactured/Control Module PCM2.1 w/o driver, Prev. Version</b>
997.642.133.05.FMH	Previous, ditto, USA, no longer available once existing supplies are used up
<b>997.642.133.X.FMH *</b>	<b>Remanufactured/Control Module PCM2.1 w/o driver, Prev. Version</b>

\* Remanufactured parts must always be used for warranty and goodwill situations in accordance with the Porsche Warranty Policy & Procedures guidelines.



**Note!**

If a new PCM2.1 control part (Index 11 or BX) is installed to replace a previous PCM2.1 control part (Index 05/06 or A/AX), new operating instructions and a new Quick reference guide must be included for the PCM2.1.

The operating instructions and the Quick Reference Guide can be ordered using the following part numbers:

- WKD 951.624.05 (PCM2.1 USA operating instructions)
- WKD 951.724.05 (PCM2.1 USA Quick reference guide)

**BOSE Amplifier**

<b>Part Number</b>	<b>Description</b>
<b>997.645.334.22</b>	<b>New/BOSE amplifier</b>
997.645.333.06	Previous, ditto, no longer available once existing supplies are used up

**Update CD**

<b>Part Number</b>	<b>Description</b>
<b>000.043.205.46.004</b>	<b>New/PCM2.1 update CD Update of existing models A (available soon)</b>
000.043.205.46.001	Previous/PCM2.1 update CD Update of existing models A (OK to use 001 until 004 becomes available)

You will shortly receive the update CD free-of-charge as a Porsche Special Tool delivery.

**NAVTEQ DVDs – To Order Call 1 (888) 628-6277**

NAVTEQ 2004-2

Parts Information:  
(cont'd)



**Note!**

After installing a PCM2.1 with software version 04202JD1 (Update of existing models A software) or after the PCM2.1 system network has been updated to Update of existing models A software, only the new navigation DVDs can be used.

Information:

**Overview of Part Numbers/Software Versions**

**M.Y. 2005 Vehicles Up To Intro Date**

<b>PCM2.1</b>	<b>BOSE Amplifier</b>
997.642.101.0x.FMH	997.645.333.04
997.642.131.0x.FMH	997.645.333.05
997.642.103.0x.FMH	997.645.333.06
997.642.133.0x.FMH	

**M.Y. 2005 vehicles From Intro Date**  
("Update of existing models, A software")

<b>PCM2.1</b>	<b>BOSE Amplifier</b>
997.642.101.11.FMH	997.645.334.22
997.642.103.11.FMH	

**Software Version**  
04035AD1

**Software Version**  
00016400 or  
00016401

**Software Version**  
4202JD1

**Software Version**  
00017500

**Display current software versions.**

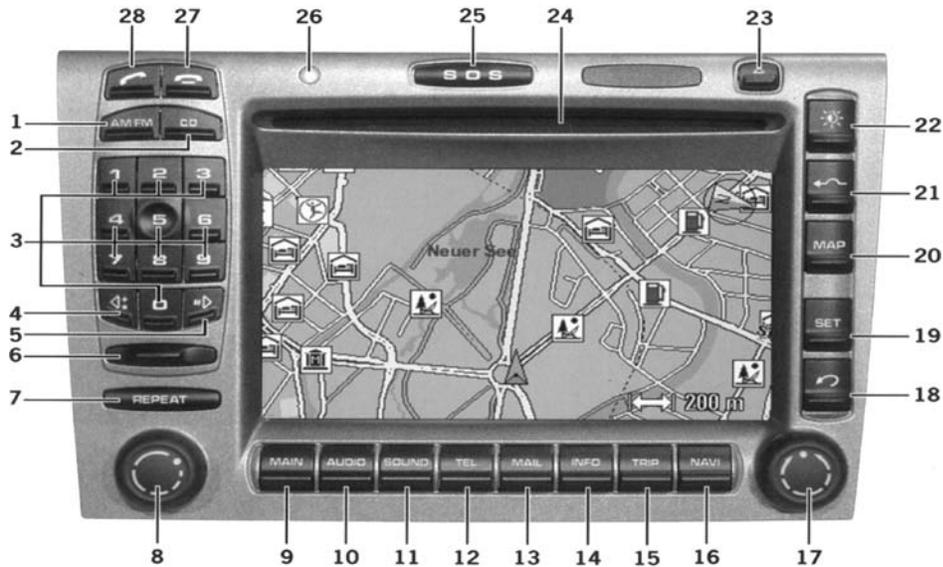
The current software versions of the PCM2.1 and the BOSE amplifier can be displayed in the display of the PCM2.1 control part.

