



# Parts and Accessories. Installation Instructions.

## DVD Navigation System Retrofit with On-Board Monitor BMW 3 Series Touring (E46/3)

**These installation instructions are only valid for cars with SA 534 (automatic air conditioning) and SA 550 (on-board computer).**

**Retrofit kit No.**            65 90 0 309 253

### Installation time

The installation time is 5.5 hours, but 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.

Ensure that the cables/lines are not kinked or damaged as you install them in the car. The costs incurred as a result of this will not be reimbursed by the BMW Group.

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.

After the installation work the retrofit must be coded using DISPlus or GT-1 via the **Retrofit** path.

All the figures show LHD cars, proceed accordingly on RHD cars.

### Pictograms



denotes instructions that draw your attention to special features.

◀ denotes the end of the instruction or other text.

See the EBA CD or Aftersales Portal for explanations of the pictograms.

Do not archive the hard copy of these installation instructions since daily updates are made by Aftersales Portal.

Subject to technical modifications.

### **Ordering instructions**

In cars with a BMW Business CD radio up to 09/01 and in all other cars up to 03/01, the aerial booster must be replaced by an aerial booster for cars from 09/01 or 03/01 onwards, respectively. This aerial booster is not included in the retrofit kit and must be ordered separately (see EPC for part number and documentation).

The on-board monitor **B** is not included in the retrofit kit since there are different versions. It must be ordered separately (see EPC for part number and documentation).

The holder **E** is not included in the retrofit kit since there are different versions. It must be ordered separately (see EPC for part number and documentation).

In cars without aerial Diversity, it must be retrofitted using individual parts (see EPC for part number and documentation).

