

Parts and Accessories. Installation Instructions.



Electrochrome Interior Rear-View Mirror Retrofit

BMW 3 Series Saloon (E90)

BMW 3 Series Touring (E91)

BMW 3 Series Coupé (E92)

These installation instructions are only valid for cars with a roof function centre and without SA5AC (main beam assistant)

Retrofit kit No.:	51 95 0 403 320	Rear-view mirror EC/LED/compass/remote control
	51 95 0 403 321	Rear-view mirror EC/light-emitting diode/compass
	51 95 0 407 031	Rear-view mirror EC/LED/compass/remote control
	51 95 0 421 323	Rear-view mirror EC/LED/compass/remote control
	51 95 0 421 324	Rear-view mirror EC/light-emitting diode/compass
	51 95 0 421 325	Rear-view mirror EC/LED/compass/remote control

Installation time

The installation time is approx 1.0 hour, but may vary depending on the condition of the car and the equipment in it.

In general the car must be upgraded to the latest I stage status by flashing before starting the work. Depending on the production age of the car and the work already carried out on the car, the programming times will vary, which means that we cannot quote a specific time at this point.

The installation time does not include any time for programming/encoding, as this depends on the age 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.

To avoid unnecessary extra work and/or costs, if any installation or function problems occur, after a brief troubleshooting session (approx. 0.5 hours), contact the following:

- 1. Either your national subsidiary or your regional office, or**
- 2. The Support team via the Aftersales Assistance Portal (ASAP) using the optional technical parts support application.**

Specify the chassis number and the part number of the installed retrofit kit and give a precise description of the problem.

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 dangers.



Denotes instructions that draw your attention to special features.



Denotes the end of the instruction or other text.

Installation information

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

Ensure that the cables/lines are not kinked or damaged as you install them in the car. Costs incurred as a result of this 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.

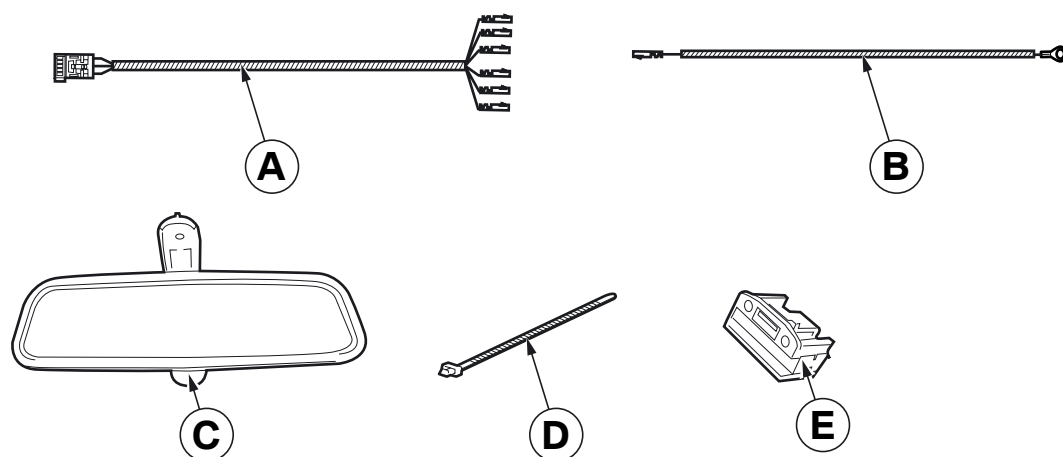
Special tools required

00 9 317, Trim wedge

Contents

Section	Page
1. Parts list	4
2. Preparatory work.....	5
3. Connection diagram.....	6
4. Installation and cabling diagram	7
5. To install and connect the interior rear-view mirror (except for US cars).....	8
6. To install and connect the interior rear-view mirror (US cars only)	11
7. Concluding work and coding	13
8. To adjust and calibrate the compass rear-view mirror.....	14
9. World maps with compass zones	15
10. Circuit diagram	19

