

Original BMW Accessories. Installation Instructions.



Universal BMW Bluetooth Hands-Free Kit Retrofit BMW 1 Series (E81, E82, E87)

These installation instructions are only valid for cars with SA 473 (front armrest) and SA 606 (Business navigation system) or SA 609 (Professional navigation system) or SA 663 (BMW Professional radio).

Retrofit kit no.: 84 64 0 393 551 Universal BMW Bluetooth hands-free kit

Installation time

The installation time is **approx. 6.0 hours**. This may vary depending on the condition of the car and the equipment in it. The installation time will increase by **approx. 0.5 hours** for cars without fibre optic cable distributor station. The installation time will increase by **approx. 0.5 hours** for cars without roof function centre.

For series E81, E87 cars without SA 606 or SA 609, the installation time will increase by **approx. 2.0 hours** for the installation of the roof aerial.

For E82 cars without SA 606 or SA 609, the installation time will increase by **approx. 0.5 hours** for the installation of the adhesive screen aerial.

The vehicle must be updated to the latest I-level status by flashing before installing the retrofit. Differing programming times may be necessary depending on the production age of the vehicle and on work previously performed on the vehicle.

The installation time given does not include time needed for programming/encoding.

The total costs for the programming time should be taken into account when calculating retrofitting costs (reimbursement through warranty is not permissible).

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, restrict troubleshooting to approx. 0.5 hours for mechanical work and 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 or other text.

Installation information

When routing fibre optic cables, make sure the bending radius is no less than 25 mm.

Refer to the instructions for handling fibre optic cables acc. to ISTA RA 61 00

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.

All pictures show LHD cars; proceed accordingly on RHD cars.

After the installation work the retrofit must be programmed / coded using SSS (software service station) via the **CIP** path.

In the following equipment variants, the ULF control unit is already fitted, connected to a large extent and doesn't need replacing:

- Cars with SA 620 without SA 609
- Cars with SA 6FL

Ordering instructions

Most diagnosis connection **Y** and Flash adapter cover **Z** must be ordered separately for cars without Flash adapters (for part number and instructions, see EPC).

The following parts are not supplied in the retrofit kit and must be ordered separately (see EPC for part number and details).

- Snap-in adapter
- ULF control unit **D**
- Telephone centre armrest **M**
- Template **P** (for cars without roof function centre only)
- Aerial base **F** and aerial rod **G** (E81, E87 cars without SA 606 or SA 609 only)
- Aerial adapter **T** (for E82 cars with SA 606 or SA 609 only)
- Adhesive window aerial **W** (for E82 cars without SA 606 or SA 609 only)
- Adapter **X** (for E82 cars without SA 606 or SA 609 only)

List of special equipment

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

SA 473	Front armrest
SA 606	Business navigation system
SA 609	Professional navigation system
SA 620	Voice input system
SA 663	BMW Professional radio
SA 6FL	USB/audio interface

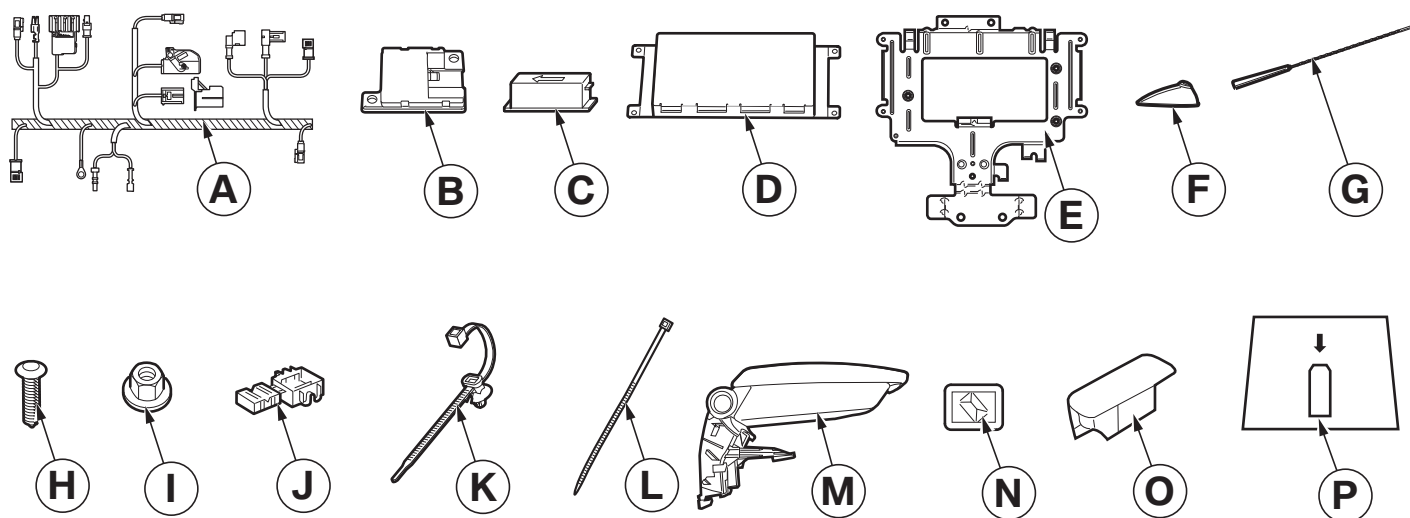
Special tools required

00 9 310, installation wedges

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1. Parts list

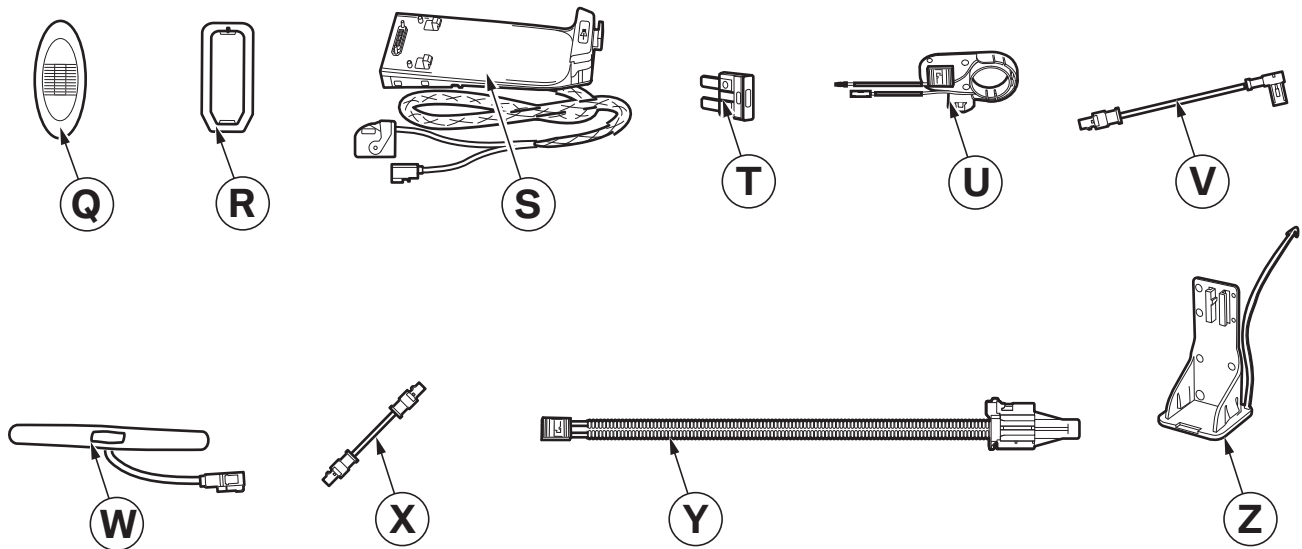


082 0103 Z

Legend

- A** Cable kit
- B** Bluetooth aerial
- C** Hands-free microphone
- D** ULF control unit (not supplied in the retrofit kit)
- E** ULF holder
- F** Aerial base (E81, E87 cars without SA 606 or SA 609 only, not supplied in the retrofit kit)
- G** Aerial rod (E81, E87 cars without SA 606 or SA 609 only, not supplied in the retrofit kit)
- H** Clip (2x)
- I** Hexagonal nut (4x)
- J** Miniature connector
- K** Cable holder (2x)
- L** Cable tie (30x)
- M** Telephone centre armrest (not supplied with the retrofit kit)
- N** Plug connector holder
- O** Eject box split cover
- P** Template (for cars without a roof function centre only, not supplied in the retrofit kit)

1. Parts list



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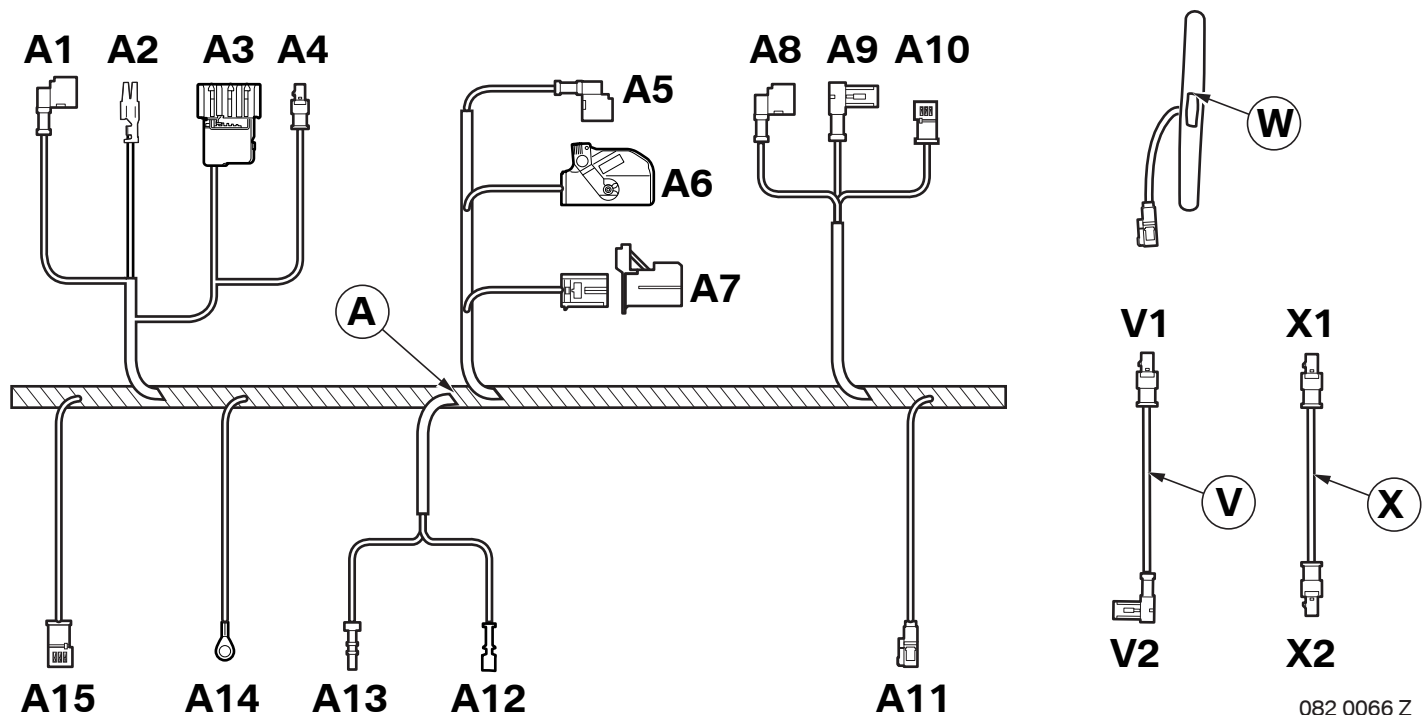
Legend