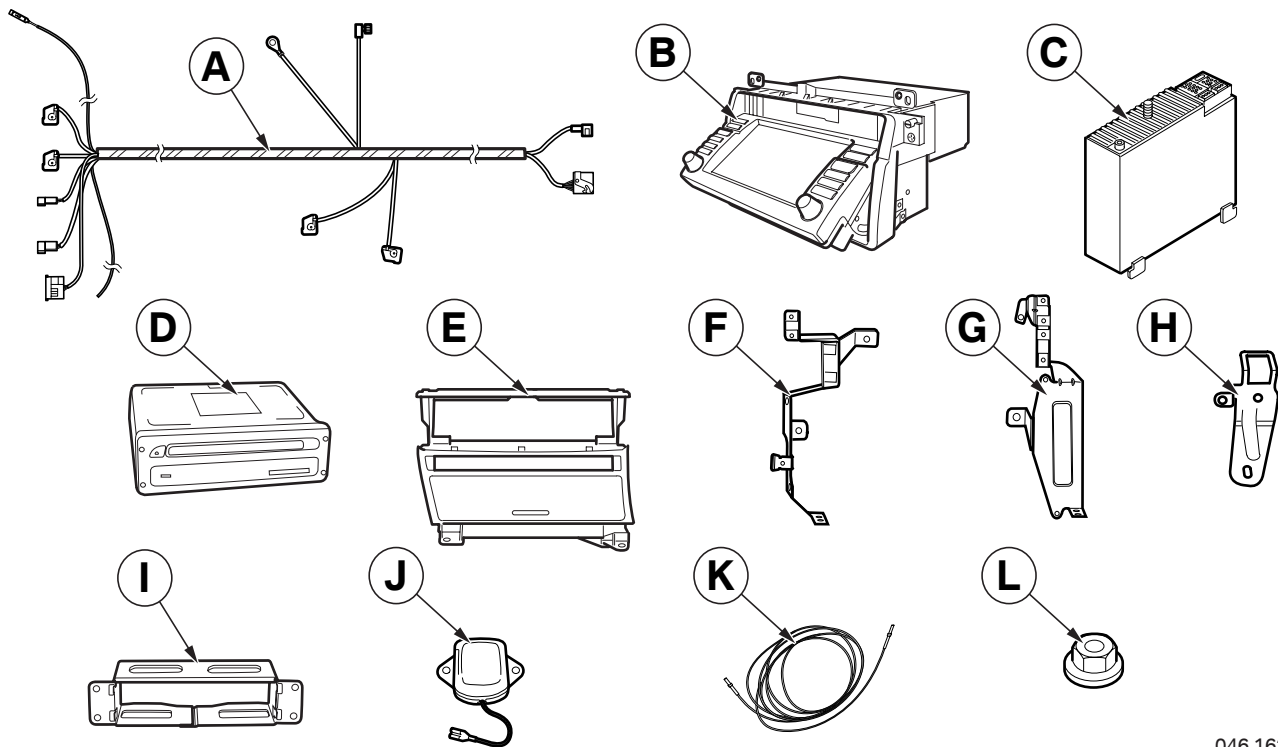
### **Special tools required**

None

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## 1. Parts list

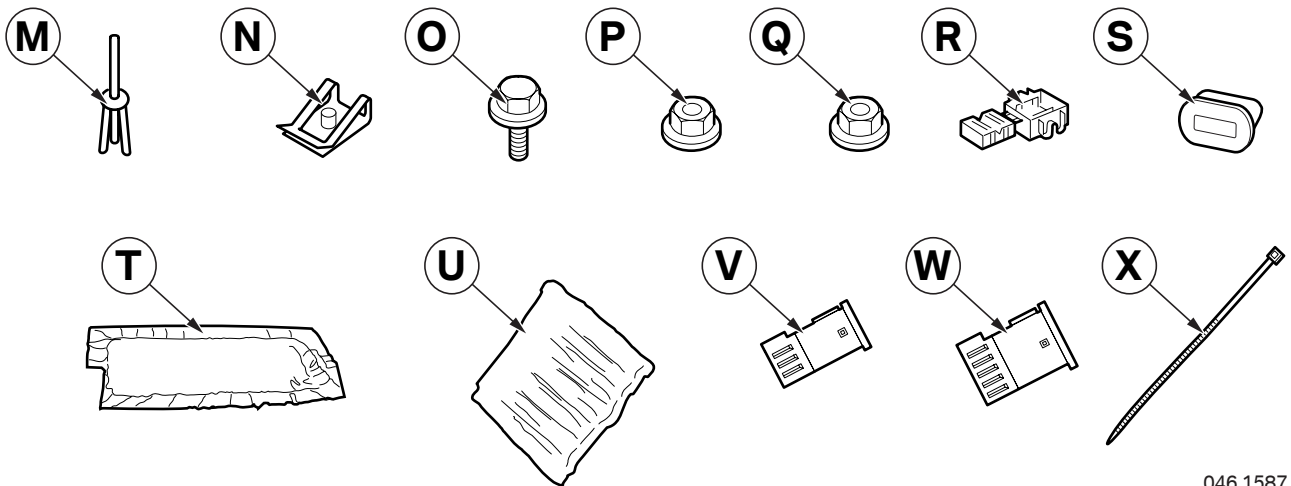


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### Legend

- A Navigation system retrofit wiring harness
- B On-board monitor (not supplied with the retrofit kit)
- C On-board monitor radio
- D Navigation computer
- E Holder (not supplied with the retrofit kit)
- F Front base support system
- G Rear base support system
- H Holder for on-board monitor radio
- I Navigation computer holder
- J GPS aerial
- K GPS aerial cable
- L Hexagonal nut M6 (2x)

## 1. Parts list



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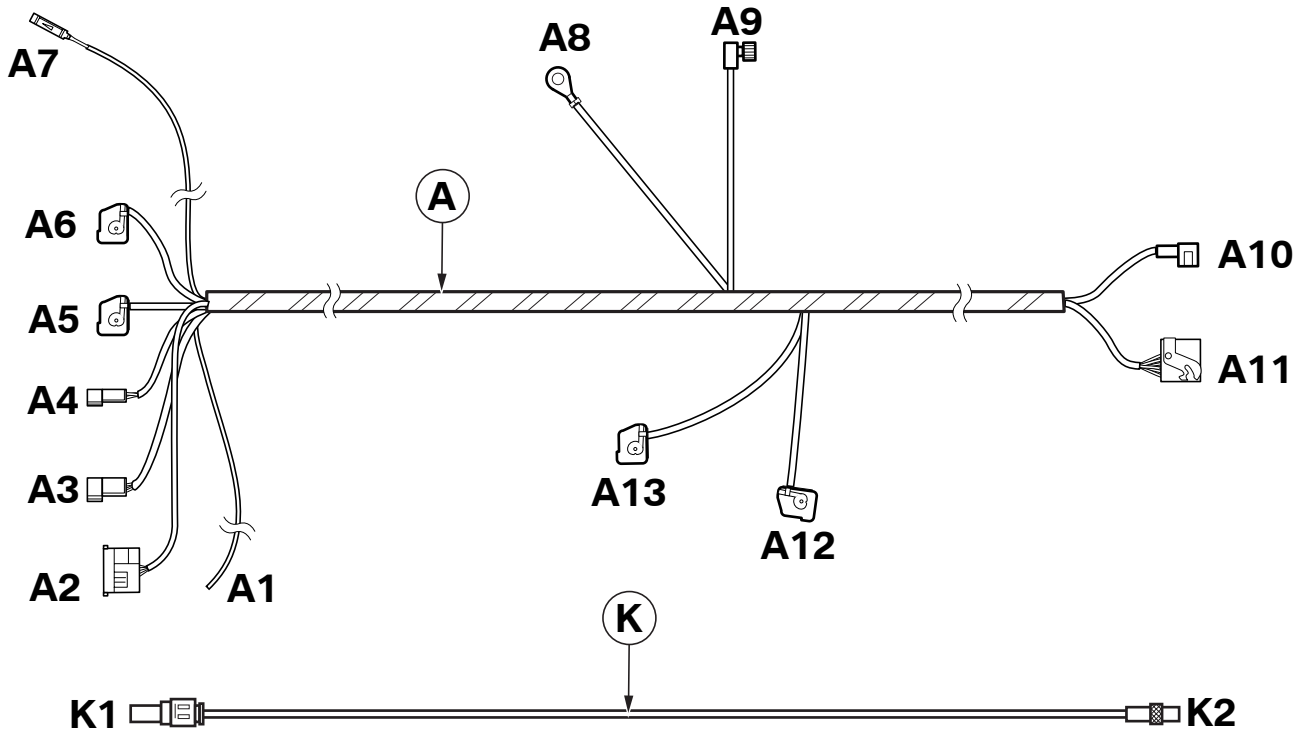
### Legend

- M Expanding rivets (2x)
- N Speed nut M5 (12x)
- O Hexagonal screw M5 x 14 mm (12x)
- P Cap nut M5
- Q Hexagonal nut M5
- R Miniature connector (2x)
- S Rubber grommet (2x)
- T Foil
- U Protective strip
- V Black 3-pin socket casing
- W Black 6-pin socket casing
- X Cable tie (10x)