1. Parts list



090 0390 Z

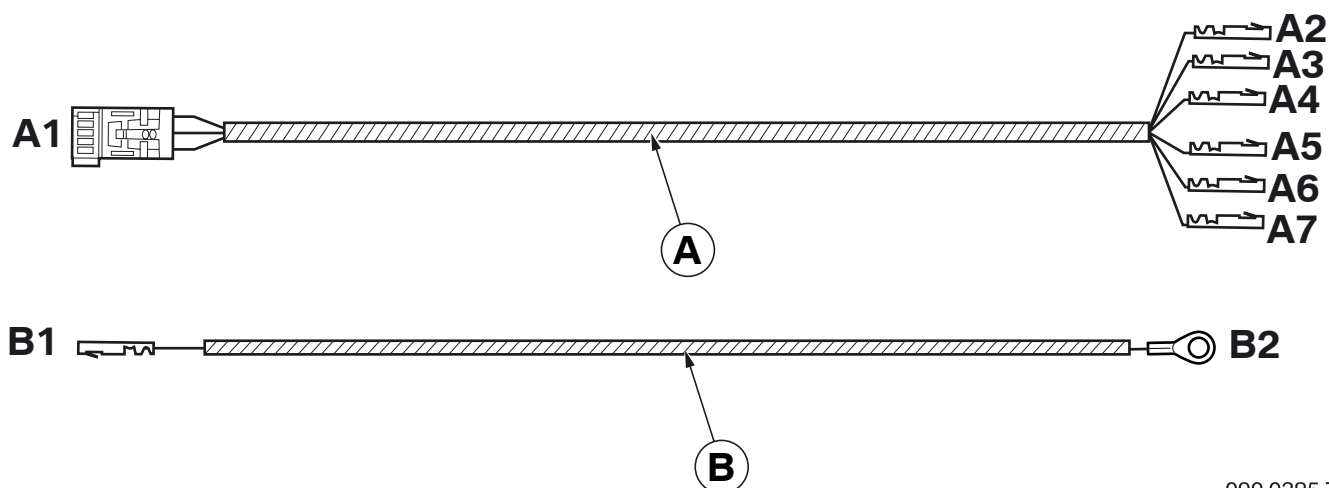
Legend

- A Retrofit cable
- B Earth cable
- C Interior rear-view mirror
- D Cable tie 200 x 3 mm (10x)
- E Black 20-pin socket casing

2. Preparatory work

	TIS No.
Conduct a brief test	---
Disconnect negative pole of battery	12 00 ...
The following components must be removed first of all	
Roof function centre	61 31 043
Interior rear-view mirror (no longer required)	51 16 060
Right glove compartment (not in cars with plug X14292 and US cars)	51 16 361
Trim at the bottom right of the instrument panel (not in cars with plug X14292 and US cars)	51 45 181
Trim at the front right of the roof pillar trim (not in cars with plug X14292 and US cars)	51 43 201
Release fuse holder (not in cars with plug X14292 and US cars)	---

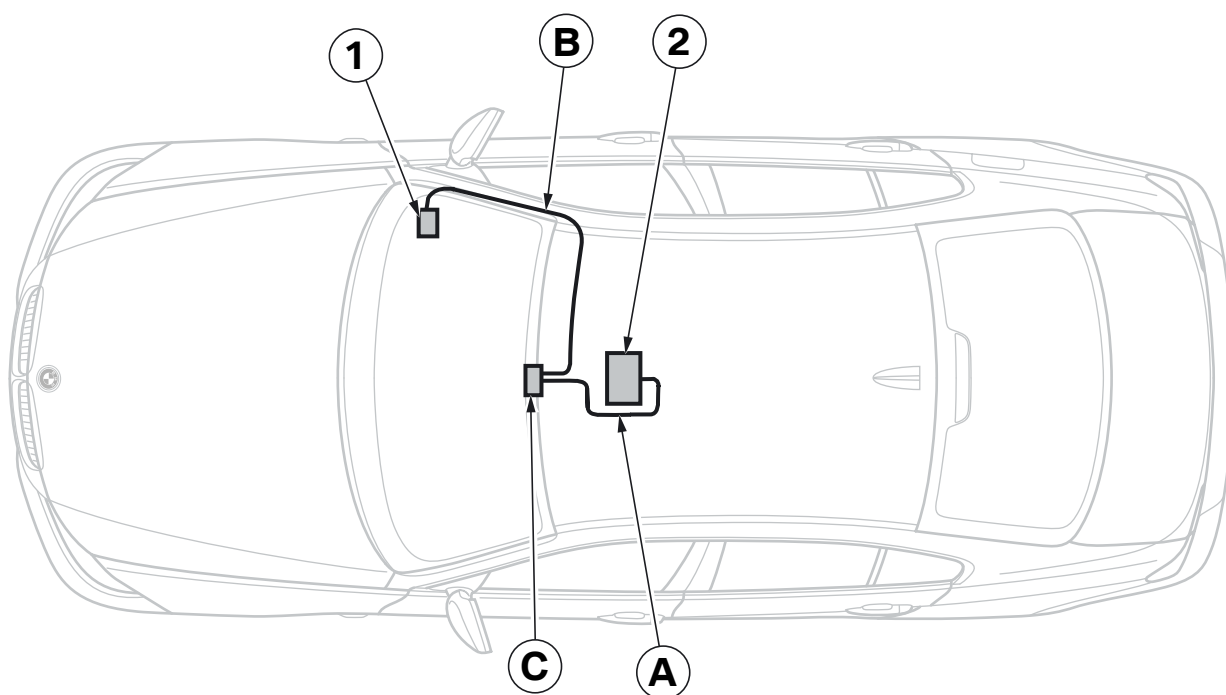
3. Connection diagram



090 0385 Z

Item	Designation	Signal	Cable colour / Cross-section	Connection location in the car	Abbreviation / Slot
A	Retrofit cable	---	---	---	---
A1	Black 10-pin socket casing	---	---	On rear-view mirror C	X14292
A2	Socket contact	S_RFL	GR/VI 0.35 mm ²	On roof function centre Black 20-pin plug	X14288 PIN 14
A3	Socket contact	Terminal 15	GN/WS 0.35 mm ²	On roof function centre Black 20-pin plug	X14288 PIN 20
A4	Socket contact	RTN_EC	SW/BR 0.35 mm ²	On roof function centre Black 20-pin plug	X14288 PIN 15
A5	Socket contact	I_EC	BR/WS 0.35 mm ²	On roof function centre Black 20-pin plug	X14288 PIN 16
A6	Socket contact	Terminal 30	RT/VI 0.35 mm ²	On roof function centre Black 20-pin plug In US cars Cut off	X14288 PIN 19
A7	Socket contact	DWAL	GR/SW 0.35mm ²	On roof function centre Black 20-pin plug In US cars Cut off	X14288 PIN 13
B	Earth cable	---	---	Not for US cars	---
B1	Socket contact	Terminal 31	BR/SW 0.35 mm ²	On rear-view mirror C Branch A1	X14292 PIN 10
B2	Eyelet A6	Terminal 31	BR/SW 0.35 mm ²	On earth joint connector in the footwell on the right	X10012