- Q** Hands-free microphone trim (2x, dependent on colour, for cars without roof function centre only)
- R** Installation frame (for cars without roof function centre only)
- S** Eject box
- T** Fusible link 10 A
- U** Retrofit fibre optic cable
- V** Aerial adapter (E82 cars without SA 606 or SA 609 only, not supplied in the retrofit kit)
- W** Adhesive window aerial (E82 cars without SA 606 or SA 609 only, not supplied in the retrofit kit)
- X** Adapter (E82 cars without SA 606 or SA 609 only, not supplied in the retrofit kit)
- Y** Most diagnostic connection (cars without Flash adapter built after 09/08 only, not supplied with the retrofit kit)
- Z** Flash adapter cover (cars without Flash adapter built after 09/08 only, not supplied with the retrofit kit)

2. Preparatory work

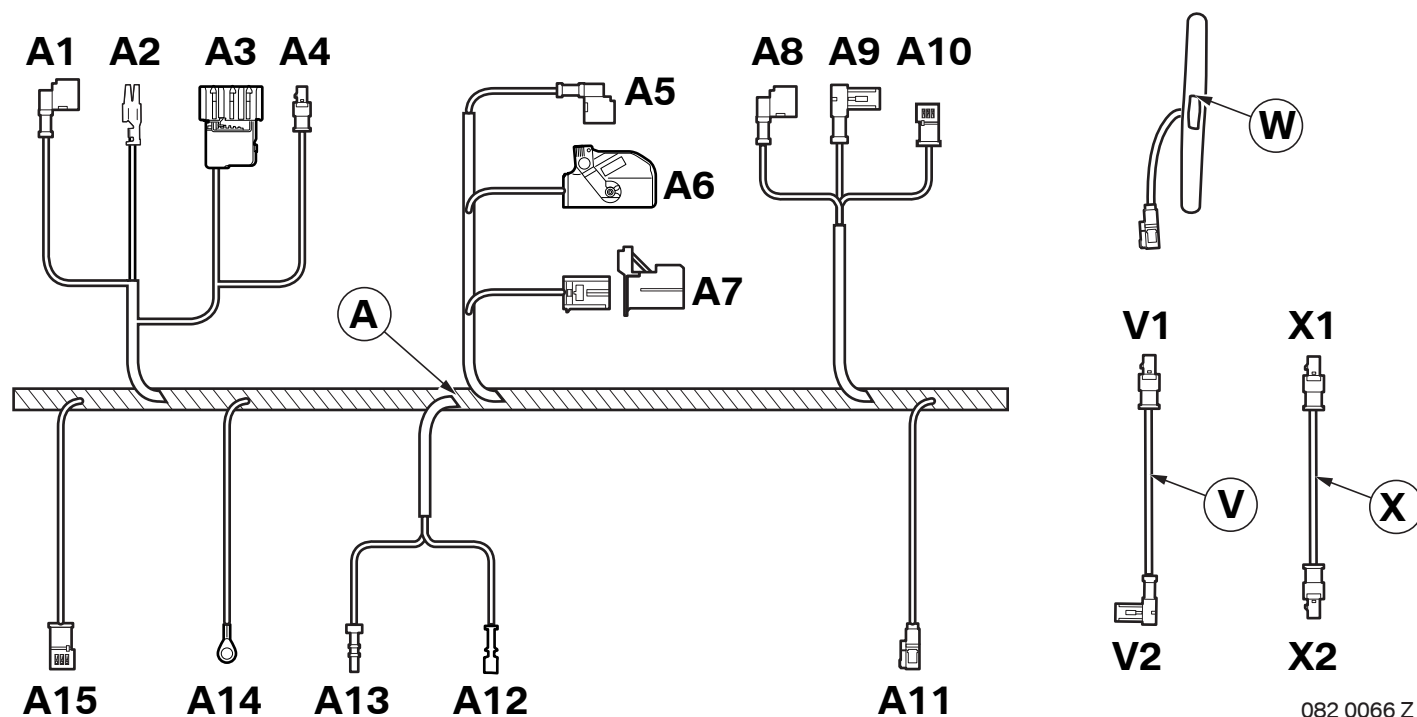
	ISTA No.
Conduct a brief test	---
Disconnect negative pole of battery	12 00 ...
The following components must be removed first of all	
Wheel arch trim in luggage compartment on left	51 47 151
Rear left roof pillar trim (not E82 without SA 606 or SA 609)	51 43 251
Luggage compartment floor trim	51 47 101
Backrest side section on the left	52 26 008
Rear seat	52 26 005
Door pillar trim, left	51 43 150
Door sill covers strips, left	51 47 ...
Pedal trim	51 45 185
Side A pillar trim, left footwell	51 43 070
Lower the A pillar trim on the left	51 43 148
Roof function centre/Front interior light	---
Driver's seat	52 13 000
Oddments box	51 16 200
Glovebox	51 16 366
Unfasten the fuse box	---
ASK or CCC (cars without fibre optic cable distributor station only)	65 83 010
Aerial base (E81, E87 cars without SA 606 or SA 609 only)	65 20 055

3. Connection diagram



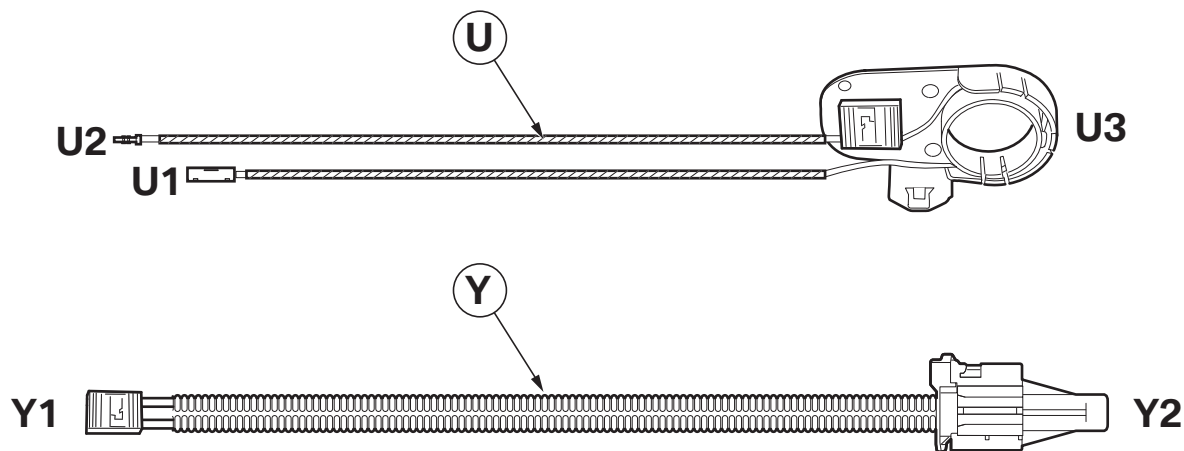
Item	Designation	Signal	Cable colour / Cross-section	Connection location in the car	Abbreviation / Slot
A	Cable kit	---	---	---	---
A1	SW Fakra socket casing	BT Ant	---	To Bluetooth aerial B	X14080
A2	Double flat spring contact	Terminal 30	RT/GE 0.75 mm ²	Cars built before 03/07 only To fuse holder A4010 behind the glovebox Cars built after 03/07 only To fuse holder A4010 behind the glovebox	X11003 PIN 6 X11002 PIN 3
A3	SW 18-pin plug casing	---	---	To eject box S	X4545
A4	SW Fakra plug casing	Tel Ant	---	All E81, E87 cars To eject box S E82 cars with SA 606 or SA 609 only To eject box S E82 cars without SA 606 or SA 609 only Tie back, not required	X13322 X13322 ---
A5	GN Fakra socket casing	BT Ant	---	To ULF control unit D	X14081
A6	WS 54-pin socket casing	---	---	Cars without ULF control unit already fitted only To ULF control unit D Cars with ULF control unit already fitted only Connect disconnected cables to ULF control unit	X14133 X17397
A7	SW 2-pin fibre optic cable casing	MOST	---	Cars without ULF control unit already fitted only To ULF control unit D Cars with ULF control unit already fitted only Tie back, not required	X14134 ---
A8	SW Fakra socket casing	Tel Ant	---	To branch A9	X13323
A9	SW Fakra plug casing	Tel Ant	---	To branch A8	X13337
A10	SW 3-pin socket casing	---	---	For optional aerial booster	X1765

4. Connection diagram



Item	Designation	Signal	Cable colour / Cross-section	Connection location in the car	Abbreviation / Slot
A11	VI Fakra socket casing	Tel Ant	---	All E81, E87 cars To roof aerial or aerial base F E82 cars with SA 606 or SA 609 only On branch V1 E82 cars without SA 606 or SA 609 only Tie back, not required	X13363 --- ---
A12	Fibre optic cable socket contact	MOST	GN	Cars without ULF control unit already fitted only To fibre optic cable distributor station behind the left backrest part Only for cars with ULF control unit already installed Tie back, not required	X14255
A13	Fibre optic cable plug contact	MOST	GN	Cars without ULF control unit already fitted only To fibre optic cable distributor station behind the left backrest part Only for cars with ULF control unit already installed Tie back, not required	X14255
A14	Eyelet M6	Termina I 31	BR 0.75 mm ²	Earth post behind the left backrest side part	X13016
A15	SW 3-pin socket casing	Mic	---	On hands-free microphone C	X3564
V	Aerial adapter	---	---	E82 cars with SA 606 or SA 609 only	---
V1	GN Fakra plug casing	Tel Ant	---	To branch A11	---
V2	GN Fakra socket casing	Tel Ant	---	To roof aerial	X13363
W	Adhesive screen aerial	---	---	E82 cars without SA 606 or SA 609 only	---
X	Adapter	---	---	E82 cars without SA 606 or SA 609 only	---
X1	SW Fakra plug casing	Tel Ant	---	To adhesive screen aerial W	---
X2	SW Fakra plug casing	Tel Ant	---	To eject box S	X13322

5. Fibre optic cable connection diagram

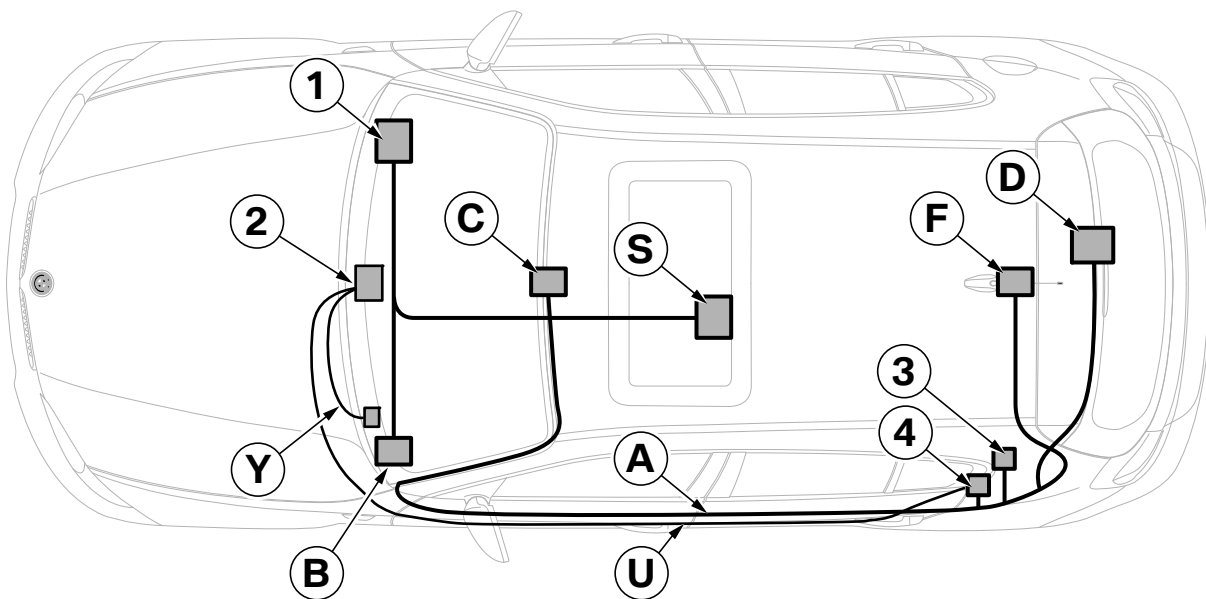


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Item	Designation	Signal	Cable colour / Cross-section	Connection location in the car	Abbreviation / Slot
U	Retrofit fibre optic cable	---	---	Cars without fibre optic cable distributor station only	---
U1	Fibre optic cable connector	---	GN	On disconnected fibre optic cable of radio plug X13812	X13815 PIN 1
U2	Fibre optic cable plug contact	---	OR	On radio plug X13812	X13815 PIN 1
U3	Fibre optic cable station	---	---	To branch A12 and A13	X14255
Y	Most diagnostic connection retrofit	---	---	Only cars without Flash adapter built after 09/08)	---
Y1	SW 2-pin fibre-optic cable plug	---	---	On radio receiver	X13812
Y2	SW 2-pin Flash connection	---	---	Clip into Flash adapter cover Z	---