## 2. Preparations

	<b>TIS No.</b>
Conduct a brief test	---
Disconnect the negative pole of the battery	12 00 ...
<b>The following components must be removed first of all</b>	
Centre fresh air grille	64 22 162
Radio receiver (no longer required)	65 11 030
Air conditioning control	64 11 749
Replace the holder in the oddments box by holder <b>E</b>	51 16 ...
Instrument carrier	62 21 000
Glove compartment	51 16 366
Left driver's seat	52 13 000
Door sill strip (front left)	51 47 000
Door sill strip (rear left)	51 47 030
Door pillar trim bottom left	51 43 150
Rear seat	52 26 005
Side backrest section rear left	52 26 008
Boot side trim left	51 47 151
D pillar trim on both sides	51 43 252
Trim for rear closing panel	51 46 050
Oddments box below boot floor	51 47 ...
Boot floor trim front	51 47 131
Rear spoiler	51 71 412
Foil under rear spoiler	---

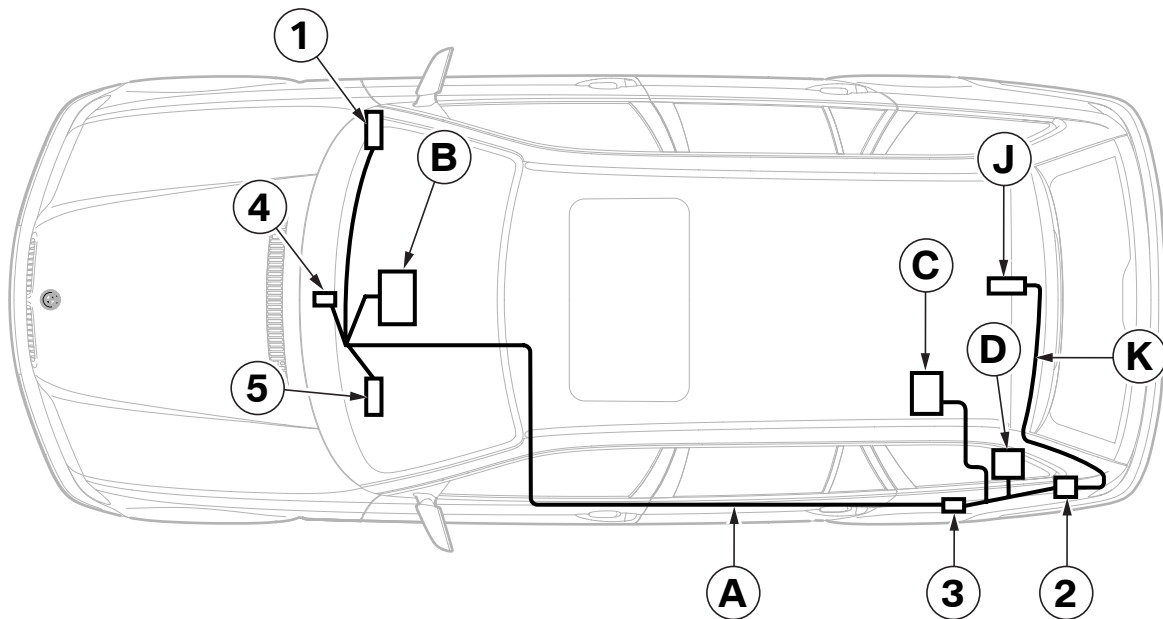
### 3. Connection diagram



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Item	Description	Signal	Cable colour / Cross-section	Connection location in the car	Abbreviation / Slot
A	Retrofit cable set	---	---	---	---
A1	Cable open	TAA	BR/RT 0.35 mm <sup>2</sup>	With miniature connector <b>R</b> to black/white cable of black 26-pin plug <b>X11175</b> on instrument holder	X11359 PIN 8
A2	Black 17-pin plug casing	---	---	On radio plug	X18126
A3	Black 6-pin plug casing	---	---	For optional CD changer retrofit and/or hands-free telephone device	X13321
A4	Black 3-pin socket casing	---	---	For optional AUX connection retrofit	X14118
A5	Blue 12-pin socket casing	---	---	On on-board monitor <b>B</b>	X18801
A6	White 12-pin socket casing	---	---	On on-board monitor <b>B</b>	X18802
A7	Joint connector contact	Reversing signal	BL/GE 0.35 mm <sup>2</sup>	To joint connector above the fuse holder	X428
A8	Cable eyelet	Terminal 31	BR 2.5 mm <sup>2</sup>	On earth post above the left rear wheel arch	X13016
A9	Coaxial plug casing	---	---	On aerial booster above the left rear wheel arch	X13344
A10	Fakra socket casing	---	---	On on-board monitor radio <b>C</b>	X13342
A11	Black 16-pin socket casing	---	---	On on-board monitor radio <b>C</b>	X18126
A12	Violet 18-pin socket casing	---	---	On navigation computer <b>D</b>	X1312
A13	Blue 18-pin socket casing	---	---	On navigation computer <b>D</b>	X1313
K	GPS aerial cable	---	---	---	---
K1	Coaxial socket casing	---	---	On navigation computer <b>D</b>	---
K2	Coaxial plug casing	---	---	To GPS aerial <b>J</b> below rear spoiler	---