Information:  
(cont'd)

**Display current software versions.**

The current software versions of the PCM2.1 and the BOSE amplifier can be displayed in the display of the PCM2.1 control part.

1. To display the current software version of the PCM2.1 in the display of the PCM2.1 control part:
  - If necessary, switch on the PCM2.1 by pressing the "On/Off switch" (Fig. 1, Item 8). After switching on the PCM2.1, simultaneously press the "MAIN" and "TRIP button" (Figure 1, Item 9 and Item 15) to go to the display "SW versions".
  - Select the menu item "PCM" in the display "SW versions" by turning the rotary knob (Figure 1, Item 17).
  - Depending on the software version of the PCM2.1, the following version is shown in the display:  
04035AD1: The software matches the PCM2.1 version for vehicles from M.Y. 05 up to the introduction date.  
04202JD1: The software matches the PCM2.1 version for vehicles from M.Y. 05 as of the introduction date.



2. Displaying the current software version of the BOSE amplifier in the display of the PCM2.1 control part.
  - Select the menu item "Amplifier" in the display "SW versions" by turning the rotary knob (Figure 1, Item 17).
  - Depending on the software version of the amplifier, the following version is shown in the display:  
00016400 or 00016401: The software matches the amplifier software version for vehicles from M.Y. 05 up to the introduction date.  
00017500: The software matches the amplifier version for vehicles from MY 05 as of the introduction date.
  - Press the "Back button" (Fig. 1, Item 18) to return to the PCM2.1 Start menu.

Work Procedure: **AllocationTable, PCM2.1/BOSE Amplifier**

Replacement Part	Part No. of delivered spare part/ software version	Required work after installing and coding
PCM2.1 Unit	997.642.101.11.FMH 997.642.101.BX.FMH 997.642.103.11.FMH 997.642.103.BX.FMH Software version 4202JD1	<b>1)</b> Depending on the part number of the installed BOSE amplifier, replace the installed BOSE amplifier update to software version 01.75.00 with the PIWIS Tester, see Procedure starting on Page 6. <b>2)</b> If necessary, replace the previously used navigation DVD with the new DVD, see Page 9, Step 3.
PCM2.1 Unit	997.642.131.05/06.FMH 997.642.131.X/AX.FMH 997.642.133.05/06.FMH 997.642.133.X/AX.FMH Software version 04035AD1	N/A
BOSE Amplifier	997.645.334.22 Software version 00017500	<b>1)</b> Update installed PCM2.1 to Update of existing models A software (software version 04202JD1) using the update CD, see Procedure as of Page 7. <b>2)</b> If necessary, replace the previously used navigation DVD with the new DVD, see Page 9, Step 3.
	997.645.333.06 Software version 00016401	N/A

Work Procedure:  
(cont'd)

**Updating or replacing the BOSE amplifier.**

Replacement PCM2.1 matches the version for vehicles from M.Y. 05 as of the introduction date:

1. Check the part number of installed BOSE amplifier.  
**BOSE amplifier has the part number, 997.645.333.04 or 997.645.333.05:**  
 > replace the installed BOSE amplifier with the BOSE amplifier having part number, 997.645.334.22. Then for vehicles with PCM2.1 Navigation (I No. 670), replace the previously used navigation DVD with a new Navigation DVD, see Step 3, Page 9.  
**BOSE amplifier has the part number 997.645.333.06:**  
 > update the installed BOSE amplifier, continue with step 2.
2. Update the BOSE amplifier.
  - 2.1 Introductory work.



**Caution!**

**Malfunctions in the PCM2.1 system network if the data loading process is interrupted.**

- > If there is an interruption while loading the data due to power loss, malfunctions can occur in the PCM2.1 system network.
- > Connect a suitable battery charger to the vehicle electrical system battery while working.