 On cars with a ULF unit already installed, the fibre optic cables are already connected in the car. ◀

6. Installation and cabling diagram (E81, E87 only)



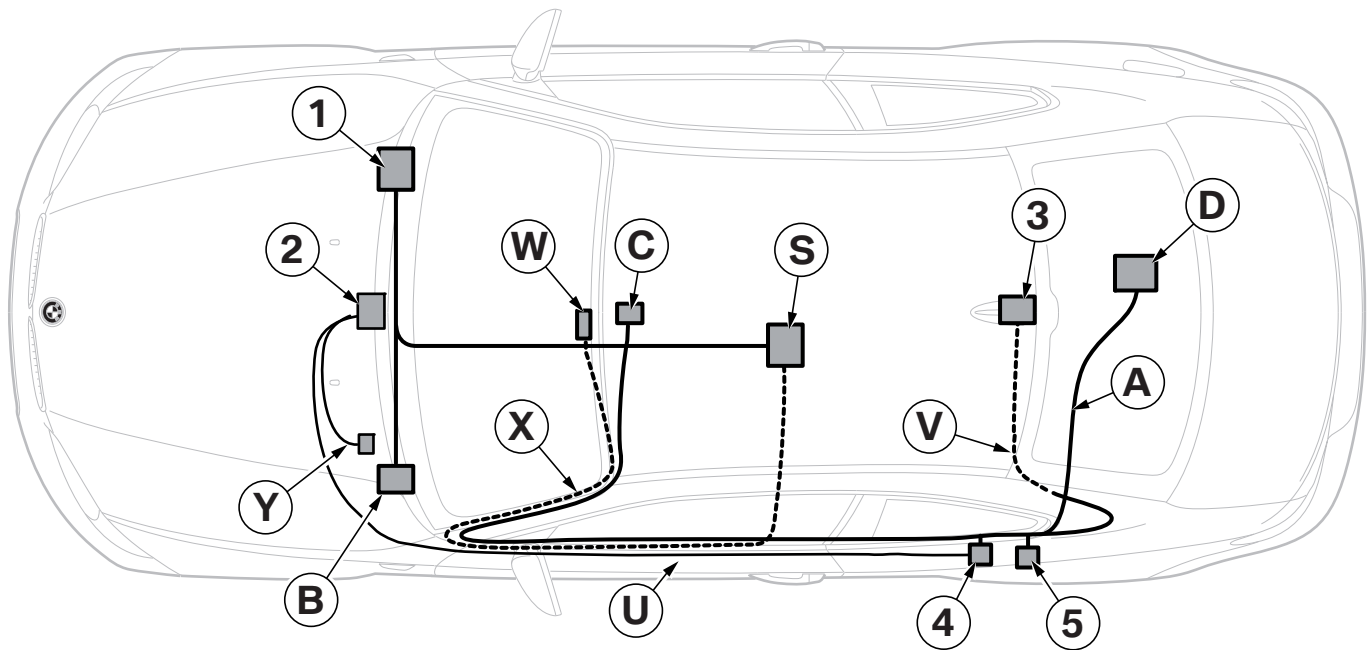
082 0105 Z

Legend

- A** Cable kit
- B** Bluetooth aerial
- C** Hands-free microphone
- D** ULF control unit
- F** Aerial foot
- S** Eject box
- U** Retrofit fibre optic cable
- Y** Most diagnostic connection (cars without Flash adapter built after 09/08 only)

- 1** Fuse holder **A4010**
- 2** Radio plug **X13812** or **X13815** (cars without fibre optic cable distributor station only)
- 3** Earth post connection **X13016**
- 4** Fibre optic cable distributor station **X14255**

7. Installation and cabling diagram (E82 only)



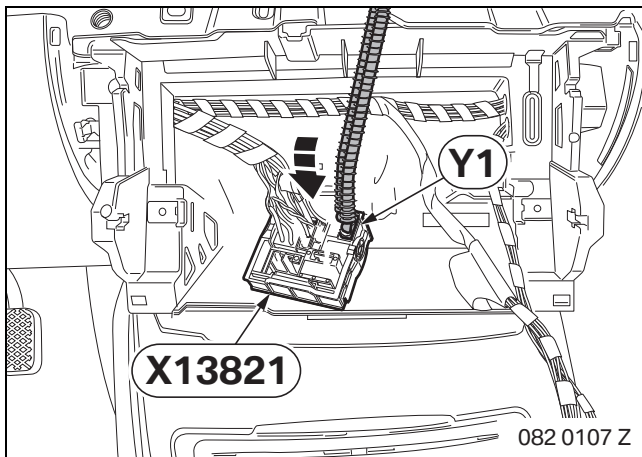
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Legend

- A** Cable kit
- B** Bluetooth aerial
- C** Hands-free microphone
- D** ULF control unit
- S** Eject box
- U** Retrofit fibre optic cable
- V** Aerial adapter (for cars with SA 606 or SA 609 only)
- W** Adhesive window aerial (for cars without SA 606 or SA 609 only)
- X** Adapter (cars without SA 606 or SA 609 only)
- Y** Most diagnostic connection (cars without Flash adapter built after 09/08 only)

- 1** Fuse holder **A4010**
- 2** Radio plug **X13812** or **X13815** (cars without fibre optic cable distributor station only)
- 3** Roof aerial (for cars with SA 606 or SA 609 only)
- 4** Fibre optic cable distributor station **X14255**
- 5** Earth post connection **X13016**

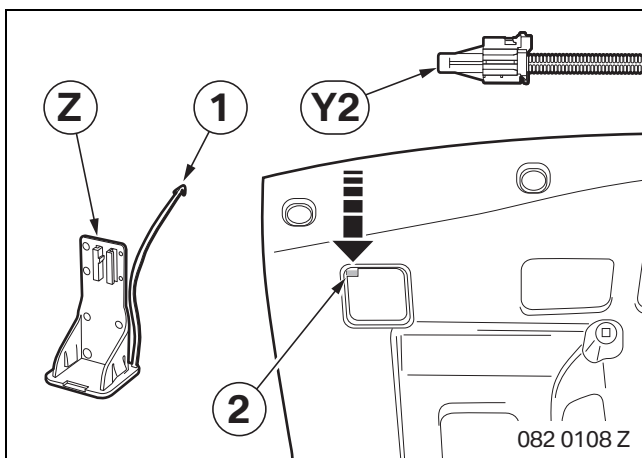
**8. To route and connect the Most diagnostic connection
(only cars without Flash adapter built after 09/08)**



▶ When routing fibre optic cables, make sure the bending radius is no less than 25 mm. ◀

Connect branch **Y1** to radio plug **X13812** (16-pin SW).

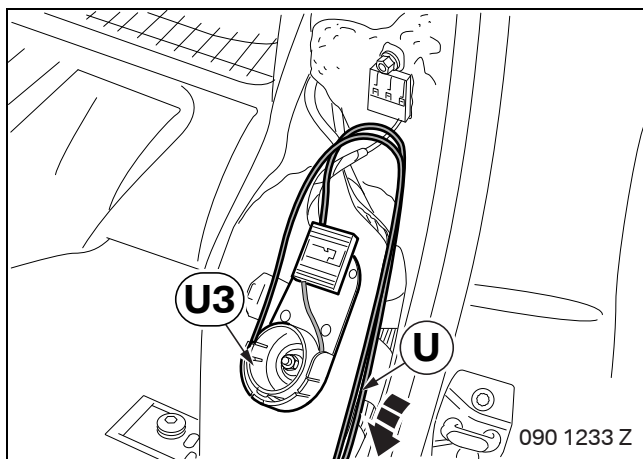
Route branch **Y2** into the footwell.



Secure the Flash adapter cover **Z** using securing strap (1) from the outside to the pedal trim (2).

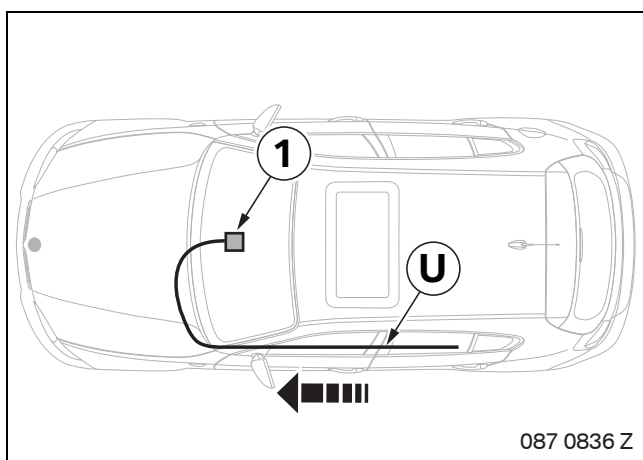
Clip branch **Y2** into the Flash adapter cover **Z**.

9. To retrofit the fibre optic cable station (cars without fibre optic cable distributor station only)

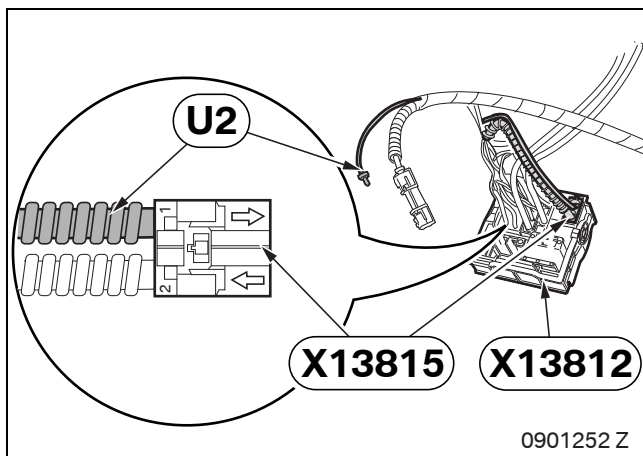


Connect the fibre optic cable station **U3** to the existing lug behind the left backrest part.

Route retrofit fibre optic cable **U** along the standard wiring harness to the front.



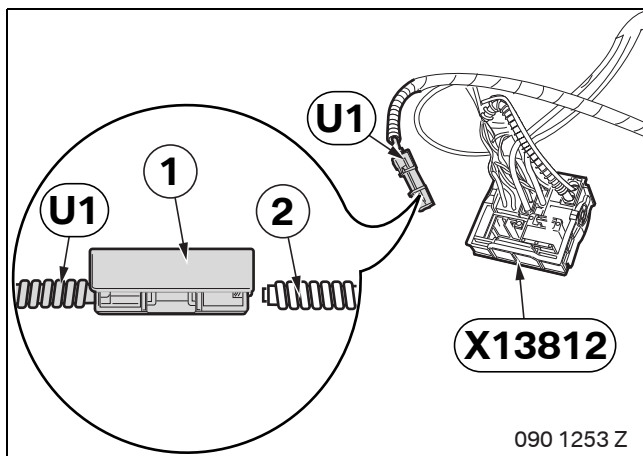
Route retrofit fibre optic cable **U** along the standard wiring harness to the installation site of the ASK or CCC (1).



Unclip fibre optic cable casing **X13815** (SW 2-pin) from radio plug **X13812** (SW 16-pin) of the ASK or CCC.

Disconnect incoming fibre optic cable from PIN 1 and connect branch **U2**, OR cable.