## 4. Installation and cabling diagram



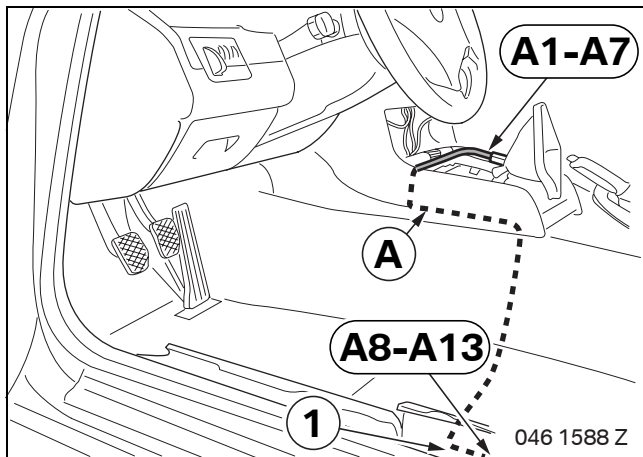
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### Legend

- A Retrofit cable set
- B On-board monitor
- C On-board monitor radio
- D Navigation computer
- J GPS aerial
- K GPS aerial cable

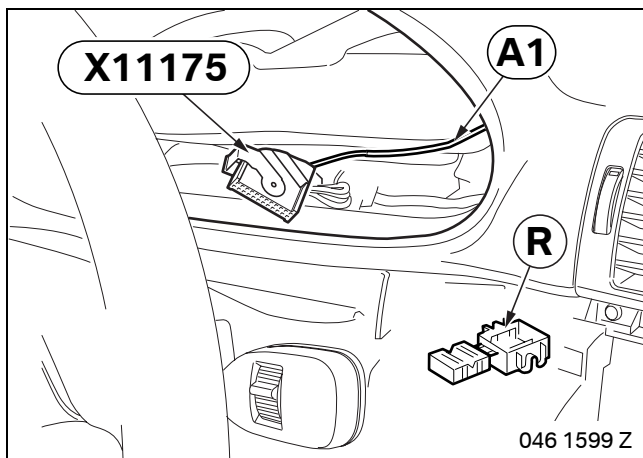
- 1 Joint connector **X428**
- 2 Aerial booster
- 3 Earth post **X13016**
- 4 Radio plug **X18126**
- 5 Instrument carrier

## 5. To install and connect the navigation system retrofit wiring harness

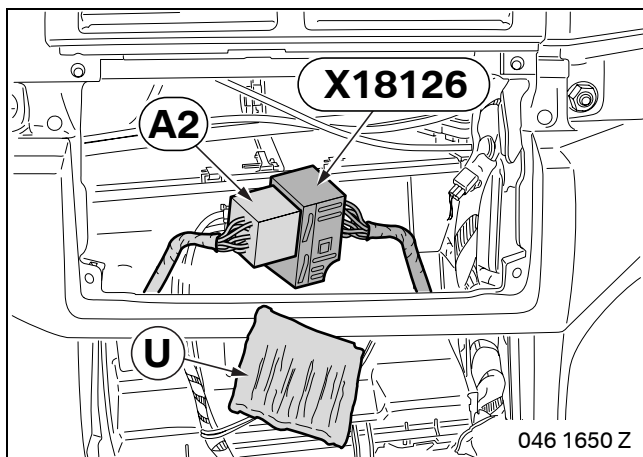


Route retrofit wiring harness **A** from side skirt (1) as follows along the standard wiring harness:

- Branches **A1 – A7** to the centre console
- Branches **A8 – A13** into the boot on the left

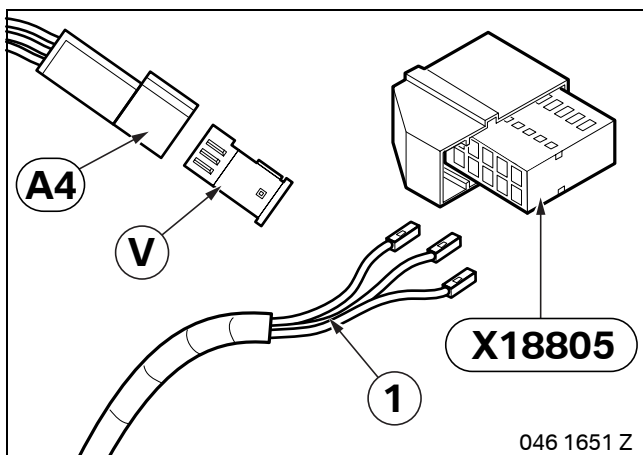


Route branch **A1** along the standard wiring harness to the instrument holder and use miniature connector **R** to connect it to the black/white cable of PIN 8 of plug **X11175**.



Connect branch **A2** to radio plug **X18126**.

Wrap the plug connector in protective strip **U**.



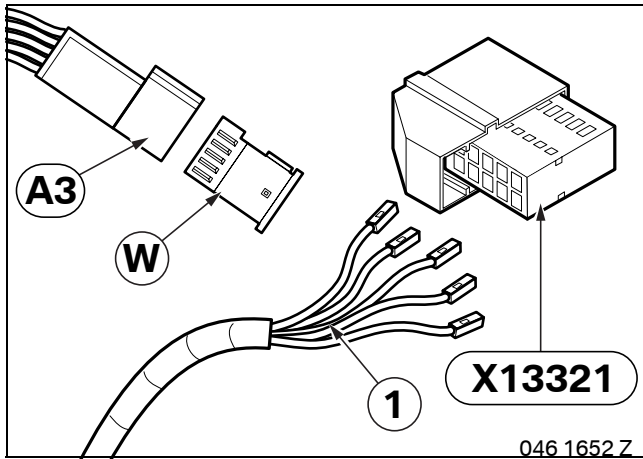
**Only for cars with retrofitted auxiliary connection for external audio sources**

Disconnect cables (1) from plug **X18805** and connect them to socket casing **V** as follows:

- White/blue cable to PIN 1 (AUX R-)
- White/yellow cable to PIN 2 (AUX L+)
- White/brown cable to PIN 3 (AUX -)

Connect branch **A4** to socket casing **V**.

