

# Original BMW Accessories. Installation Instructions.



## Alpine HiFi system retrofit

**BMW 1 Series (E81, E82, E87, E88)**

**BMW 3 Series (E90, E91, E92, E93)**

**These installation instructions are not valid for cars with HiFi systems**

**retrofit kit no.** 65 41 445 684 Alpine HiFi system retrofit kit

### Installation time

The installation time is **approx. 2.5 hours**. This may vary depending on the condition of the car and the equipment in it.

### Important information

These installation instructions are primarily designed for use within the BMW dealership organisation and by authorised BMW service companies.

In any event, the target group for these installation instructions is specialist personnel trained on BMW cars with the appropriate specialist knowledge.

All work must be completed using the latest BMW repair manuals, circuit diagrams, servicing manuals and work instructions, in a rational order, using the prescribed tools (special tools) and observing current health and safety regulations.

**If you experience installation or function problems, limit troubleshooting to approx. 0.5 hours for mechanical or 1.0 hour for electrical work.**


In order to reduce costs and avoid any additional expense, send a query immediately to the Technical Parts Support via the Aftersales Assistance Portal (ASAP).


Specify the following information:

- Chassis number
- Part number of the retrofit kit
- A precise description of the problem
- Work steps already carried out

Do not archive the hard copy of these installation instructions since daily updates are made by ASAP!

### Pictograms

 Denotes instructions that draw your attention to special features.

 Denotes the end of the instruction.

### Information for the customer

Print out the "Customer information for the Alpine HiFi system" chapter at the end of the installation instructions and give it to the customer.

### **Installation information**

Ensure that the cables and/or lines are not kinked or damaged as you install them in the car. The costs thereby incurred will not be reimbursed by BMW AG.

Additional cables/lines that you install must be secured with cable ties.

If the specified PIN chambers are occupied, bridges, double crimps or twin-lead terminals must be used.

Exclusively use this EBA for troubleshooting. The information printed on amplifier **C** does not correspond to the connection on the car.

### **Ordering instructions**

The corner panels on the mirror quadrant **I, J** or covers on the window frames **K, L** are not included in the retrofit kit and must be ordered separately (for part number and instructions, see EPC).

### **List of special equipment**

The following special equipment must be taken into consideration when installing the retrofit kit:

- SA 606** Business navigation system
- SA 609** Professional navigation system
- SA 662** BMW Business CD radio
- SA 663** BMW Professional radio

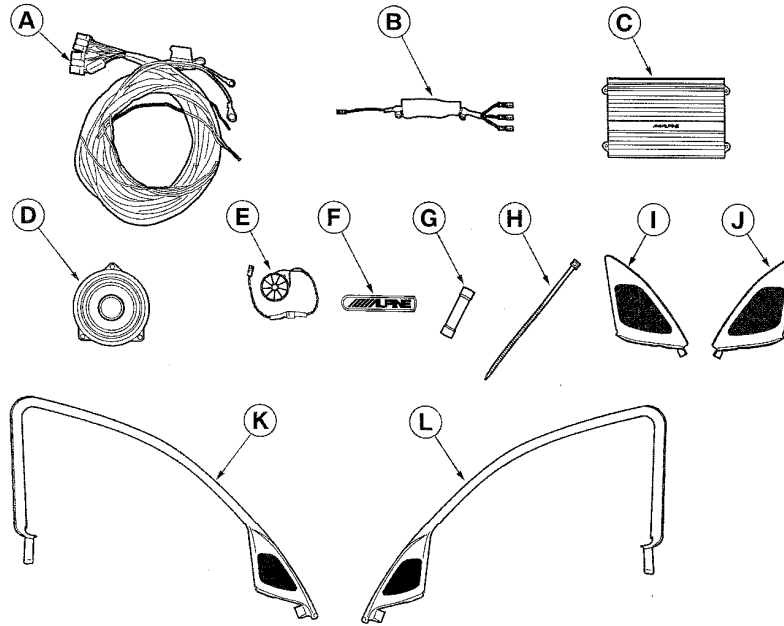
### **Special tools required**

00 9 310, installation wedges

## Table of contents

Section	Page
1. Parts list .....	4
2. Preparatory work .....	5
3. Connection diagram .....	6
4. Installation and cabling diagram .....	8
5. To install and connect the retrofit kit .....	9
6. Concluding work and coding .....	13
7. Circuit diagram .....	14
8. Customer information for the Alpine HiFi system .....	16