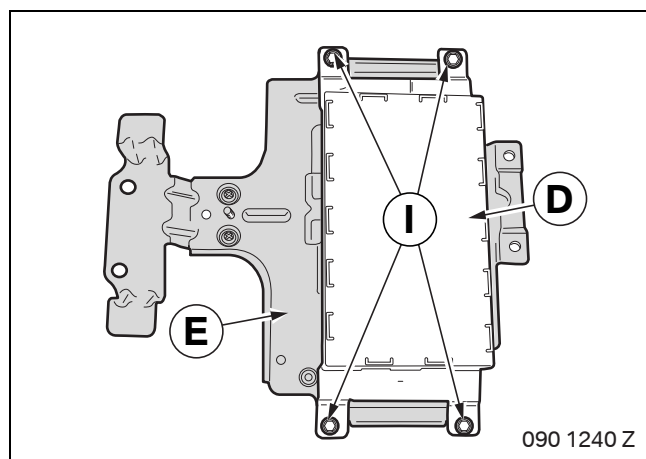
Connect fibre optic cable casing **X13815** into radio plug **X13812**.



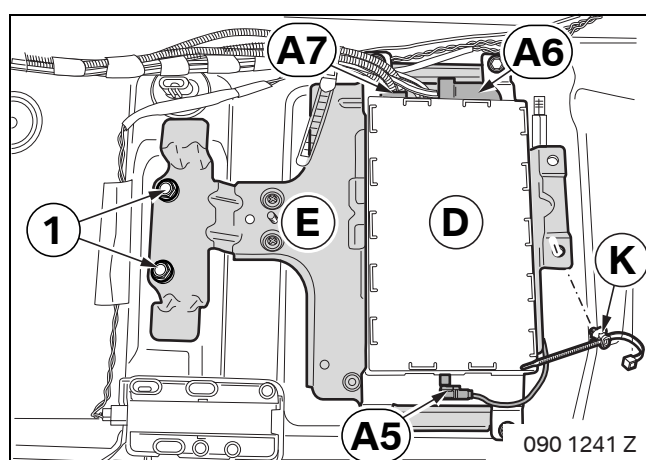
Unlock the fibre optic cable connector (1) on branch **U1**, GN cable, and connect the disconnected fibre optic cable (2).

Connect radio plug **X13812** (16-pin SW) to the ASK or CCC.

10. To install and connect the ULF control unit (cars without an existing ULF control unit only)



Use hexagonal nuts **I** to secure ULF control unit **D** to ULF holder **E**.



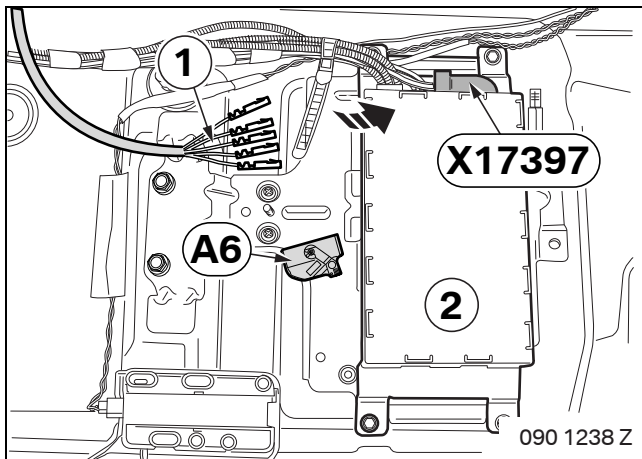
Connect the following branches to ULF control unit **D**:

- Branch **A6** (natural 54-pin socket casing)
- Branch **A7** (2-pin fibre optic cable casing, SW)
- Branch **A5** (Fakra socket casing, GN)

Connect holder **E** into the lugs in the car and screw on with the existing nuts (1).

Secure branch **A5** with cable holder **K**.

11. To connect the ULF control unit (cars with ULF control unit already fitted only)



Disconnect socket casing **X17397** (54-pin BL) from the ULF control unit (2).

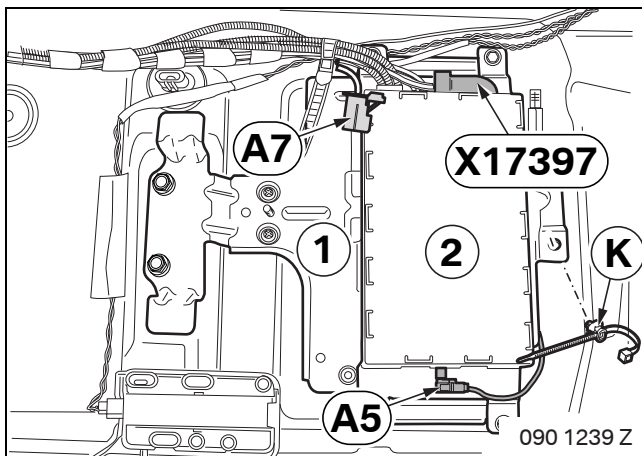
Disconnect all cables (1) from branch **A6** (natural-coloured 54-pin).

Insulate and tie back the following cables (1):

- RT/GE cable
- BR cable

Connect the following cables (1) into socket casing **X17397**:

- GE cable in PIN 1
- WS/BL cable in PIN 11
- SW cable in PIN 19
- Screen cable in PIN 21
- WS/SW cable in PIN 32
- GN cable in PIN 34

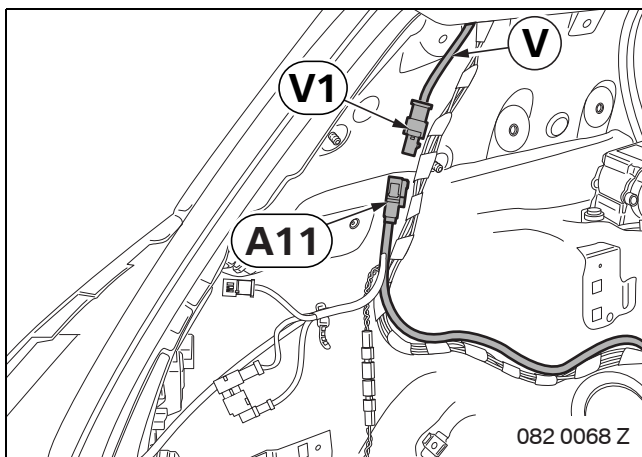
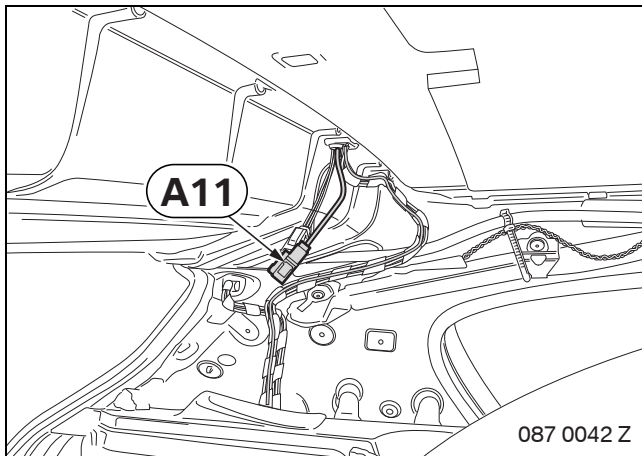
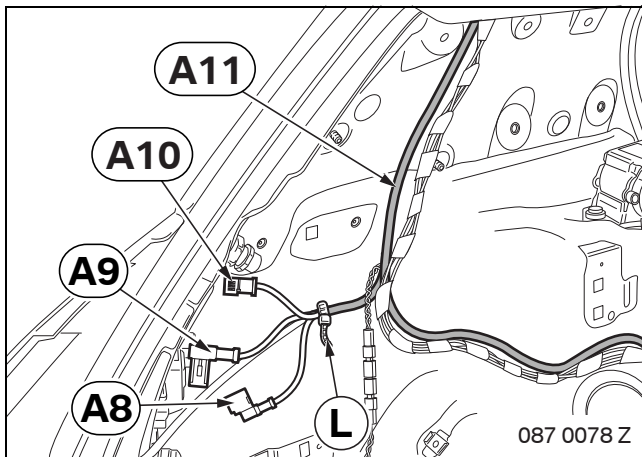
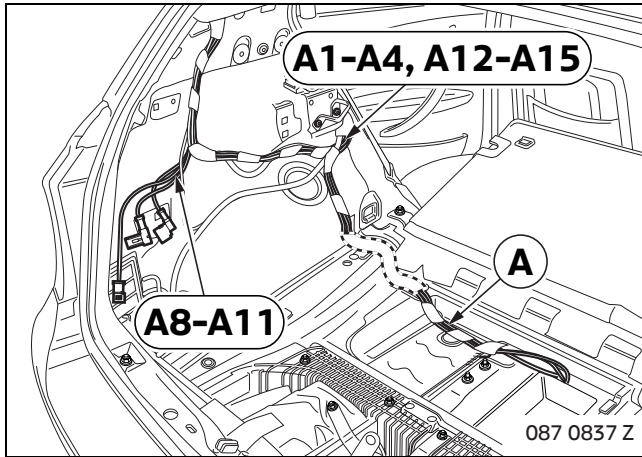


Connect socket casing **X17397** (54-pin BL) and branch **A5** (Fakra socket casing GN) to the ULF control unit (2).

Tie back branch **A7** (SW 2-pin fibre optic cable casing).

Secure the aerial cable onto the holder (1) with cable holder **K**.

12. To install and connect the cable kit



Route cable kit **A** from the installation site of ULF control unit **D** as follows:

- Branches **A8-A11** to the luggage compartment wheel arch trim on the left
- Branches **A1-A4** and **A12-A15** to the left-hand side of the car

Connect branches **A8** and **A9** together.

Tie back branches **A8-A10** to the left boot wheel arch trim using a cable tie **L**.

E81 and E87 only

Route branch **A11** (VI Fakra socket casing) over the left C pillar to the headlining.

Route branch **A11** (Fakra socket casing, VI) along the cable harness to the roof aerial.

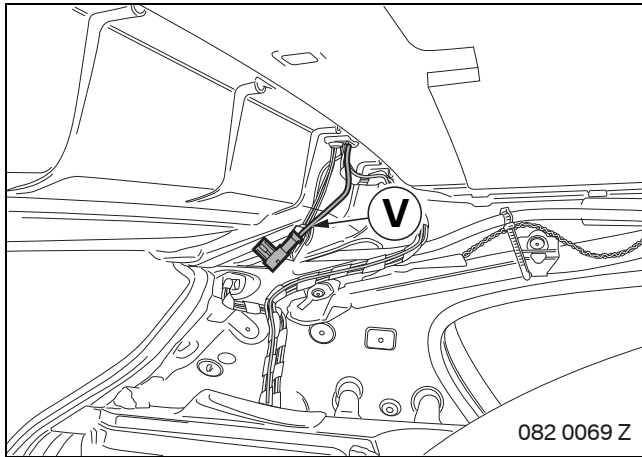
E82 cars without SA 606 or SA 609 only

Tie back branch **A11** (Fakra socket casing, VI), it is not required.

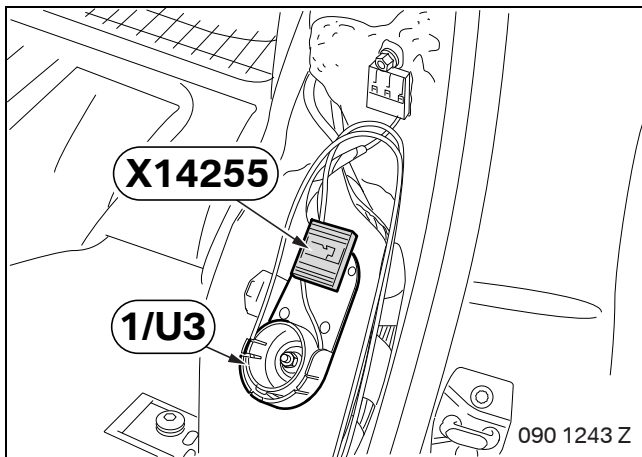
E82 cars with SA 606 or SA 609 only

Connect branch **A11** (Fakra socket casing VI) to branch **V1** (Fakra plug casing GN).