5. To install and connect the navigation system retrofit wiring harness



**Only for cars with retrofitted CD changer or hands-free telephone device**

Disconnect cables (1) from plug **X13321** and connect them to socket casing **W** as follows:

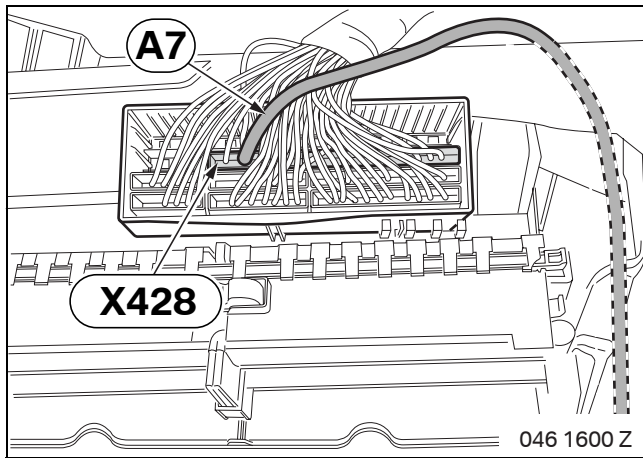
- Black cable to PIN 1 (Tel NF+)
- Yellow cable to PIN 2 (Tel NF-)
- White/blue cable to PIN 4 (CD NF RE+)
- White/red cable to PIN 5 (CD NF LI+)
- White/brown cable to PIN 6 (CD NF -)

Connect branch **A3** to socket casing **W**.

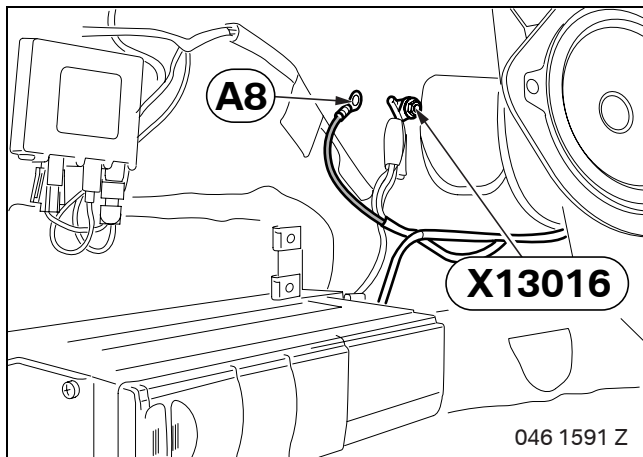
**All cars**

Route branch **A7** along the standard wiring harness to the glove compartment and connect to joint connector **X428**.

- ▶ If joint connector **X428** is fully occupied, disconnect the contact and connect branch **A7** using miniature connector **R**. ◀



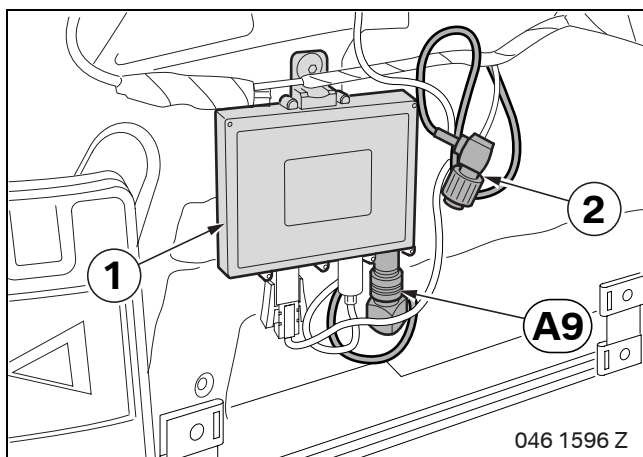
Route branch **A8** to earth post connection **X13016** and screw it on.



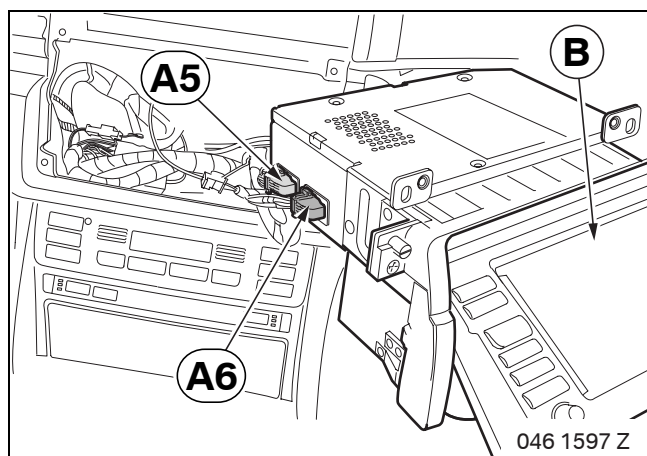
- ▶ In cars with a BMW Business CD radio up to 09/01 and in all other cars up to 03/01, the aerial booster must be replaced by an aerial booster for cars from 09/01 or 03/01 onwards, respectively. ◀

Unfasten the aerial plug (2) from the aerial amplifier (1) and tie it back.