## 1. Parts list



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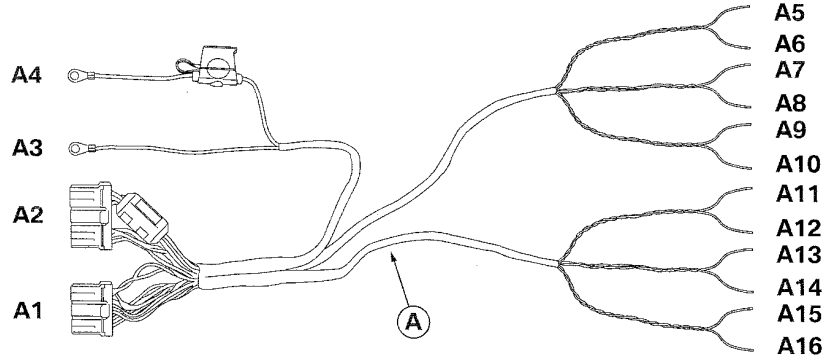
### Legend

- A** Retrofit wiring harness
- B** Frequency switch (2x)
- C** Amplifier
- D** Mid-range speaker (2x)
- E** Tweeter (2x)
- F** Emblem (2x)
- G** Crimp joint (red 5x for cross-section 0.5 – 1 mm, blue 10x for cross-section 1 – 2.5 mm)
- H** Cable ties (15x)
- I** Corner panel on the left-hand mirror quadrant (for E82, E88, E92, E93 cars only, not supplied with the retrofit kit)
- J** Corner panel on the right-hand mirror quadrant (for E82, E88, E92, E93 cars only, not supplied with the retrofit kit)
- K** Left-hand window frame cover (for E81, E87, E90, E91 cars only, not supplied with the retrofit kit)
- L** Right-hand window frame cover (for E81, E87, E90, E91 cars only, not supplied with the retrofit kit)

## 2. Preparatory work

	<b>ISTA no.</b>
Conduct a brief test	---
Disconnect negative pole of battery	12 00 ...
<b>The following components must be removed first of all</b>	
Front door sill strip (interior) on both sides	51 47 000
Rear door sill strip (interior) on both sides (E87, E90, E91 cars only)	51 47 030
Rear seat	52 26 005
Luggage compartment floor trim	51 47 101
Front door trim, left and right	51 41 000
<b>Also for E81, E87, E90, E91, E92 cars</b>	
Backrest side section on the rear seat backrest, left and right	52 26 008
<b>Also for E81, E87, E90, E91 cars</b>	
Cover on door window frame interior left and right	51 32 160
<b>Also for E82, E88, E92, E93 cars</b>	
Inner panel on mirror quadrant left and right	51 16 000