- 2.1.1 Switch off ignition.
- 2.1.2 Connect battery charger to the vehicle electrical system battery.
- 2.2 Update the BOSE amplifier to software version 00017500 with the PIWIS Tester. In the PIWIS Tester, the software versions of the BOSE amplifier are shown without the two prefix zeros and with decimals between the blocks of digits, e.g. 01.75.00.
  - 2.2.1 Connect PIWIS Tester to the vehicle and switch on.
  - 2.2.2 Switch on ignition.
  - 2.2.3 In the start display of the PIWIS Tester, call up the "Diagnostics" menu and select the vehicle type "911 (997)".
  - 2.2.4 In the control units selection, select "PCM2.1" and after the control unit search is complete, use the F12 key to change to the PCM2.1 component selection.
  - 2.2.5 Select "external BOSE amplifier" and use the F12 key to change to the BOSE amplifier function selection.
  - 2.2.6 Select the menu item "Control unit programming" and use the F12 key to change to the selection of data records to be used.

Work Procedure:  
(cont'd)

- 2.2.7 Check whether the records specified by the PIWIS Tester for model range and convertible top version match the respective vehicle for which an update is supposed to be performed. If necessary, change the data record selection.
- 2.2.8 Use the F8 key "Coding" to change to the BOSE selection display. In this display, the part number of the BOSE amplifier, the software part number, the software version, and the data record are displayed.
- 2.2.9 Press the F8 key "Coding" again to start the BOSE update. During the update, follow the other instructions of the PIWIS Tester. During the update process, the PCM2.1 switches to service mode and "Service" is displayed in the display of the PCM2.1 control part.
- 2.2.10 After the update is finished, the message "Programming successfully completed " is shown on the screen of the PIWIS Tester and the current software version 01.75.00 is displayed.
- 2.2.11 Change to the main menu of the PIWIS Tester and shut down the tester. The PCM2.1 control part switches again from service mode to normal mode.
- 2.2.12 Switch off and disconnect the PIWIS Tester.
- 2.2.13 Vehicles **with PCM2.1 navigation** (I No. 670):  
Replace previous navigation DVD with new navigation DVD, continue with Step 3, page 9.

### Update PCM2.1

Replacement BOSE amplifier matches the version for vehicles from M.Y. 05 as of the introduction date:

#### 1. Introductory work.



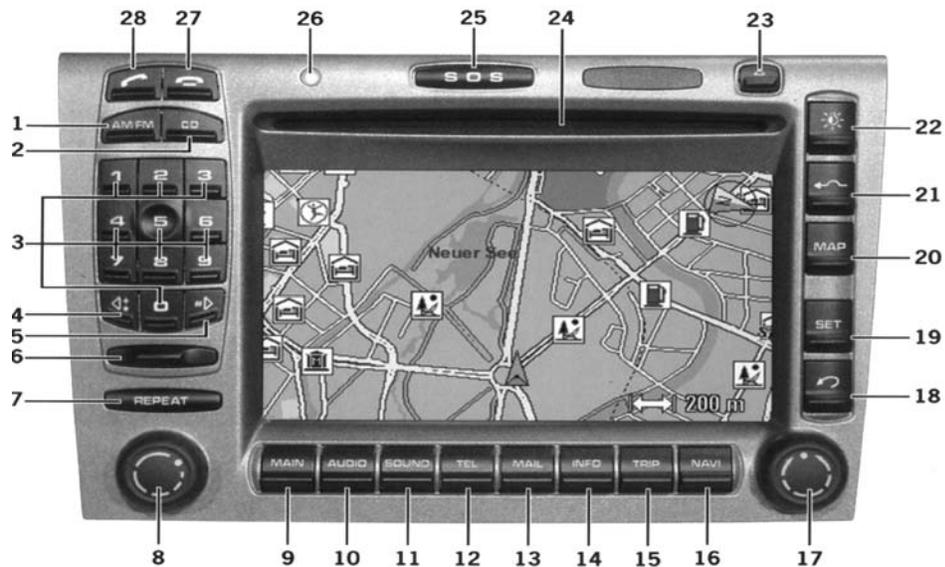
#### Caution!