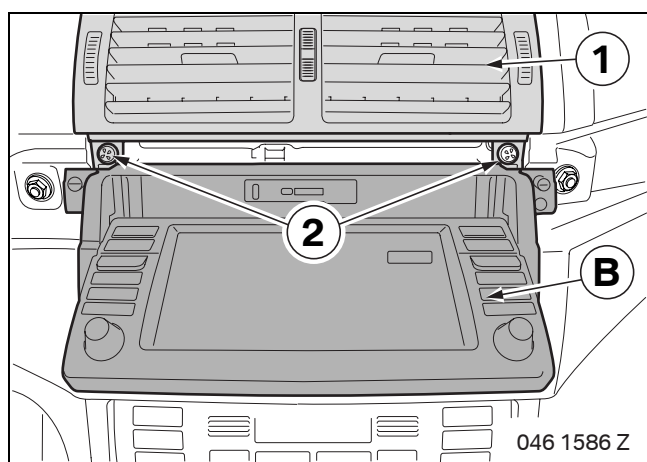
Screw branch **A9** onto the aerial amplifier (1).



## 6. To install and connect the on-board monitor



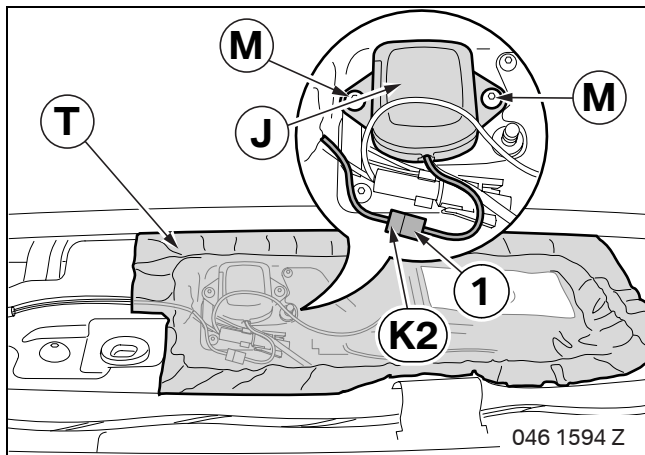
Connect branch **A5** and branch **A6** to on-board monitor **B**.



Insert on-board monitor **B** in the instrument panel.

Clip in the centre fresh air grille (1) and use screws (2) to secure it.

## 7. To install and connect the GPS aerial

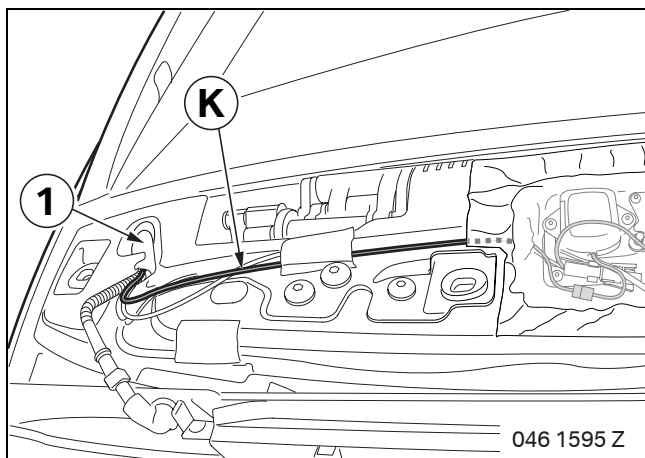


Secure GPS aerial **J** under the rear spoiler using expanding rivets **M**.

Connect branch **K2** to line (1) of GPS aerial **J**.

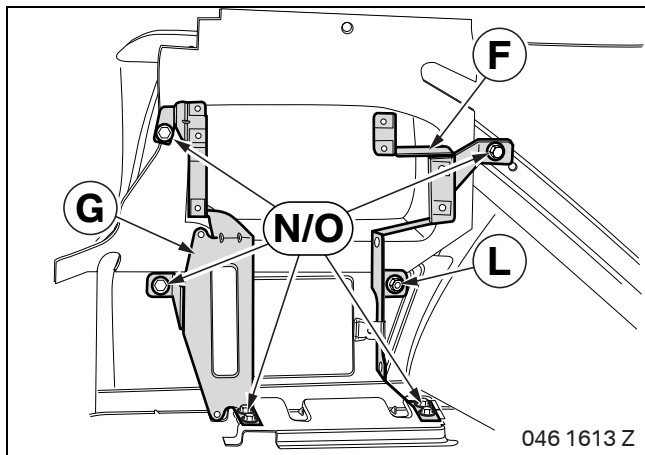
▶ The bonding surfaces must be clean and free of grease. Replace foil **T** to guarantee a good seal. ◀

Stick on foil **T** in the original position.



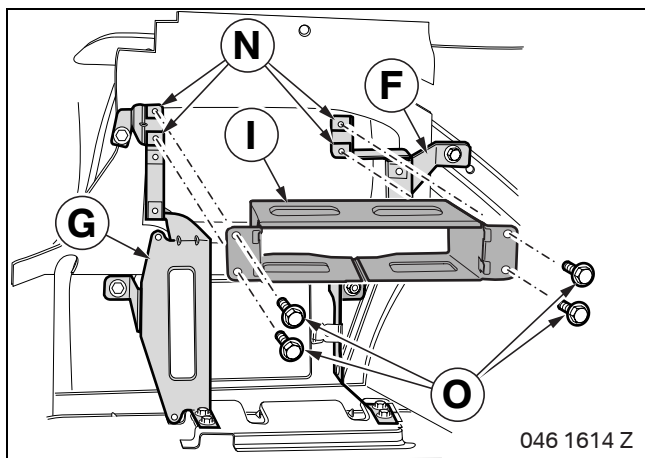
Route GPS aerial cable **K** along the standard wiring harness through the rubber grommet (1) to the installation site of the navigation computer.