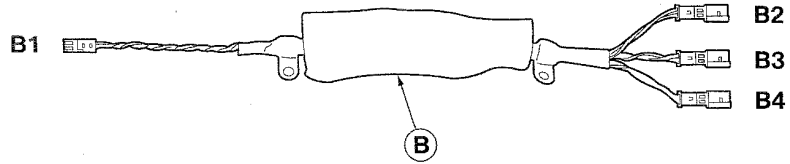
### 3. Connection diagram



087 1029 Z

Branch/Item	Designation	Signal	Cable colour / Cross-section	Connection location in the car	Abbreviation / Slot
A	Retrofit wiring harness	---	---	---	---
A1	WS 10-pin socket casing	---	---	To amplifier <b>C</b>	---
A2	WS 14-pin socket casing	---	---	To amplifier <b>C</b>	---
A3	Eyelet	Terminal 31	BR 4.0 mm <sup>2</sup>	To the screw of the battery clamp	
A4	Eyelet	Terminal 30	RT 4.0 mm <sup>2</sup>	<b>E81, E82, E87, E88 cars only</b> To the positive bolt of the luggage compartment liner battery terminal <b>E90, E91, E92, E93 cars only</b> To the positive bolt of the rear fuse holder	X10209
A5	Cable open	INVR+	BL/SW 0.5 mm <sup>2</sup>	With crimp joint <b>G</b> to the radio's BL/SW cable	X9385
A6	Cable open	INVR-	BL/BR 0.5 mm <sup>2</sup>	With crimp joint <b>G</b> to the radio's BL/BR cable	X9386
A7	Cable open	MLVR+	RT/SW 0.5 mm <sup>2</sup>	With crimp joint <b>G</b> to the door loudspeaker's BL/SW cable	X9385
A8	Cable open	MLVR-	RT/BR 0.5 mm <sup>2</sup>	With crimp joint <b>G</b> to the door loudspeaker's BL/BR cable	X9386
A9	Cable open	ZBVR+	GN/SW 0.75 mm <sup>2</sup>	With crimp joint <b>G</b> to the subwoofer's BL/SW cable	X9385
A10	Cable open	ZBVR-	GN/BR 0.75 mm <sup>2</sup>	With crimp joint <b>G</b> to the subwoofer's BL/BR cable	X9386
A11	Cable open	INVR+	BL/WS 0.5 mm <sup>2</sup>	With crimp joint <b>G</b> to the radio's BL/WS cable	X9387
A12	Cable open	INVR-	BL/BR 0.5 mm <sup>2</sup>	With crimp joint <b>G</b> to the radio's BL/BR cable	X9388
A13	Cable open	MLVL+	RT/WS 0.5 mm <sup>2</sup>	With crimp joint <b>G</b> to the door loudspeaker's BL/WS cable	X9387
A14	Cable open	MLVL-	RT/BR 0.5 mm <sup>2</sup>	With crimp joint <b>G</b> to the door loudspeaker's BL/BR cable	X9388
A15	Cable open	ZBVL+	GN/WS 0.75 mm <sup>2</sup>	With crimp joint <b>G</b> to the subwoofer's BL/WS cable	X9387
A16	Cable open	ZBVL-	GN/BR 0.75 mm <sup>2</sup>	With crimp joint <b>G</b> to the subwoofer's BL/BR cable	X9388

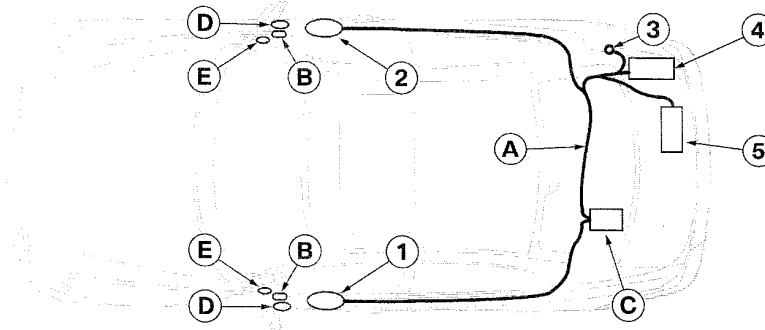
### 3. Connection diagram



087 1042 Z

Branch/Item	Designation	Signal	Cable colour / Cross-section	Connection location in the car	Abbreviation / Slot
B	Frequency switch	---	---	---	---
B1	BL 2-pin socket casing	---	---	To mid-range speaker <b>D</b>	---
B2	BL 2-pin plug casing	---	---	<b>Cars with SA 662 only</b> To tweeter <b>E</b>	---
B3	BL 2-pin plug casing	---	---	To the original socket casing for the door loudspeaker	---
B4	BL 2-pin plug casing	---	---	<b>Only cars with SA 606, SA 609, SA 663</b> To tweeter <b>E</b>	---

#### 4. Installation and cabling diagram



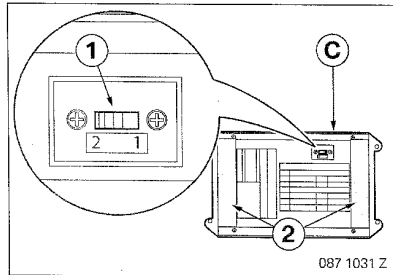
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#### Legend