4. Installation and cabling diagram

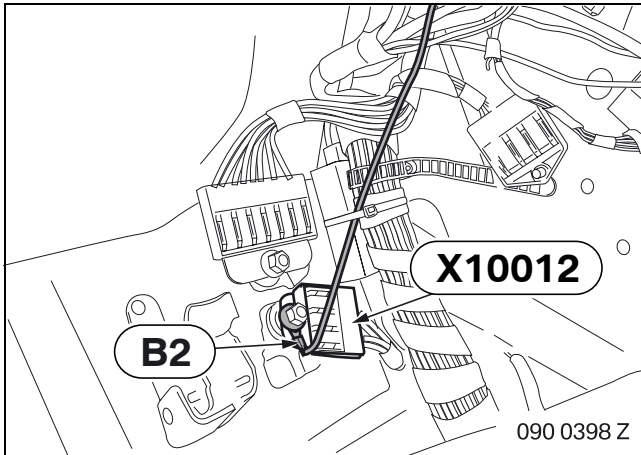


090 0384 Z

Legend

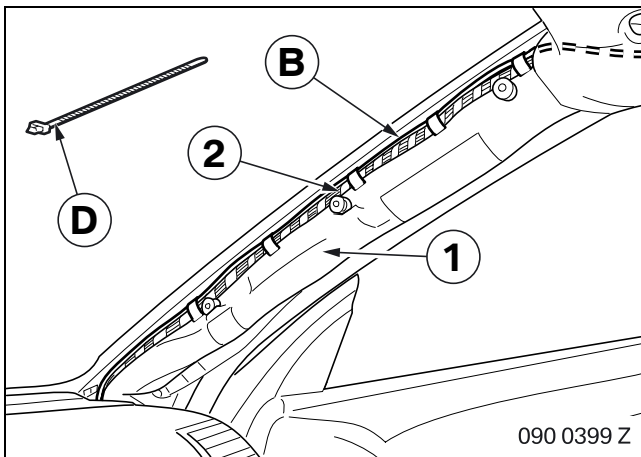
- A Retrofit cable
 - B Earth cable (not in cars with plug **X14292** and US cars)
 - C Rear-view mirror
-
- 1 Earth joint connector **X10012**
 - 2 Roof function centre

5. To install and connect the interior rear-view mirror (except for US cars)



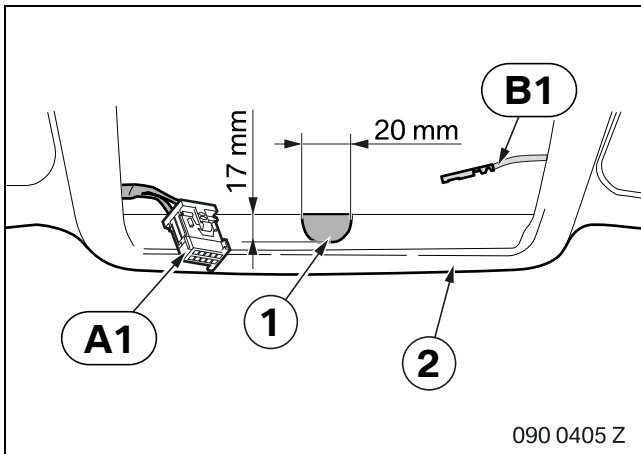
Cars without plug X14292 only

Secure branch **B2** to earth joint connector **X10012**.



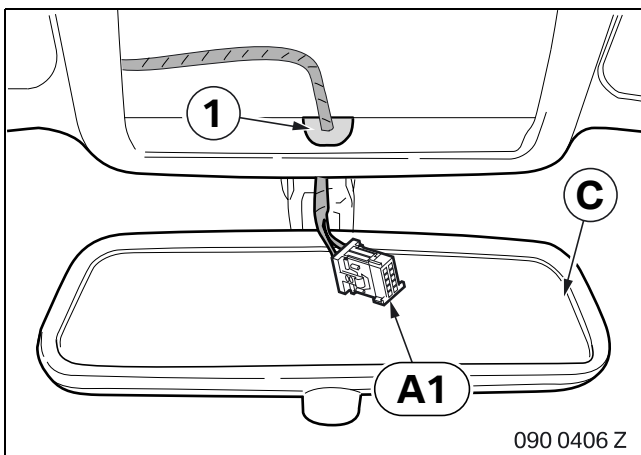
! So as not to adversely affect the function of the airbag (1), secure earth cable **B** to the standard wiring harness (2) with cable ties **D**. ◀

Route earth cable **B** along the A pillar to the installation site of the interior rear-view mirror.



Cut out the marked area (1) of the headlining (2) using the dimensions shown.

Connect branch **B1**, brown/black cable, to branch **A1** (black 10-pin) in pin 10.



Install interior rear-view mirror **C**.