## 8. To install and connect the navigation computer



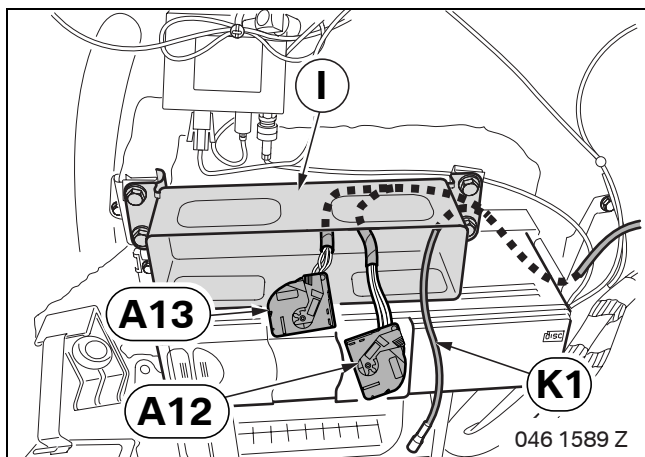
Clip speed nuts **N** into the body.

Use hexagonal screws **O** and hexagonal nuts **L** to screw on front base support system **F** and rear base support system **G**.

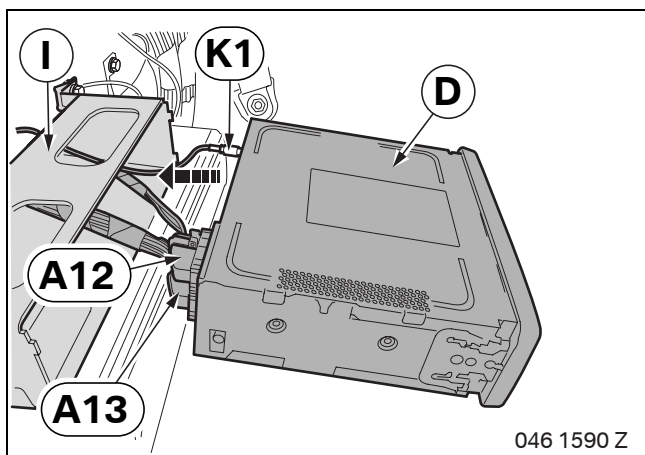


Push speed nuts **N** onto front base support system **F** and rear base support system **G**.

Screw on navigation computer holder **I** using hexagonal screws **O**.



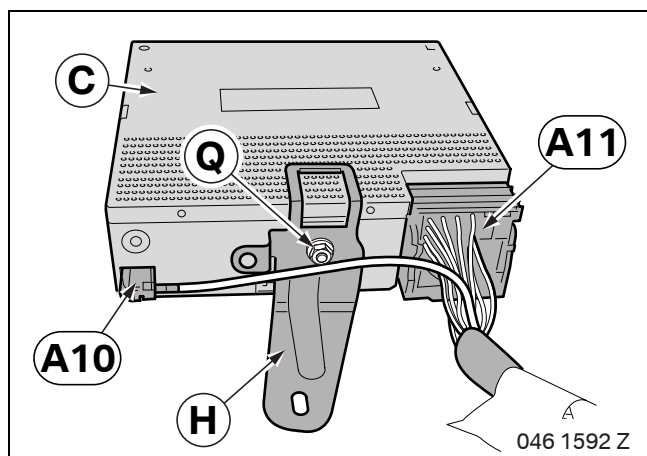
Route branches **A12**, **A13** and **K1** through navigation computer holder **I**.



Connect branches **A12**, **A13** and **K1** to navigation computer **D**.

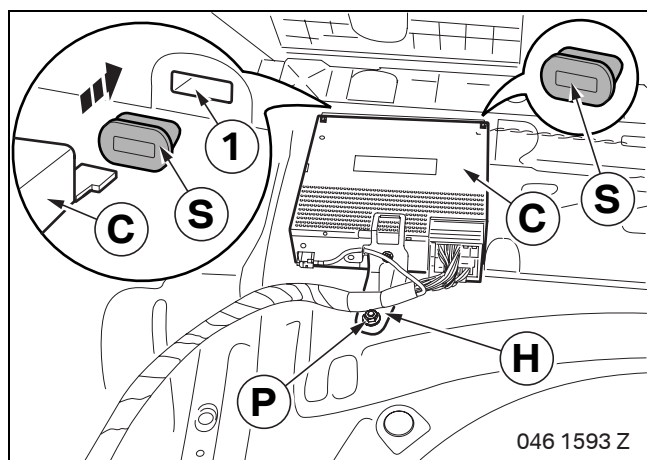
Push navigation computer **D** into navigation computer holder **I** until it clips in.

## 9. To install and connect the on-board monitor radio



Connect branch **A10** and branch **A11** to on-board monitor radio **C**.

Push on-board monitor radio holder **H** onto on-board monitor radio **C** and use hexagonal nut **Q** to screw it on.



Insert rubber grommets **S** into the existing slots (1).

Push on-board monitor radio **C** into rubber grommets **S** and use cap nut **P** to screw on-board monitor radio holder **H** onto the existing stud.