- A Retrofit wiring harness
  - B Frequency switch
  - C Amplifier
  - D Mid-range loudspeaker
  - E Tweeter
- 1 Connector **X9387, X9388**
  - 2 Connector **X9385, X9386**
  - 3 Battery (E90, E91, E92, E93 cars only)
  - 4 Battery (E81, E82, E87, E88 cars only)



## 5. To install and connect the retrofit kit

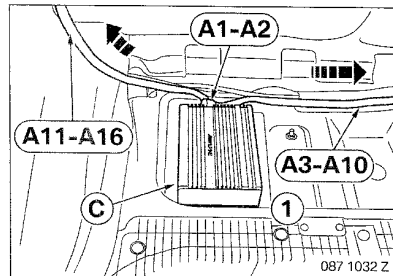


☒ Before installing amplifier **C**, adjust switch (1). ◀

Position 1 for SA 662.

Position 2 for SA 606, SA 609, SA 663.

Remove the backing foil from the adhesive strips (2).



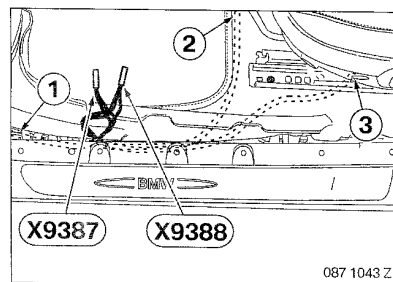
Stick the amplifier **C** in the boot space well (1).

Connect branches **A1** und **A2** to the amplifier **C**.

Route branches **A3** and **A4** to the battery.

Route branches **A5–A10** to the right-hand footwell.

Route branches **A11–A16** to the left-hand footwell.



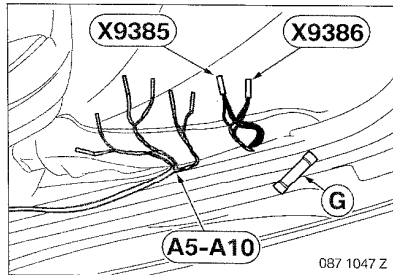
Expose connectors **X9387** and **X9388** on the wiring harness.

Expose the wiring harness as much as is required to ensure the cables can be routed securely

- (1) to the door loudspeaker, 0.75 mm<sup>2</sup>
- (2) to the radio, 0.75 mm<sup>2</sup>
- (3) to the subwoofer, 0.75 mm<sup>2</sup>

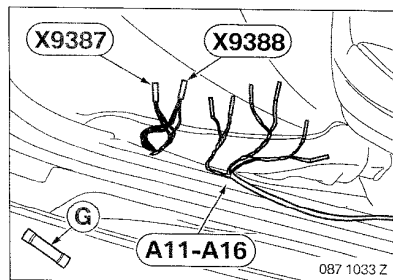
Proceed in exactly the same way on the right-hand side.

5. To install and connect the retrofit kit



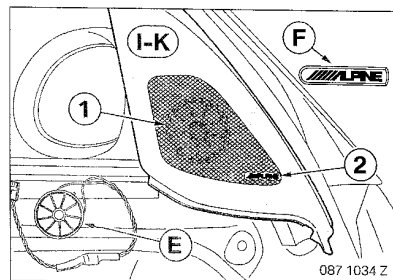
Connect branches **A5–A10** as follows with crimp joint **G** to connector **X9385** and **X9386**:

- Branch **A5**, BL/SW cable, to the radio's BL/SW cable
- Branch **A6**, BL/BR cable, to the radio's BL/BR cable
- Branch **A7**, RT/SW cable, to the door loudspeaker's BL/WS cable
- Branch **A8**, RT/BR cable, to the door loudspeaker's BL/BR cable
- Branch **A9**, GN/SW cable, to the subwoofer's BL/SW cable
- Branch **A10**, GN/BR cable, to the subwoofer's BL/BR cable



Connect branches **A11–A16** as follows with crimp joint **G** to connector **X9387** and **X9388**:

- Branch **A11**, BL/WS cable, to the radio's BL/WS cable
- Branch **A12**, BL/BR cable, to the radio's BL/BR cable
- Branch **A13**, RT/WS cable, to the door loudspeaker's BL/WS cable
- Branch **A14**, RT/BR cable, to the door loudspeaker's BL/BR cable
- Branch **A15**, GN/WS cable, to the subwoofer's BL/WS cable
- Branch **A16**, GN/BR cable, to the subwoofer's BL/BR cable



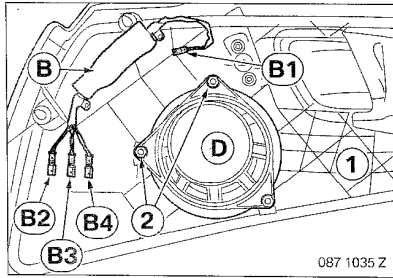
☐ If required, use a corner panel on mirror quadrant **I** or window frame cover **K**. ◀

Replace the tweeter in the mirror quadrant (1) with tweeter **E**, see ISTA no. 65 13 050.

Suspend the emblem **F** in the speaker grille (2) and stick in position.

Proceed in exactly the same way on the right-hand side.

5. To install and connect the retrofit kit



**E81, E82, E87, E88 cars only**

Replace the speaker in the door trim (1) with mid-range speaker **D**, see ISTA no. 65 13 070.

Screw frequency switch **B** to mid-range speaker **D** using nuts (2).

Connect branch **B1** to mid-range speaker **D**.

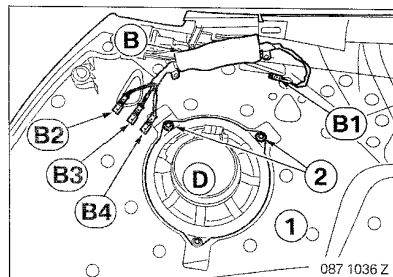
Connect branch **B3** to the original socket casing for the door speaker.

**Cars with SA 662 only**

Connect branch **B2** to tweeter **E**.

**Only cars with SA 606, SA 609, SA 663**

Connect branch **B4** to tweeter **E**.



**E90, E91, E92, E93 cars only**

Replace the speaker in the door trim (1) with mid-range speaker **D**, see ISTA no. 65 13 070.

Screw frequency switch **B** to mid-range speaker **D** using nuts (2).

Connect branch **B1** to mid-range speaker **D**.

Connect branch **B3** to the original socket casing for the door speaker.

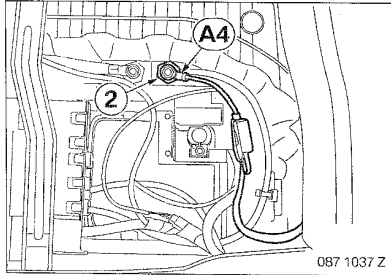
**Cars with SA 662 only**

Connect branch **B2** to tweeter **E**.

**Only cars with SA 606, SA 609, SA 663**

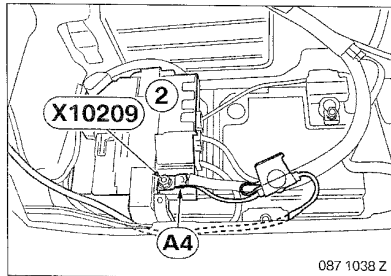
Connect branch **B4** to tweeter **E**.

5. To install and connect the retrofit kit



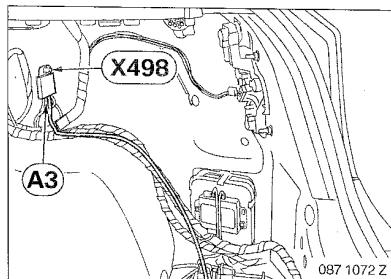
**E81, E82, E87, E88 cars only**

Screw branch **A4** to the positive bolt of the luggage space liner battery terminal (2).



**E90, E91, E92, E93 cars only**

Screw branch **A4** under clamp **X10209** of the rear fuse holder (2).



**For all cars**

strip the insulation off the retrofit cable set until branch **A3** can be screwed onto earth post connection **X498** on the right wheel arch.