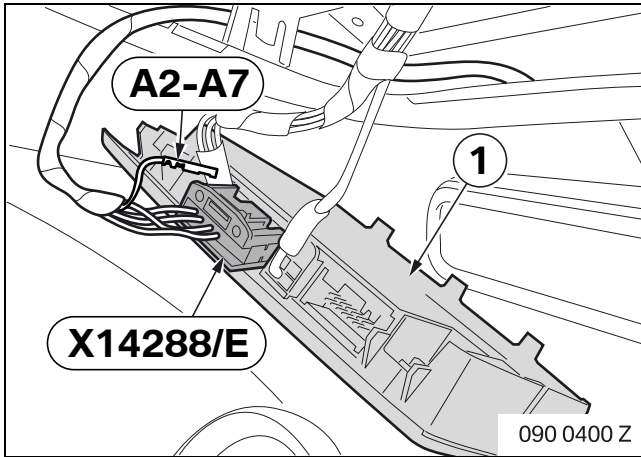
Route branch **A1** to interior rear-view mirror **C**.

Insert the rubber grommet (1) into the headlining.

Connect branch **A1** to interior rear-view mirror **C**.

Route branches **A2** – **A7** to the roof function centre.

5. To install and connect the interior rear-view mirror (except for US cars)



If plug **X14288** is not available, use socket casing **E**. ◀

Route branches **A2 – A7** to the roof function centre (1).

Connect branches **A2 – A7** to plug **X14288** or socket casing **E** (black 20-pin) as follows:

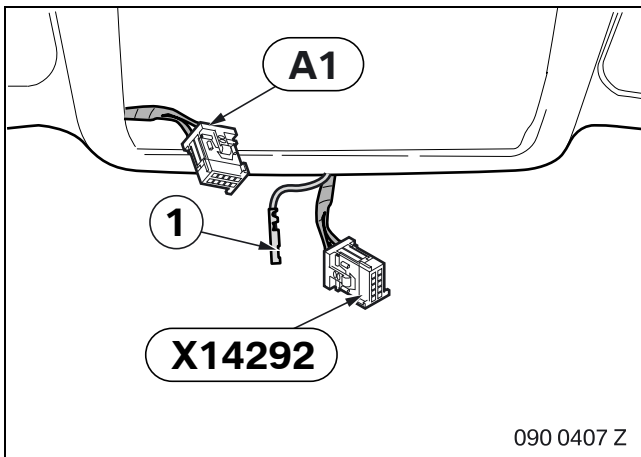
- Branch **A2**, grey/violet cable, to pin 14
- Branch **A3**, green/white cable, to pin 20
- Branch **A4**, black/brown cable, to pin 15
- Branch **A5**, brown/white cable, to pin 16
- Branch **A6**, red/violet cable, to pin 19
- Branch **A7**, grey/black cable, to pin 13

Cars with plug X14292 only

Disconnect black/brown cable (1) from plug **X14292** (black 10-pin) pin 10.

Insulate and tie back plug **X14292** (black 10-pin).

Connect black/brown cable (1) to branch **A1** (black 10-pin) pin 10.

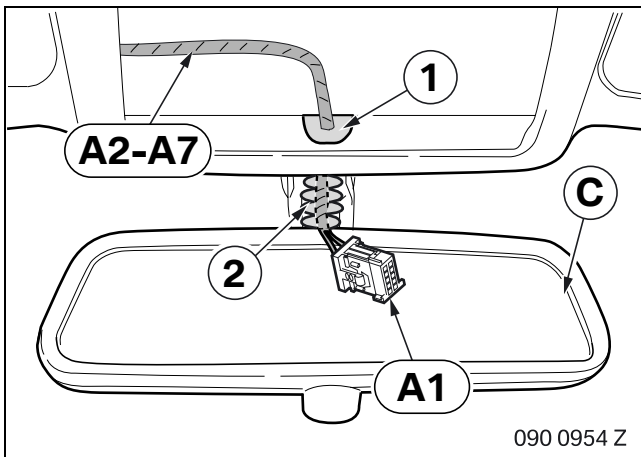


Install rear-view mirror **C**.

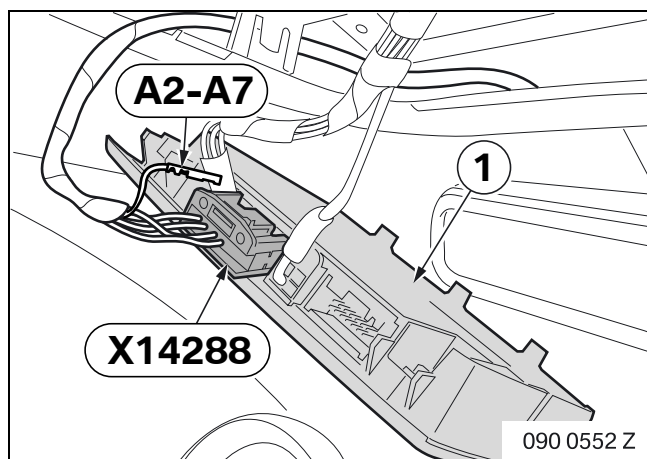
Route branches **A2 – A7** through the existing rubber grommet (2) to the roof function centre.

Insert the rubber grommet (1) into the headlining.

Connect branch **A1** to rear-view mirror **C**.