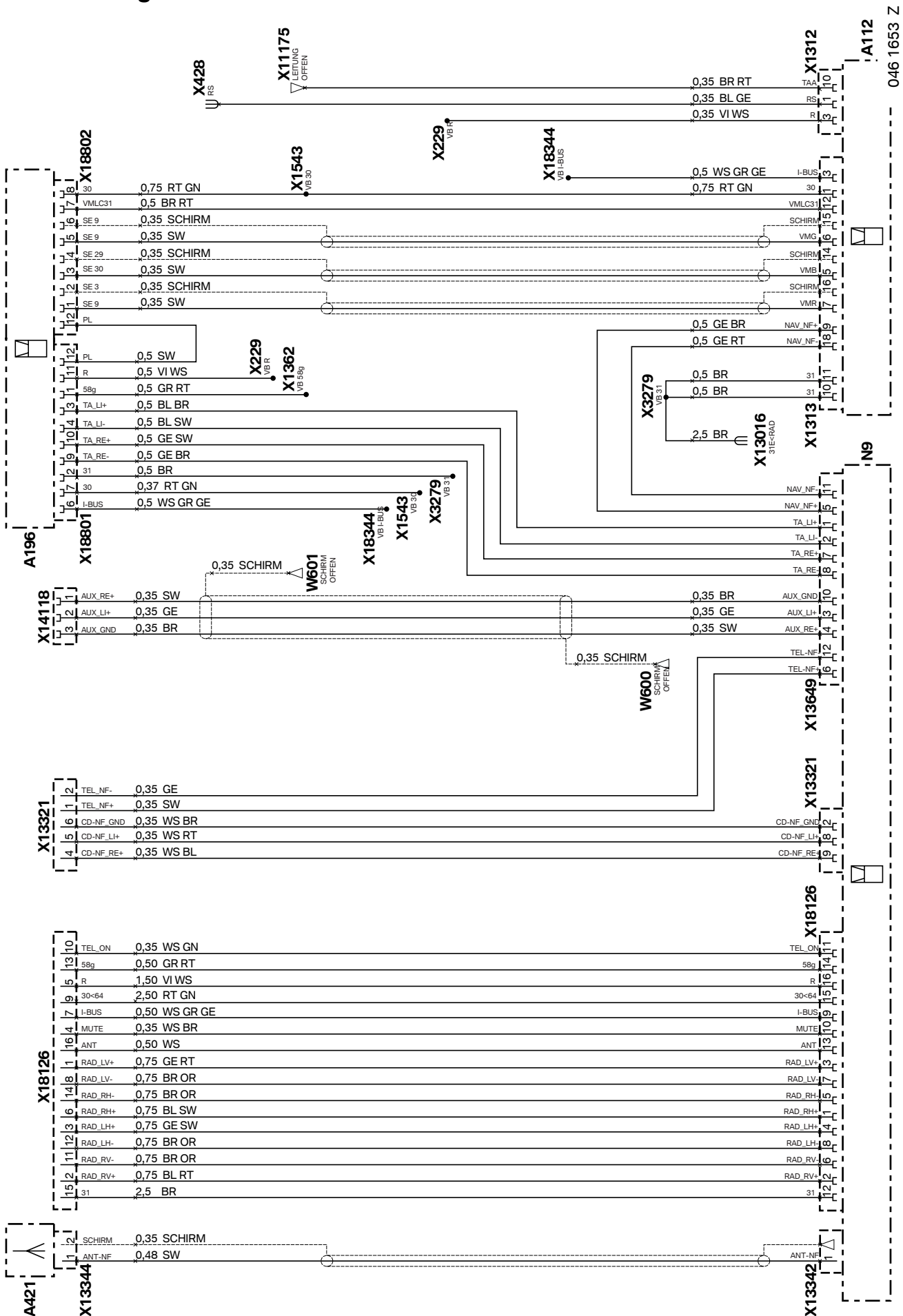
## 10. Concluding work and coding



Do not insert the software CD into the navigation computer until prompted to do so during the coding procedure (risk of damaging the navigation computer). ◀

- Connect the battery
- Code the retrofit using DISPlus or GT-1 via path **Retrofit**
- Conduct a brief test
- Conduct a function test
- Re-assemble the car

# 11. Circuit diagram



## 11. Circuit diagram

### Legend

<b>A3</b>	Light module
<b>A112</b>	Navigation computer
<b>A196</b>	On-board monitor
<b>A421</b>	Aerial booster
<b>N9</b>	On-board monitor radio
<b>W600</b>	Shield open
<b>W601</b>	Shield open
<b>X229</b>	Terminal R connector
<b>X428</b>	Joint connector contact, reversing signal
<b>X1312</b>	Violet 18-pin plug, navigation computer
<b>X1313</b>	Blue 18-pin plug, navigation computer
<b>X1362</b>	58g connector
<b>X1543</b>	Terminal 30 connector
<b>X3279</b>	Terminal 31 connector
<b>X11175</b>	Open cable, instrument cluster I
<b>X13016</b>	Earth, stereo/Hi Fi
<b>X13321</b>	Radio III
<b>X13342</b>	Aerial Radio LF
<b>X13344</b>	Aerial Diversity LF
<b>X13649</b>	Radio IV
<b>X14118</b>	Black 3-pin plug, AUX preparation
<b>X18126</b>	Radio plug
<b>X18344</b>	I bus connector
<b>X18801</b>	Blue 12-pin plug, on-board monitor
<b>X18802</b>	White 12-pin plug, on-board monitor

### Cable colours

BL	Blue	OR	Orange
BR	Brown	RT	Red
GE	Yellow	SW	Black
GN	Green	VI	Violet
GR	Grey	WS	White