#### Malfunctions in the PCM2.1 system network if the data loading process is interrupted.

- > If there is an interruption while loading the data due to power loss, malfunctions can occur in the PCM2.1 system network.
- > Connect a suitable battery charger to the vehicle electrical system battery while working.

- 1.1 Connect battery charger to the vehicle electrical system battery.
- 1.2 **Switch on ignition.**
- 1.3 If necessary, switch on the PCM2.1 by activating the "On/Off switch" (Figure 2, Item 8).
- 1.4 Activate the Eject button (Figure 2, Item 23) and remove CD if present from the CD slot (Figure 2, Item 24).

Work Procedure:  
(cont'd)



**2. Update PCM2.1 to software version 4202JD1 using update CD.**

- 2.1 Insert the PCM2.1 update CD, part number, 000.043.205.46.xxx in the CD slot (Figure 2, Item 24). The software update starts automatically.
- 2.2 In the PCM2.1 display appears: "Update software to version PCM2.1 MOPF A". The "Yes" selection is already pre-selected.
- 2.3 Press the rotary knob (Figure 2, Item 17) to confirm the selection "Yes" and to start the PCM2.1. There is an update for the following system components of the PCM2.1 (display in PCM2.1 display):  
 "Update the system software."  
 "Device 1 of 2."  
 "Update to version GW04113AD1 is being performed."  
 "Update the PCM."  
 "Device 2 of 2."  
 "Update to version MMI 04202JD1 is being performed."  
 For each update step there is a bar shown that displays the loading progress.
- 2.4 When the update is finished, "Update successful" is displayed in the PCM2.1 display.



**Note!**

The message about a successful update is brief, afterwards the PCM2.1 switches off and on again automatically.

- 2.5 If the PCM2.1 does not switch on again automatically, switch on the PCM2.1 again by pressing the On/Off switch (Fig. 2, Item 8).

Work Procedure:  
(cont'd)

- 2.6 Remove update CD from the CD slot (Fig. 2, Item 24) by pressing the Eject button (Figure 2, Item 23).
- 2.7 If customer's audio CD was removed, insert again in the CD slot of the PCM2.1 control part.
- 2.8 Switch off the PCM2.1 by pressing the "On/Off switch" (Figure 2, Item 8).
- 3. **Replace the Navigation DVD.**



**Note!**

In vehicles with PCM2.1 navigation (I No. 670), after installing a PCM2.1 with software version 04202JD1 (Update of existing models A software) or after the PCM2.1 system network has been updated to Update of existing models A software, only the new navigation DVDs can be used.



**Attention!**

**Opening of the DVD package and inserting the navigation DVD implies acceptance of the terms of the license.**

- > Please observe the terms of the license.
- > In this regard, request the customer to open the package on handing over the vehicle or obtain the customer's approval in advance. Then perform the following steps.

- 3.1 Remove the previously used navigation DVD from the navigation module in the luggage compartment.
- 3.2 Insert new navigation DVD in the navigation module or hand it over to the customer.
- 3.3 Switch off ignition.
- 3.4 Disconnect battery charger.

Working Time:

Labor Operation	Description	Time Units
91 10 25 40	Updating the PCM2.1	60 TU
91 44 25 40	Updating the loudspeaker amplifier	80 TU

Warranty Info:

In order to facilitate the inspection for the supplier, follow the following procedure when returning the BOSE amplifier to the Atlanta Warranty Test Center:  
If the BOSE amplifier is to be replaced in addition to the spare parts requirements for the PCM2.1 (see Step 1 on Page 6 of this Technical Information), it must be noted in the field "workshop determination" on the barcode of the BOSE amplifier to be replaced that the amplifier was replaced due to Technical Information, Group 9, No. 7/04, Procedure Step 1, Page 6.

References:

- POSES, Workshop Manual, 911 Carrera (997):
- > Group 9: 91 10 19 – Removing and installing display and PCM operator control unit.
- 91 44 21 – Removing and installing the loudspeaker amplifier.

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