5. To install and connect the interior rear-view mirror (except for US cars)



Disconnect the existing cables with the same pins from plug **X14288**, insulate them and tie them back. ◀

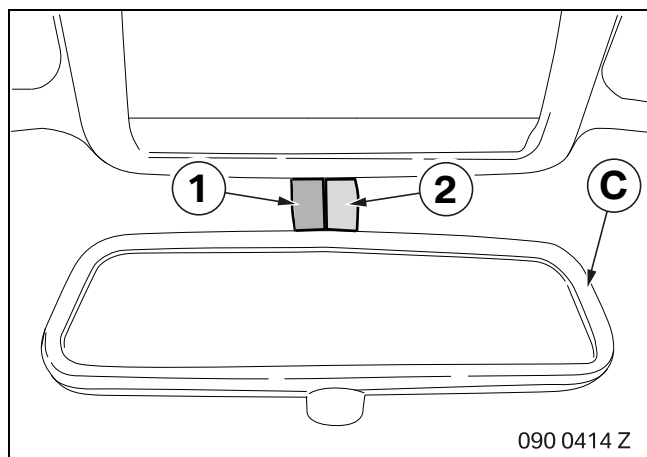
Route branches **A2 – A7** to the roof function centre (1).

Connect branches **A2 – A7** as follows to plug **X14288** (black 20-pin):

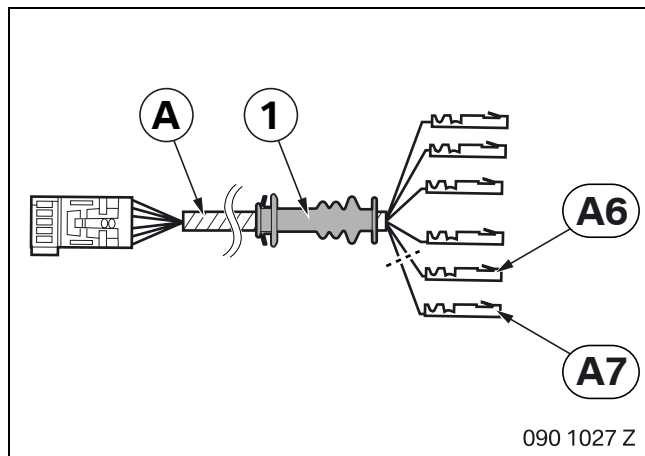
- Branch **A2**, grey/violet cable, to pin 14
- Branch **A3**, green/white cable, to pin 20
- Branch **A4**, black/brown cable, to pin 15
- Branch **A5**, brown/white cable, to pin 16
- Branch **A6**, red/violet cable, to pin 19
- Branch **A7**, grey/black cable, to pin 13

All cars

Fit the mirror foot covers (1) and (2) back onto rear-view mirror **C**.

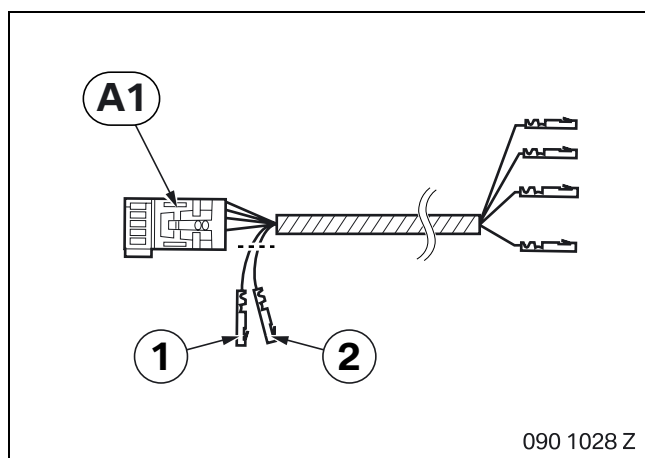


6. To install and connect the interior rear-view mirror (US cars only)



Carefully cut the rubber grommet (1) off retrofit cable **A**.

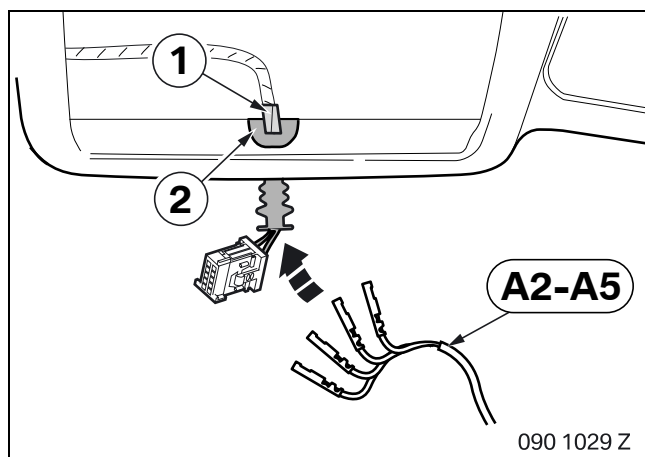
Cut branches **A6** and **A7** off retrofit cable **A**.



⏏ Opening the secondary catch too far can cause it to break off. ◀

Carefully open the secondary catch of pins 6 – 10.

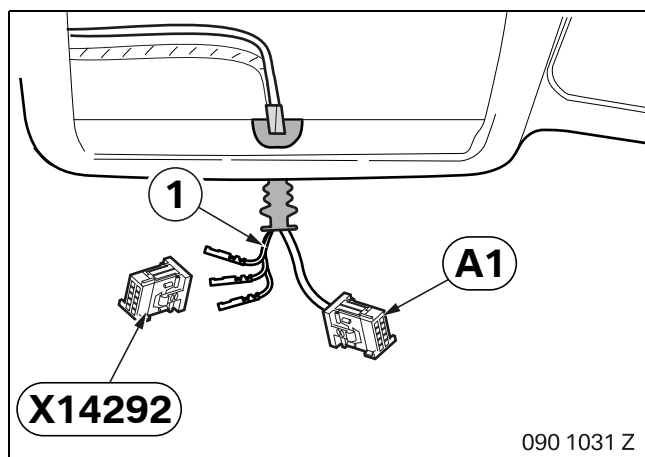
Disconnect and cut off the cable (1) from pin 8, red/violet cable, and cable (2) from pin 9, grey/black cable.