12. To install and connect the cable kit



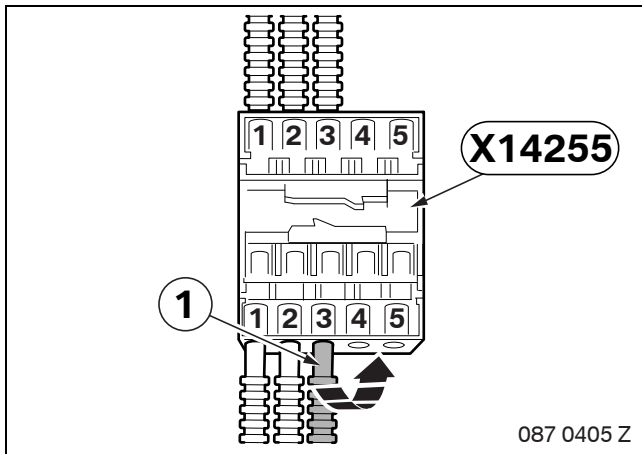
Route the antenna adapter **V** via C-pillar, along the standard wiring harness to the roof aerial.



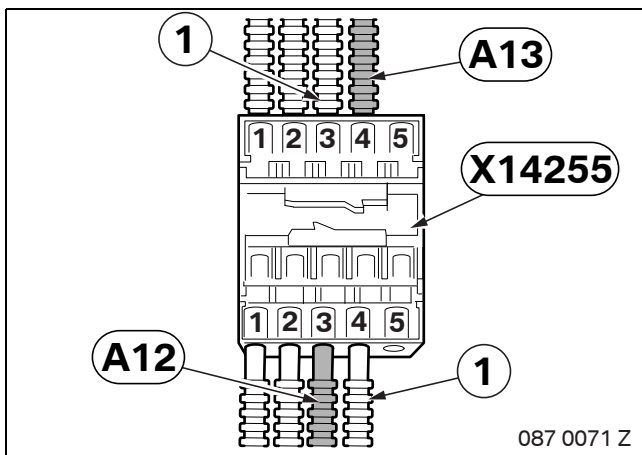
Cars without fibre optic cable distributor station only

▶ On cars with a ULF unit already installed, the fibre optic cables are already connected in the car. ◀

Release casing **X14255** of the fibre optic cable distributor station (1) or branch **U3** (fibre optic cable station) and remove the cover cap.



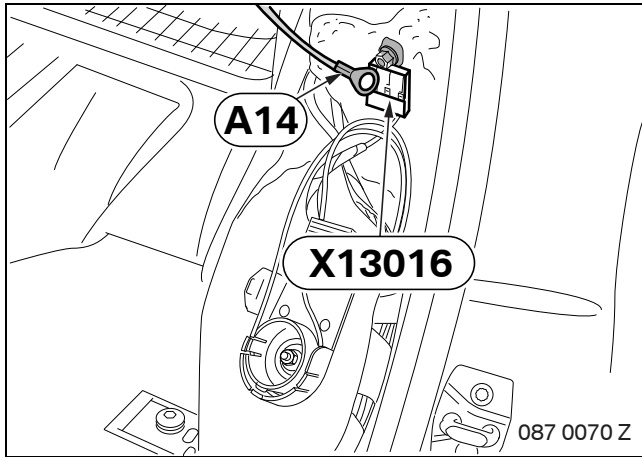
Disconnect any bottom fibre optic cable (1) from casing **X14255** and connect it to the nearest empty bottom slot.



Connect branches **A12** and **A13** opposite the open fibre optic cable (1) in casing **X14255**.

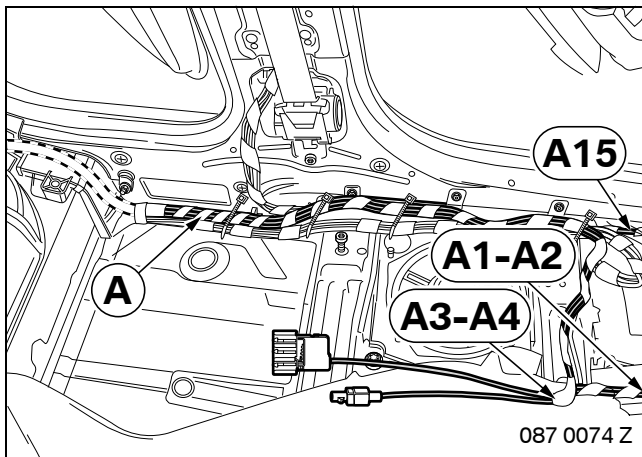
Push on the cover cap and attach casing **X14255** to the fibre optic cable station.

12. To install and connect the cable kit



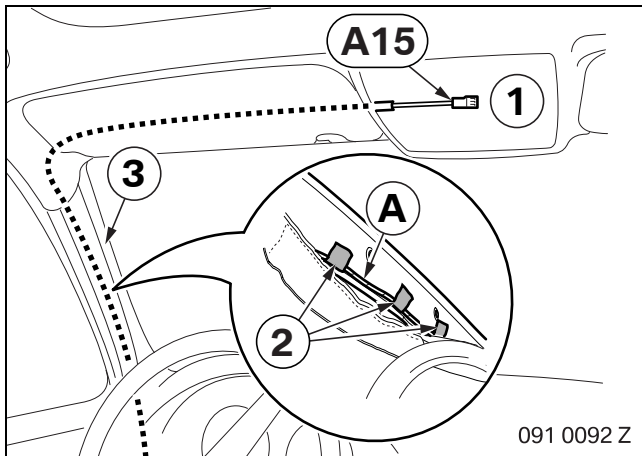
All cars

Route branch **A14**, BR cable, to earth post **X13016** and secure it.



Route wiring harness **A** along the standard wiring harness as follows:

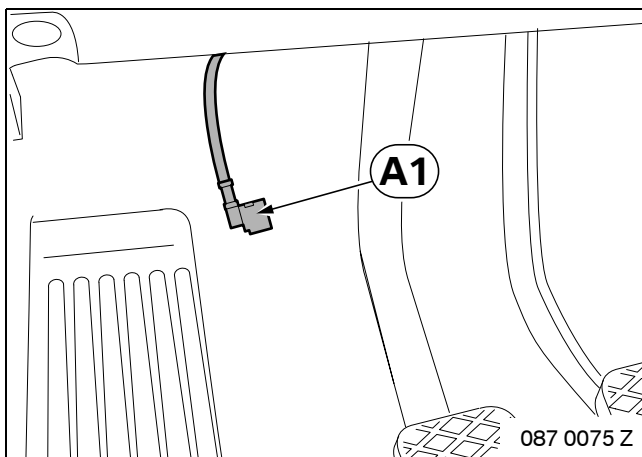
- Branch **A15** to the left A pillar
- Branches **A1-A2** to the centre armrest and then to the instrument panel
- Branches **A3-A4** to the centre armrest



Route branch **A15** (3-pin socket casing SW) to the left A pillar over the lowered headlining to the opening of the roof trim (1).

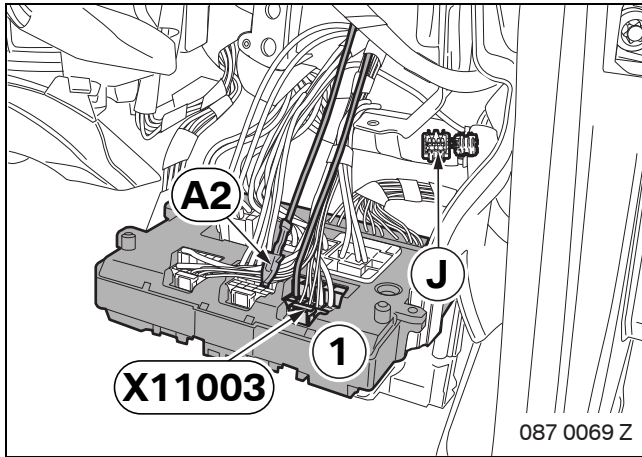
Ensure that wiring harness **A** is routed and secured behind the head airbag. ◀

Secure wiring harness **A** to the left A pillar (3) using textile adhesive tape (2).



Route branch **A1** (Fakra socket casing SW) to the pedal trim.

12. To install and connect the cable kit

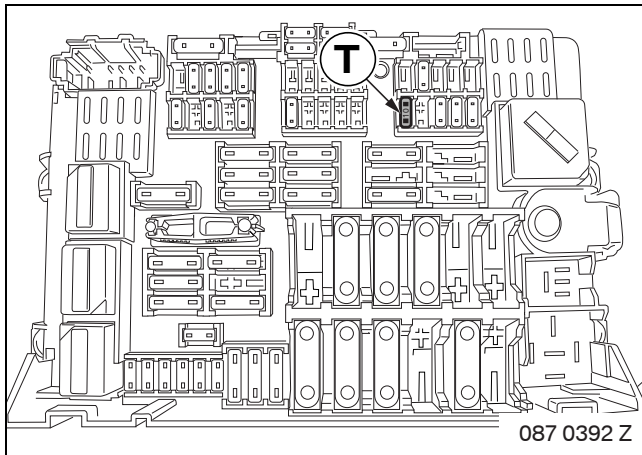


Cars built before 03/07 only

Route branch **A2**, RT/GE cable, to the fuse holder (**1**).

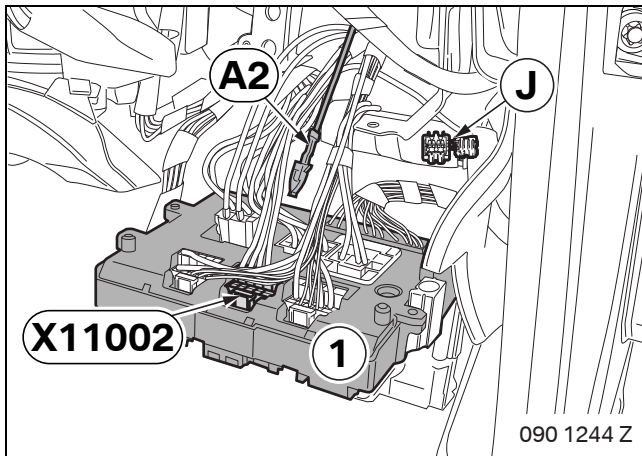
▶ If the PIN chamber is already occupied, connect branch **A2** to the connected cable using a miniature connector **J**. ◀

Connect branch **A2** to PIN 6 of plug **X11003** (15-pin BL).



Insert fusible link **T** into slot F26.

▶ If slot F26 is already occupied, replace the fusible link. ◀

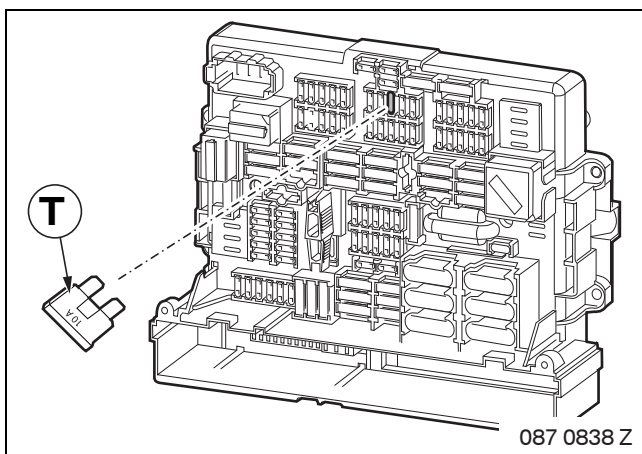


Cars built after 03/07 only

Route branch **A2**, RT/GE cable, to the fuse holder (**1**).