## 6. Concluding work and coding

This retrofit system does not require coding.

- Connect the battery
- Conduct a brief test
- Conduct a function test
- Re-assemble the car

### Information for the customer

Print out the "Customer information for the Alpine HiFi system" chapter at the end of the installation instructions and give it to the customer.



## 7. Circuit diagram

### Legend

<b>A1*</b>	10-pin WS plug casing
<b>A2*</b>	14-pin WS plug casing
<b>A3*</b>	Ring eyelet M6, terminal 31 pick-up
<b>A4*</b>	Ring eyelet M6, terminal 30 pick-up
<b>A5*</b>	Line open, positive radio signal pick-up, right-hand side
<b>A6*</b>	Line open, negative radio signal pick-up, right-hand side
<b>A7*</b>	Line open, to positive cable of door speaker, right-hand side
<b>A8*</b>	Line open, to negative cable of door speaker, right-hand side
<b>A9*</b>	Line open, to positive cable of subwoofer, right-hand side
<b>A10*</b>	Line open, to negative cable of subwoofer, right-hand side
<b>A11*</b>	Line open, positive radio signal pick-up, left-hand side
<b>A12*</b>	Line open, negative radio signal pick-up, left-hand side
<b>A13*</b>	Line open, to positive cable of door speaker, left-hand side
<b>A14*</b>	Line open, to negative cable of door speaker, left-hand side
<b>A15*</b>	Line open, to positive cable of subwoofer, left-hand side
<b>A16*</b>	Line open, to negative cable of subwoofer, left-hand side
<b>B*</b>	Frequency switch
<b>B1*</b>	To mid-range speaker <b>D</b>
<b>B2*</b>	To tweeter <b>E</b> (cars with SA 662 only)
<b>B3*</b>	To the original socket casing of the speaker
<b>B4*</b>	To tweeter <b>E</b> (cars with SA 606, SA 609, SA 663 only)
<b>C*</b>	Amplifier
<b>D*</b>	Mid-range loudspeaker
<b>E*</b>	Tweeter
<b>G*</b>	Crimp joint
<b>VB*</b>	Connector
<b>1*</b>	Fuse holder (20 Amps)

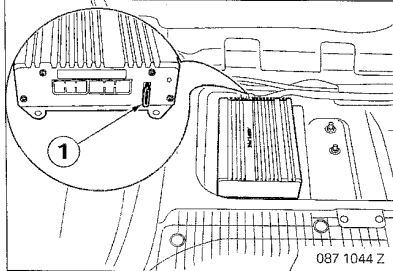
All the designations marked with an asterisk (\*) apply only to these installation instructions or this circuit diagram.

### Cable colours

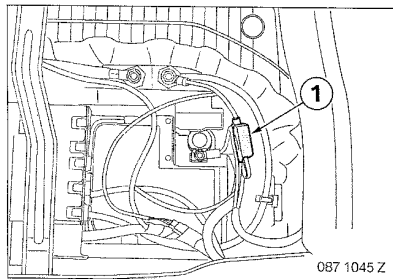
BL	Blue	RT	Red
BR	Brown	SW	Black
GN	Green	WS	White

## 8. Customer information for the Alpine HiFi system

In the event of a system failure, check the power supply as follows:

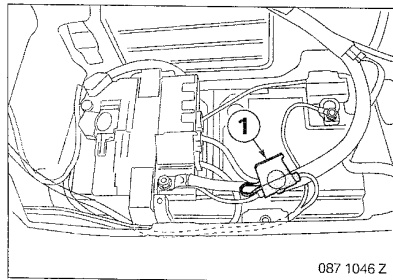


- Remove the luggage compartment floor trim
- Check the fuse (1) on the amplifier
- If necessary, replace with a new 20 Amp fuse



### 1 Series cars only

- Remove the luggage compartment floor trim
- Check the fuse in the fuse holder (1)
- If necessary, replace with a new 20 Amp fuse



### 3 Series cars only

- Remove the flap in the right-hand boot trim
- Check the fuse in the fuse holder (1)
- If necessary, replace with a new 20 Amp fuse