Remove the adhesive tape (1) from the rubber grommet (2).

Route branches **A2 – A7** through the rubber grommet (2) to the roof function centre.

Reattach the adhesive tape (1) to the rubber grommet (2).



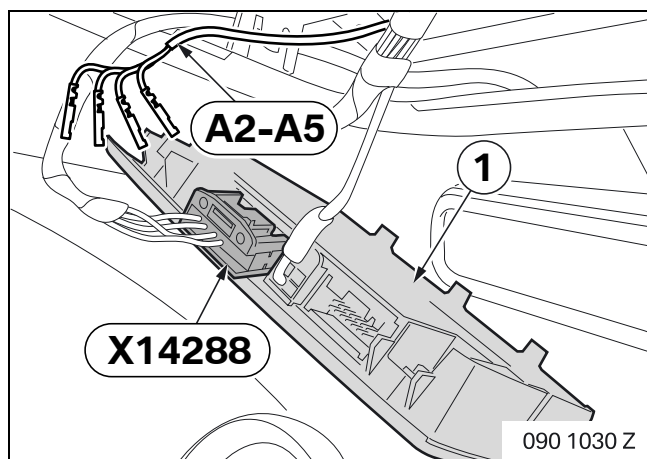
Disconnect the following cables (1) from plug **X14292** and connect them to branch **A1**:

X14292	Cable colour	Branch A1
From pin 8	Red/violet	To pin 8
From pin 9	Grey/black	To pin 9
From pin 10	Brown/black	To pin 10

Close the secondary catch.

Plug casing **X14292** is no longer required.

6. To install and connect the interior rear-view mirror (US cars only)

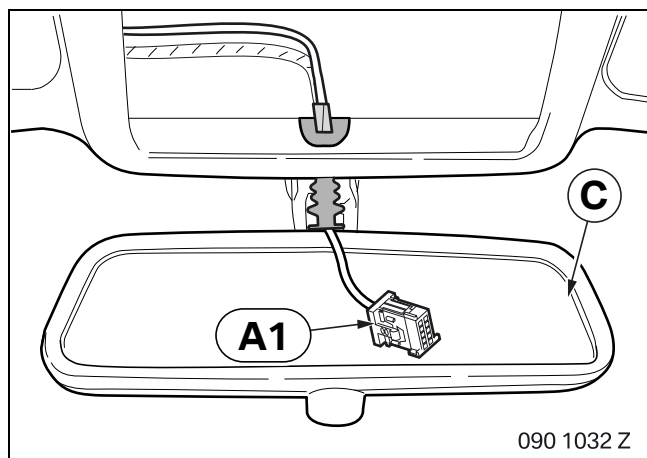


Route branches **A2 – A5** to the roof function centre (1).

Connect branches **A2 – A5** as follows to plug **X14288** (black 20-pin):

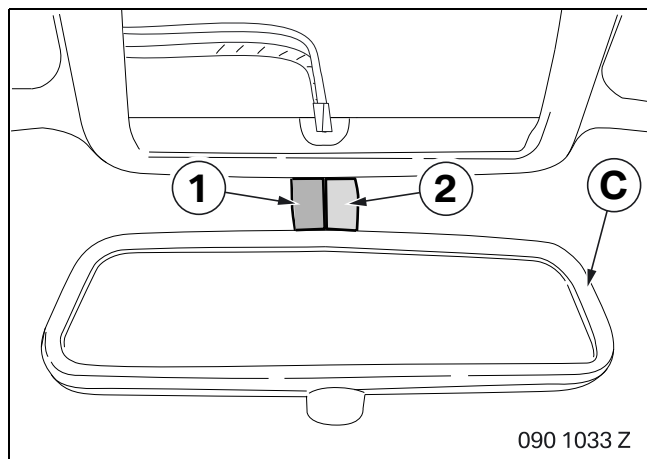
- Branch **A2**, grey/violet cable, to pin 14
- Branch **A3**, green/white cable, to pin 20
- Branch **A4**, black/brown cable, to pin 15
- Branch **A5**, brown/white cable, to pin 16

Attach retrofit cable **A** to the standard wiring harness.



Install rear-view mirror **C**.

Connect branch **A1** to rear-view mirror **C**.