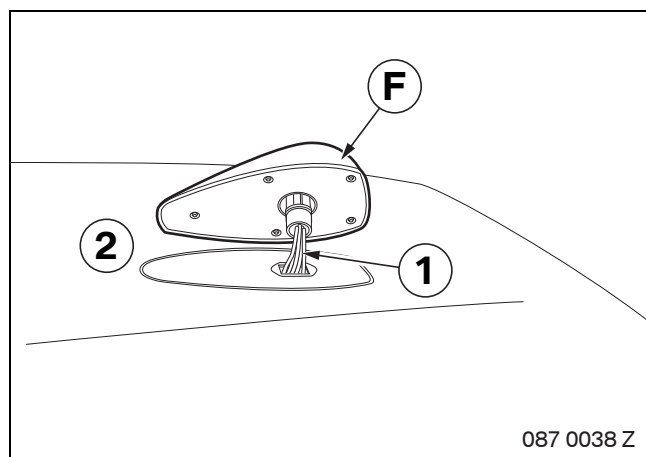
▶ If the PIN chamber is already occupied, connect branch **A2** to the connected cable using a miniature connector **J**. ◀

Connect branch **A2** to PIN 3 of plug **X11002** (15-pin GN).



Insert fusible link **T** in slot F26 in cars from 03/07 to 09/07 and in slot F13 in cars built after 09/07.

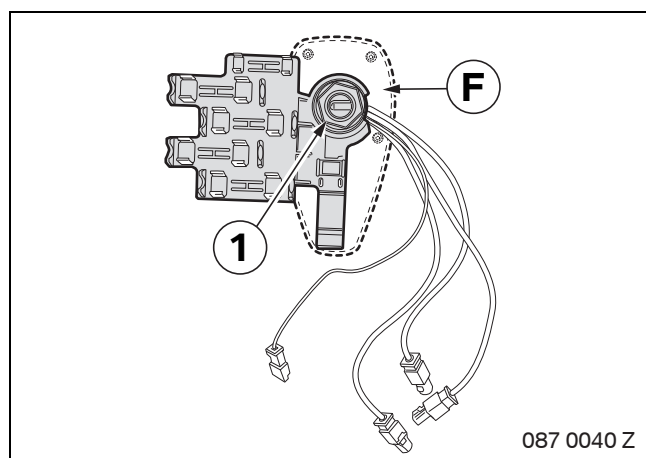
13. Installing and connecting the roof aerial



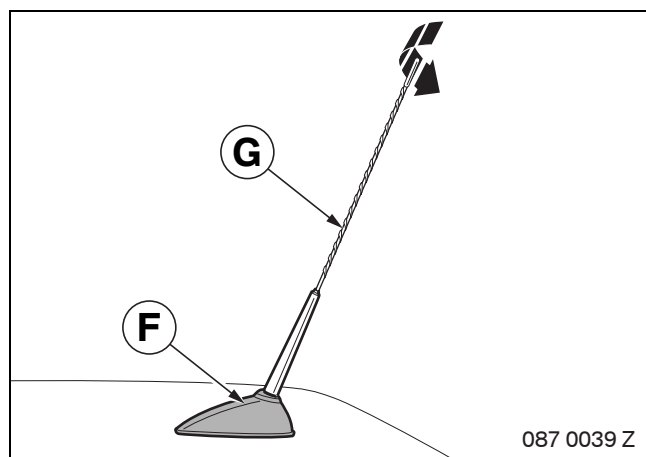
E81, E87 cars without SA 606 or SA 609 only

Thread the cable (1) from the aerial base **F** to the opening in the roof (2) and fit the aerial base **F**.

Secure the aerial foot **F** from the inside with a nut/holder (1).



Screw aerial rod **G** to aerial foot **F**.

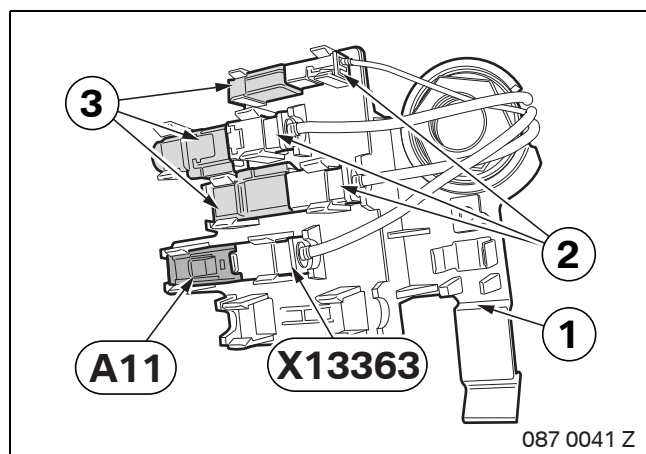


Connect the cables in the car (3) to the cables of the same colour on the aerial foot (2).

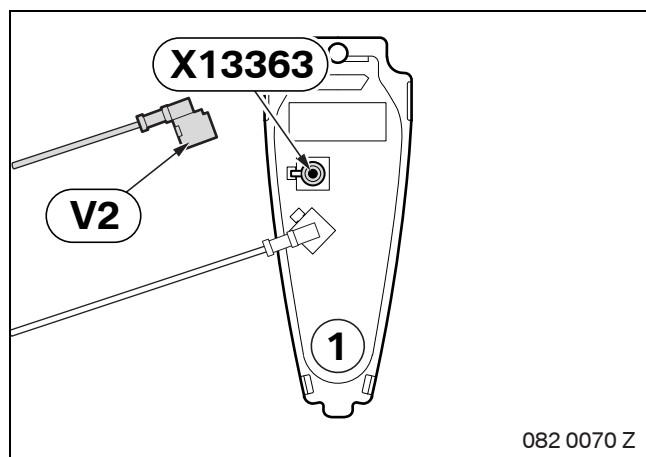
All E81, E87 cars

Connect branch **A11** (Fakra socket casing VI) to connection **X13363**.

Clip the plug connectors into the holder (1).



13. Installing and connecting the roof aerial

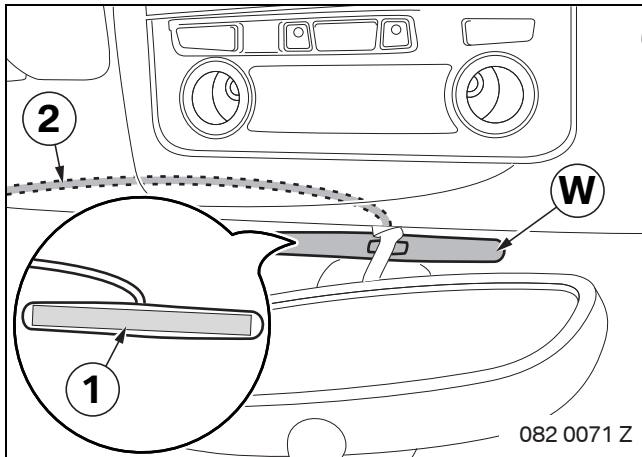


E82 cars with SA 606 or SA 609 only

Connect branch **V2** (Fakra socket casing GN) to connector **X13363** on the roof aerial (1).

Tie back any excess cable lengths.

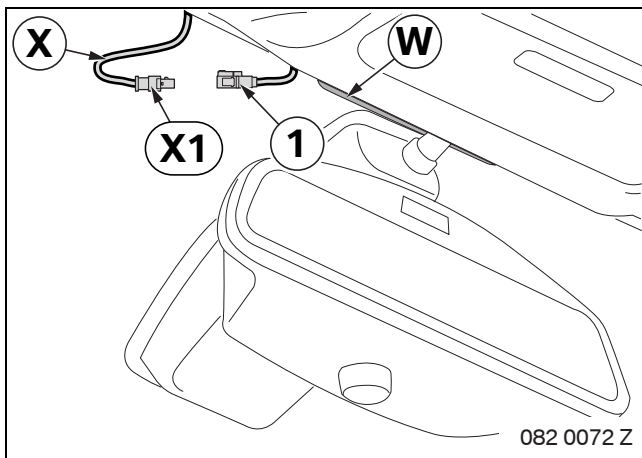
14. Installing and connecting the adhesive window aerial (E82 cars without SA 606 or SA 609 only)



▶ Clean the windscreen in the area where the aerial is to be affixed. ◀

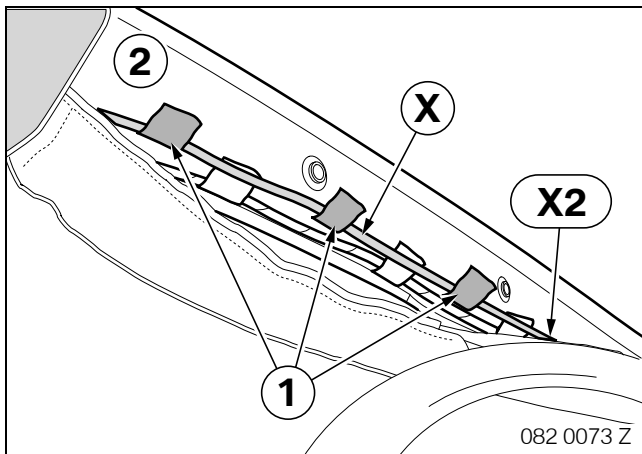
Pull the adhesive strips (1) off adhesive screen aerial **W**, position adhesive screen aerial **W** in the centre of the windscreen and press it into place.

Route the aerial cable (2) towards the left A pillar.



Connect Fakra socket casing (1) on the adhesive window aerial **W** to branch **T1**.

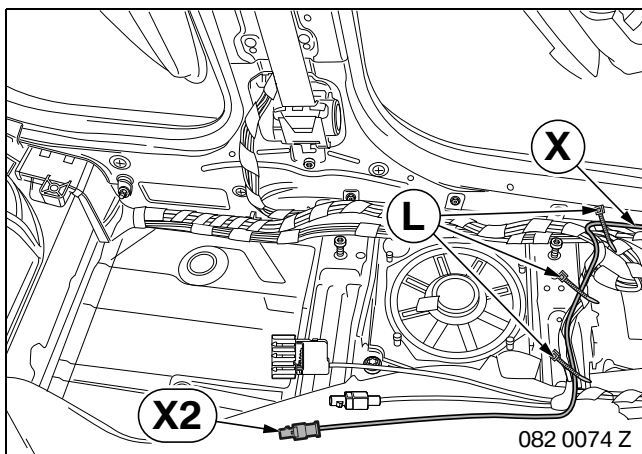
Route adapter **X** to the left A pillar.



▶ Ensure that adapter **X** is routed and secured behind the head airbag. ◀

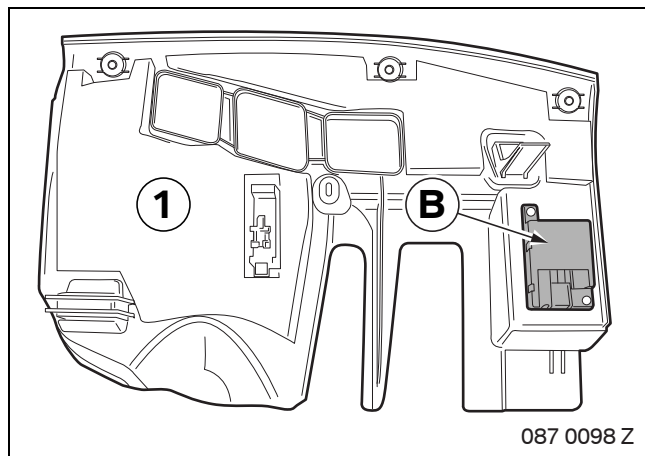
Route branch **X2** left via the A pillar along the standard wiring harness to the left footwell.

Secure adapter **X** to the left A pillar (2) using textile adhesive tape (1).



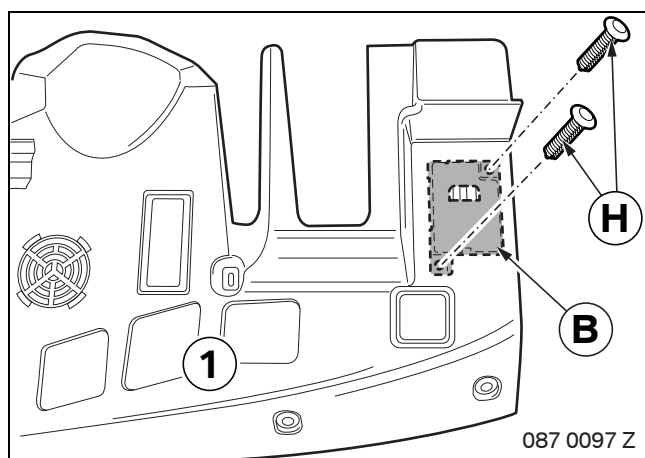
Route branch **X2** to the centre armrest and secure adapter **X** with cable ties **L**.

15. Installing and connecting the Bluetooth aerial and hands-free microphone

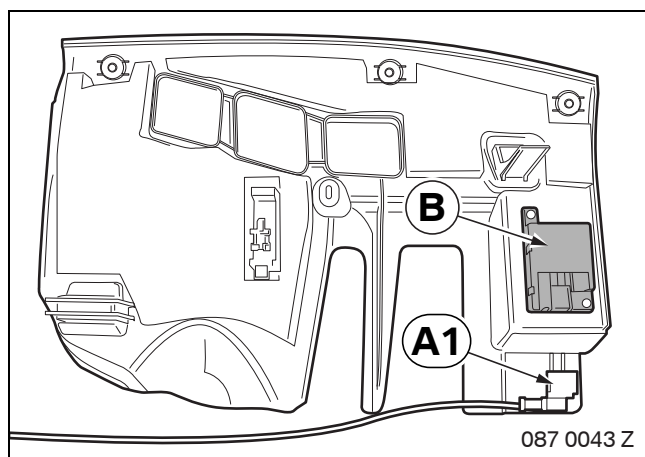


Place the Bluetooth aerial **B** on the pedal trim (1) and mark the hole pattern.

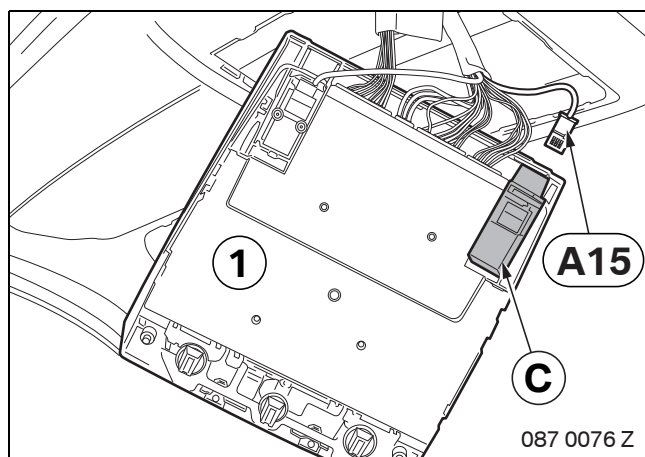
Drill holes through the pedal trim (1) using a 7.0 mm drill bit.



Secure Bluetooth aerial **B** to the pedal trim (1) using clips **H**.



Connect branch **A1** (Fakra socket casing SW) to Bluetooth aerial **B**.



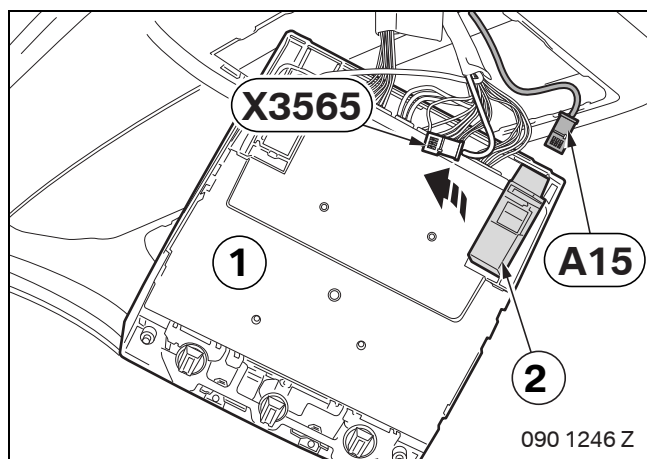
Cars with roof function centre and without SA 620 only

▶ The arrow on hands-free microphone **C** must point to the front of the car after it has been installed. ◀

Clip hands-free microphone **C** into the roof function centre (1).

Connect branch **A15** (3-pin socket casing SW) to the hands-free microphone **C**.

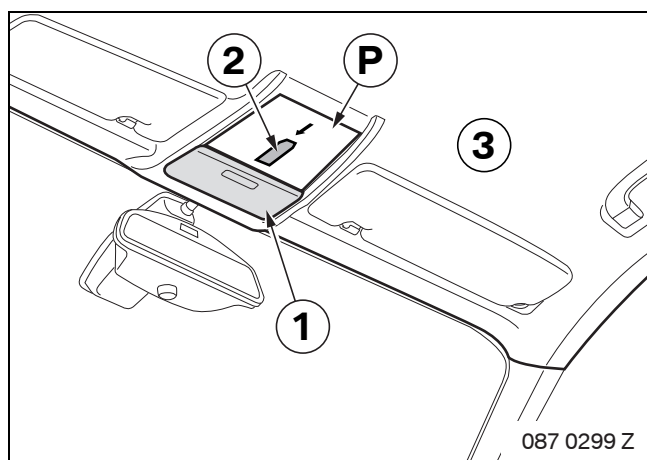
15. To install and connect the Bluetooth aerial and hands-free microphone



Cars with roof function centre (1) and SA 620 only

Detach socket casing **X3565** (SW 3-pin) from microphone (2) and tie back.

Connect branch **A15** (SW 3-pin socket casing) to the microphone (2).

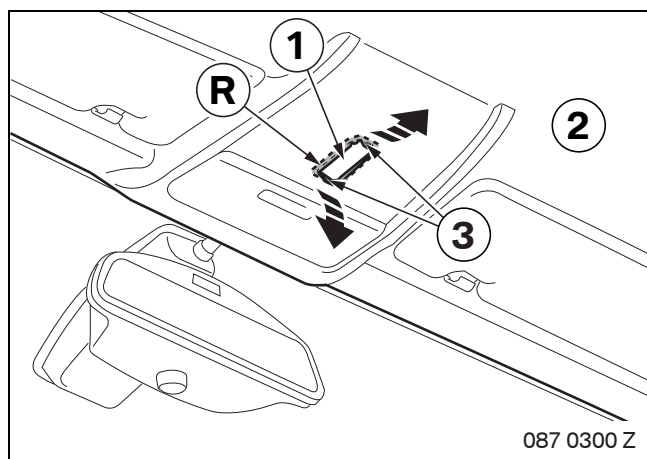


Cars without roof function centre only

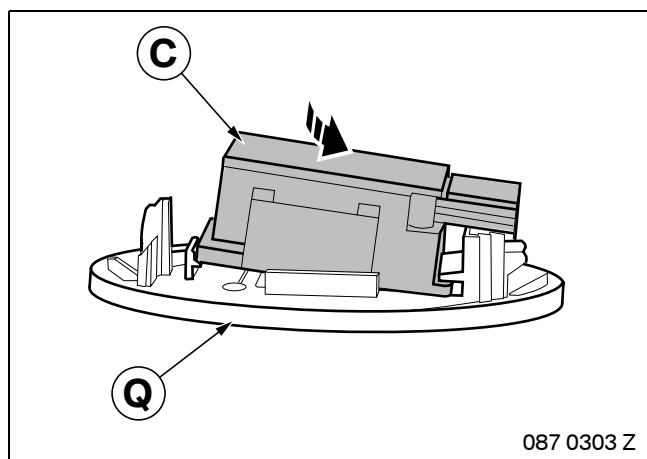
▶ Use only template **P**. ◀

Cut out the marked area on template **P** and place it on the interior light (1).

Mark the contours of the cut-out (2) for the hands-free microphone and cut out the headlining (3).

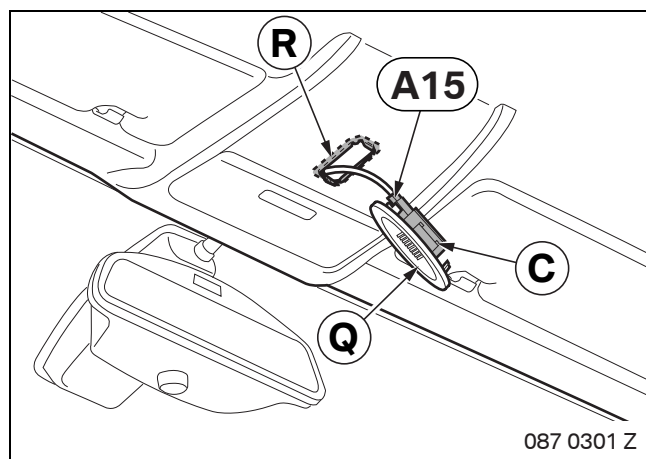


Insert the installation frame **R** from above into the opening (1) in the headlining (2) and bend the retaining lugs (3).



Clip hands-free microphone **C** into hands-free microphone trim **Q**.

15. To install and connect the Bluetooth aerial and hands-free microphone

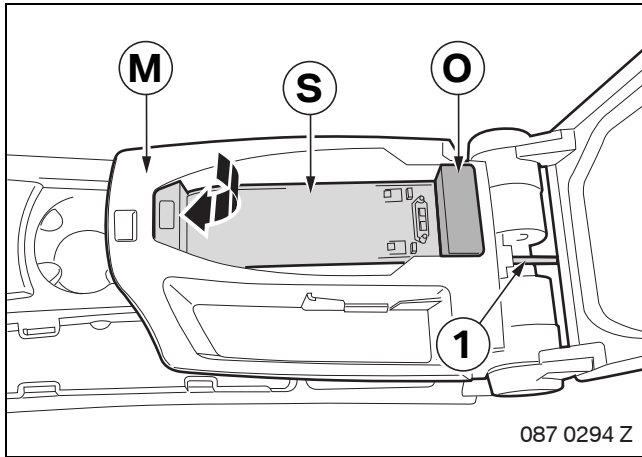


▶ The arrow on hands-free microphone **C** must point to the front of the car after it has been installed. ◀

Route branch **A15** (3-pin socket casing SW) through the installation frame **R** and connect it to the hands-free microphone **C**.

Clip the hands-free microphone trim **Q** into installation frame **R**.

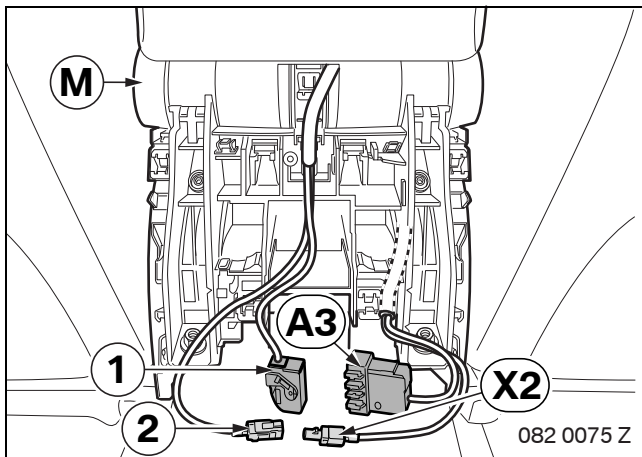
16. Installing and connecting the centre armrest and eject box



Replace the centre armrest with the telephone centre armrest **M** as described in ISTA RA 51 16 195.

Route the cable (1) from the eject box **S** through the rear of the telephone centre armrest **M** and clip the eject box **S** into the telephone centre armrest **M**.

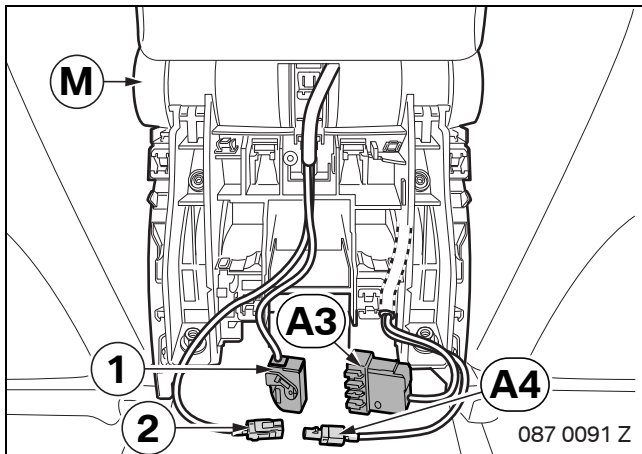
Insert the eject box split cover **O** behind the eject box **S**.