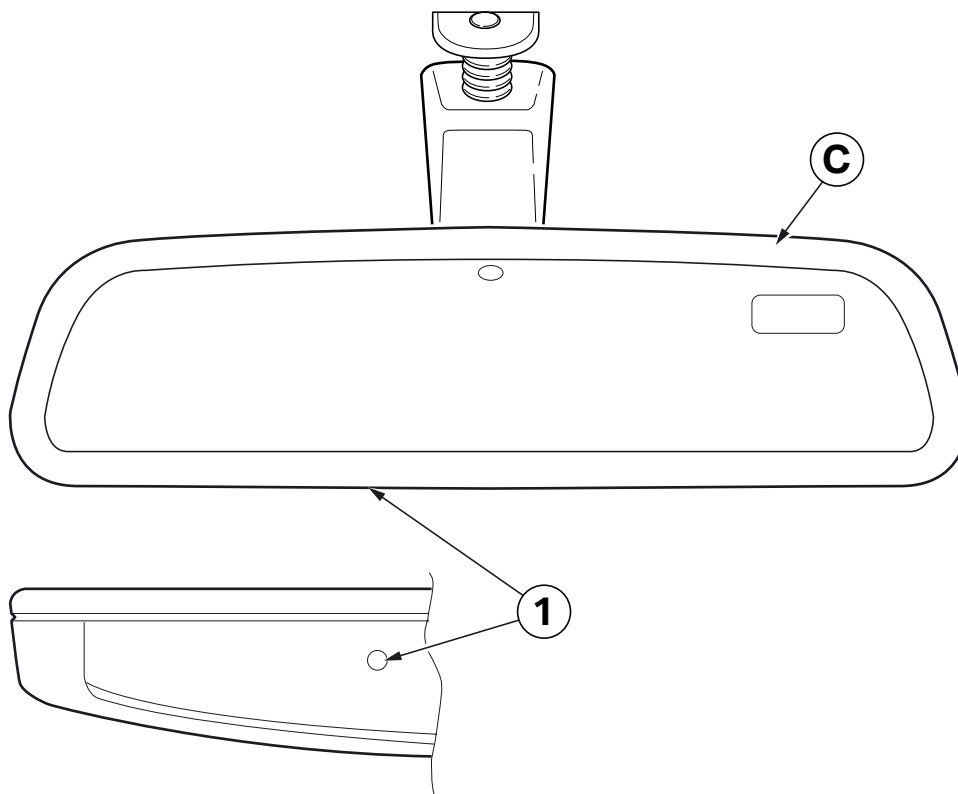
Fit the mirror foot covers (1) and (2) back onto rear-view mirror **C**.

7. Concluding work and coding

This retrofit system does not require coding.

- Connect the battery
- If a compass rear-view mirror has been retrofitted, it must be adjusted and calibrated as described in section 8
- Conduct a brief test
- Conduct a function test
- Re-assemble the car

8. To adjust and calibrate the compass rear-view mirror



090 0528 Z

The compass rear-view mirror C must be calibrated and adjusted after its installation.

Step 1: To calibrate the compass rear-view mirror C:

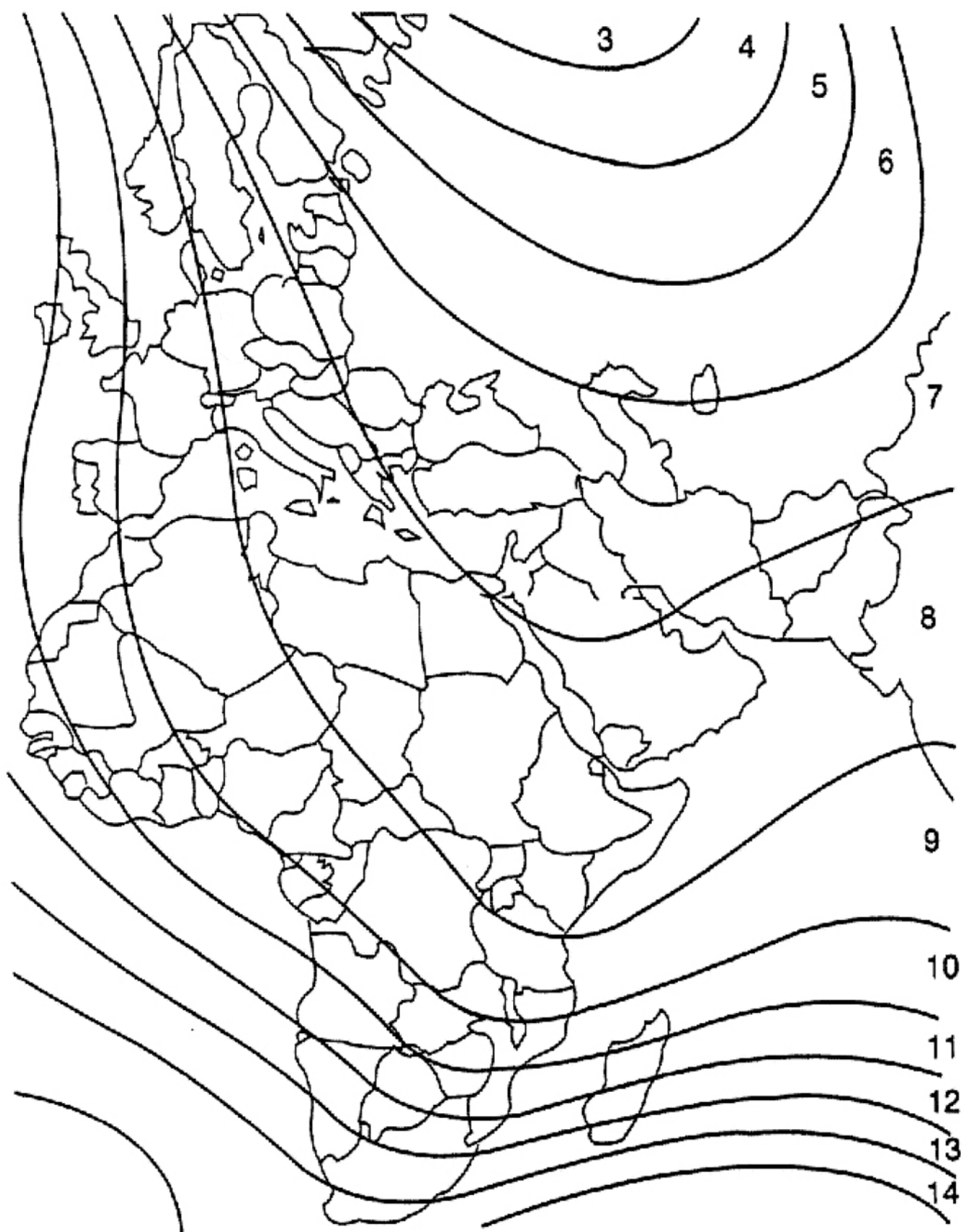
- Switch on the ignition.
- If "C" does not appear on the display, press the adjusting knob (1) on the underside of compass rear-view mirror C for 6-7 seconds. "C" will then appear on the display.
- Drive in a circle (at least 360°) at a maximum speed of 7 km/h until a direction is shown on the display.
- The compass is now ready for use.