E82 cars without SA 606 or SA 609 only

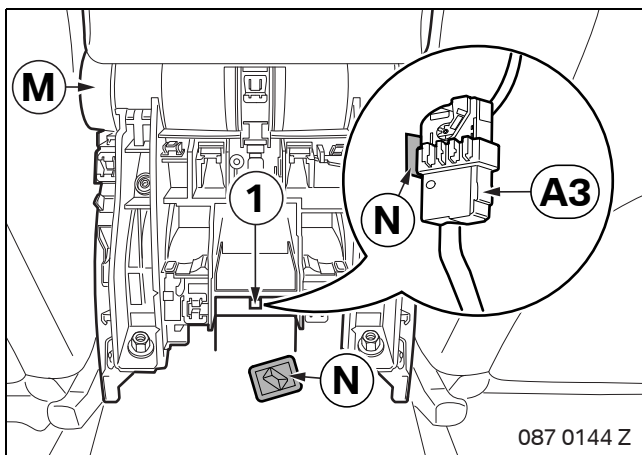
Tie back branch **A4** (Fakra plug casing SW, not shown).

Connect branch **A3** (SW 18-pin plug casing) to the plug (1) for the eject box and branch **X2** (SW Fakra plug casing) to the Fakra plug (2) for the eject box behind the telephone centre armrest **M**.



All cars except E82 without SA 606 or SA 609

Connect branch **A3** (SW 18-pin plug casing) to the plug (1) for the eject box and branch **A4** (SW Fakra plug casing) to the Fakra plug (2) for the eject box behind the telephone centre armrest **M**.



All cars

Insert the plug connector holder **N** into the opening (1) in the telephone centre armrest **M**.

Secure branch **A3** into the plug connector holder **N**.

17. Concluding work and coding

This retrofit system requires coding.

- Connect the battery
- Encode the retrofit with SSS (software service station) via the **CIP** path
- Conduct a brief test
- Pair the mobile phone with the car (see section 17 or 18)
- Re-assemble the car

18. Pairing the mobile phone with the car (cars with SA 606 or SA 609 only)

 Registration, also known as “pairing” can only be carried out if the encoding has been successful. The Bluetooth code required for the pairing process can be any number with 1–16 digits. ◀

After the installation of the ULF retrofit and the insertion of the mobile phone holder (snap-in adapter), the mobile phone must be registered as follows:

- Switch on the mobile phone
- Switch on the ignition, the main menu will appear in the on-board monitor
- Press the controller and select the **INFORMATION** menu point
- Select the **COMMUNICATION INTERFACE** menu point using the controller
- Press the controller, **BLUETOOTH COMMUNICATION ACTIVE** will appear in the on-board monitor
- Push the controller forwards, turn it anti-clockwise and select the **TELEPHONE** menu point
- Press the controller, **BLUETOOTH CAN BE CONNECTED IN THIS MENU** will appear in the on-board monitor
- Select and activate the Bluetooth option on the mobile phone. (The steps required for this differ from phone to phone, see the manual supplied with the phone under searching for Bluetooth device, connecting BT device, pairing BT device)
- After a successful search the display on the phone will show **FOUND**, the car will register itself on the phone with a 5-digit number. Select the **SELECT** menu point
- Turn the controller and select the **ADD DEVICE** menu point
- Press the controller, **PASSKEY** will appear in the on-board monitor
- Enter a freely selectable 1–16-digit Bluetooth code using the controller
- Slide the controller downwards and select the **CONFIRM PASSKEY** menu point
- Press the controller
- Select **CONNECTION** or **REGISTRATION** on the mobile phone and confirm this
- **CONNECTED** will appear on the mobile phone

 You have a maximum of 10 seconds to enter the passkey or Bluetooth code. ◀

- Enter the same passkey and Bluetooth code in the mobile phone and confirm
- The message **HANDS-FREE ACCEPTED** will appear on the mobile
- Press the menu button next to the controller twice
- Switch off the ignition for at least 30 seconds
- Quit the mobile phone sub-menu again

 If the registration process was not completed successfully, repeat the entire process quickly. ◀

19. Registering the mobile phone in the car (cars with SA 663 only)

 Registration, also known as “pairing” can only be carried out if the encoding has been successful. The Bluetooth code required for the pairing process can be any number with 1–16 digits. ◀

After the installation of the ULF retrofit and the insertion of the mobile phone holder (snap-in adapter), the mobile phone must be registered as follows:

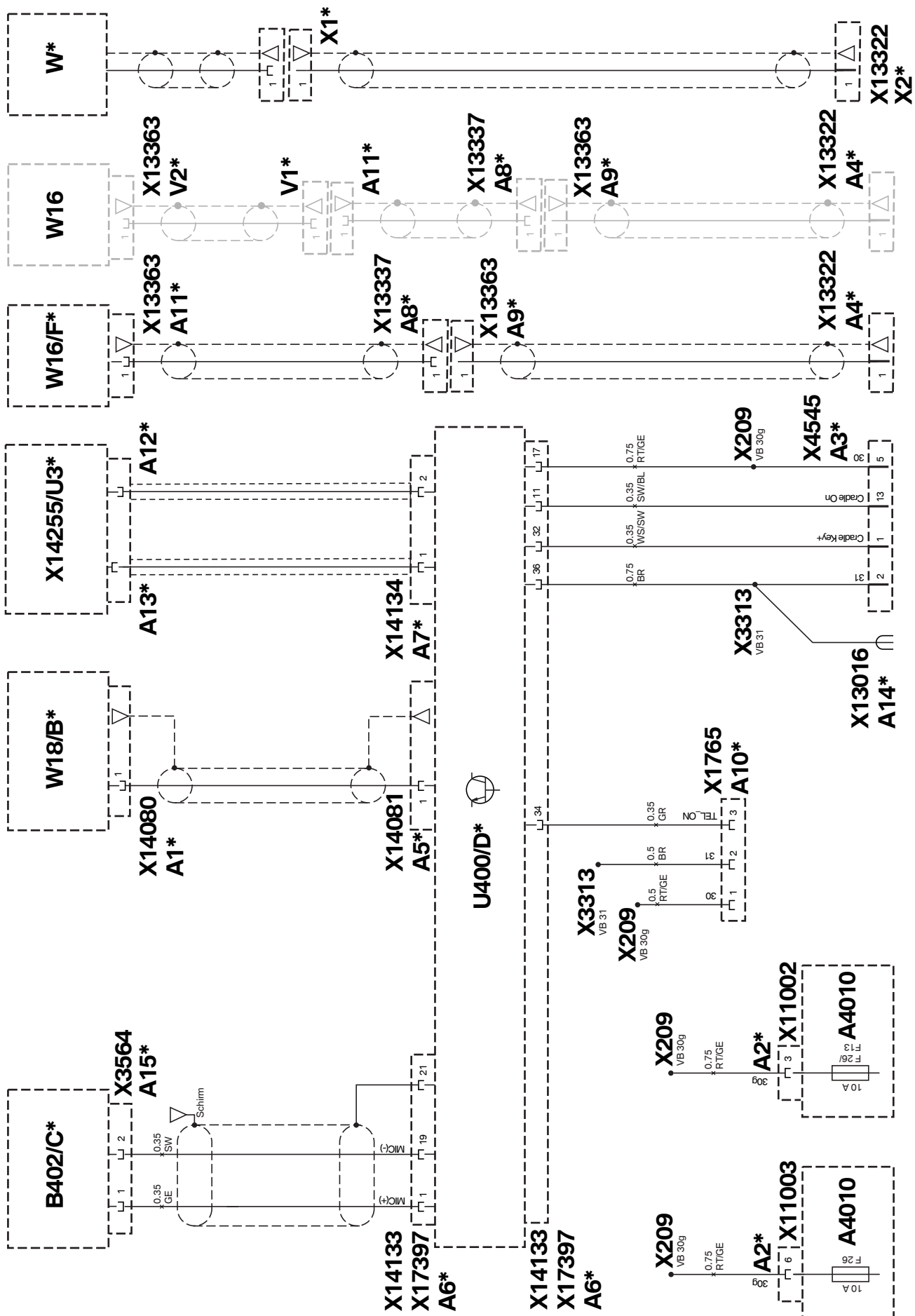
- Switch on the mobile phone
- Switch on the ignition
- Press the menu key on the radio
- The menu will appear on the radio display
- Select **TEL** by pressing the key beneath it on the radio
- The radio display shows **Searching for connected devices**
- Select **BT** by pressing the key beneath it on the radio
- The radio display shows **BT devices**
- Select **SEARCH** by pressing the key beneath it on the radio
- The radio display shows **BT devices connectable**
- Select and activate the Bluetooth option on the mobile phone. (The steps required for this differ from phone to phone, see the manual supplied with the phone under searching for Bluetooth device, connecting BT device, pairing BT device)
- After a successful search the display on the phone will show **FOUND**, the car will register itself on the phone with a 5-digit number. Select the **SELECT** menu point
- The radio display shows **Ext. device ready!**
- Select **ADD** by pressing the key beneath it on the radio
- Enter a freely selectable 1–16-figure Bluetooth code on the radio using the number pad beneath it
- Press the right-hand control knob on the radio to confirm the Bluetooth code
- Select **CONNECTION** or **REGISTRATION** on the mobile phone and confirm this
- **CONNECTED** will appear on the mobile phone

 You have a maximum of 10 seconds to enter the passkey or Bluetooth code. ◀

- Enter the same passkey and Bluetooth code in the mobile phone and confirm
- The message **HANDS-FREE ACCEPTED** will appear on the mobile
- The radio display shows **Pairing succeeded**
- Select **OK** by pressing the key beneath it on the radio
- To exit the menu, select **“Arrow”** by pressing the key beneath it on the radio
- Switch off the ignition for at least 30 seconds – the registration/pairing process is complete

 If the registration process was not completed successfully, repeat the entire process quickly. ◀

20. Circuit diagram



20. Circuit diagram

Legend

A4010 Front fuse holder

A1* Fakra socket casing SW **X14080**

A2* Double flat spring contact, terminal 30g pick-up **X11002** (cars built after 03/07) or **X11003** (cars built before 03/07)

A3* SW 18-pin socket casing **X4545**

A4* SW Fakra plug casing **X13322**

A5* GN Fakra socket casing **X14081**

A6* Natural 54-pin socket casing **X14133**
or BL 54-pin socket casing **X17397** (cars with SA 620 without SA 609 or with SA 6FL only)

A7* SW 2-pin fibre optic cable casing **X14134**

A8* SW Fakra socket casing **X13323**

A9* SW Fakra plug casing **X13337**

A10* SW 3-pin socket casing **X1765** (for optional aerial amplifier)

A11* VI Fakra socket casing **X13363**

A12* Fibre optic cable socket contact **X14255**

A13* Fibre optic cable plug contact **X14255**

A14* Ring eyelet M6, terminal 31 pick-up **X13016**

A15* SW 3-pin socket casing **X3564**

B* Bluetooth aerial **W18**

C* Hands-free microphone **B402**

D* ULF control unit **U400**

F* Aerial base, **W16**

V1* Fakra plug casing GN (E82 cars with SA 606 or SA 609 only)

V2* Fakra socket casing GN (for E82 cars with SA 606 or SA 609 only)

W* Adhesive window aerial (for E82 cars without SA 606 or SA 609 only)

X1* Fakra plug casing SW (E82 cars without SA 606 or SA 609 only)

X2* Fakra plug casing SW (E82 cars without SA 606 or SA 609 only)

U3* Fibre optic cable station (cars without fibre optic cable distributor station **X14255** only)

X209 Terminal 30g connector

X3313 Terminal 31 connector

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

20. Circuit diagram

Cable colours

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