Step 2: To adjust the compass zone:

- Press the adjustment knob (1) for 3-4 seconds. A number will be shown on the display. To change the zone setting, press the adjustment knob (1) until the required zone appears in the display (see world maps below with compass zones).
- The compass will be ready for use again after approx. 10 seconds.
- The factory setting for the compass zone is 8.

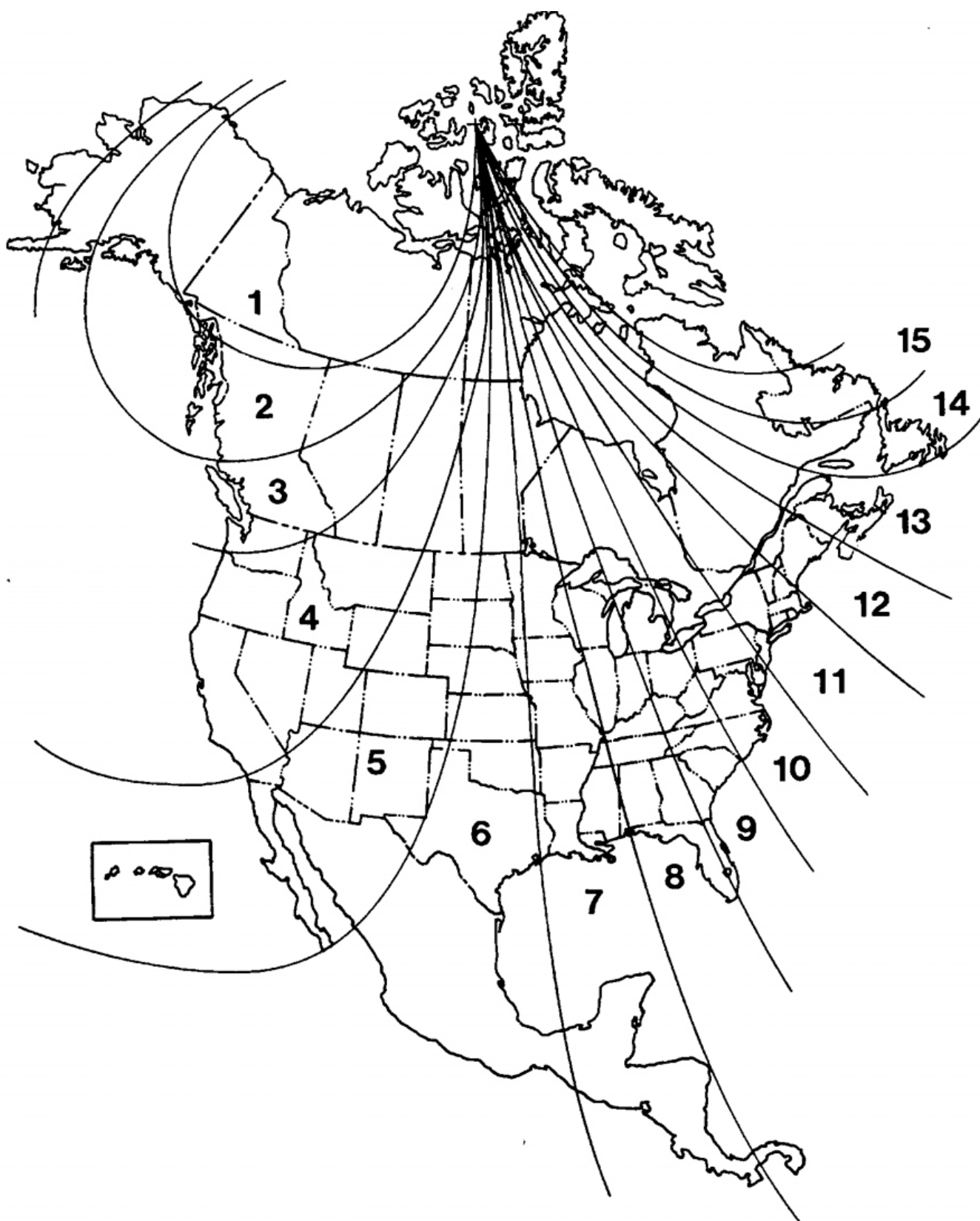
9. World maps with compass zones

Europe, Africa and West Asia



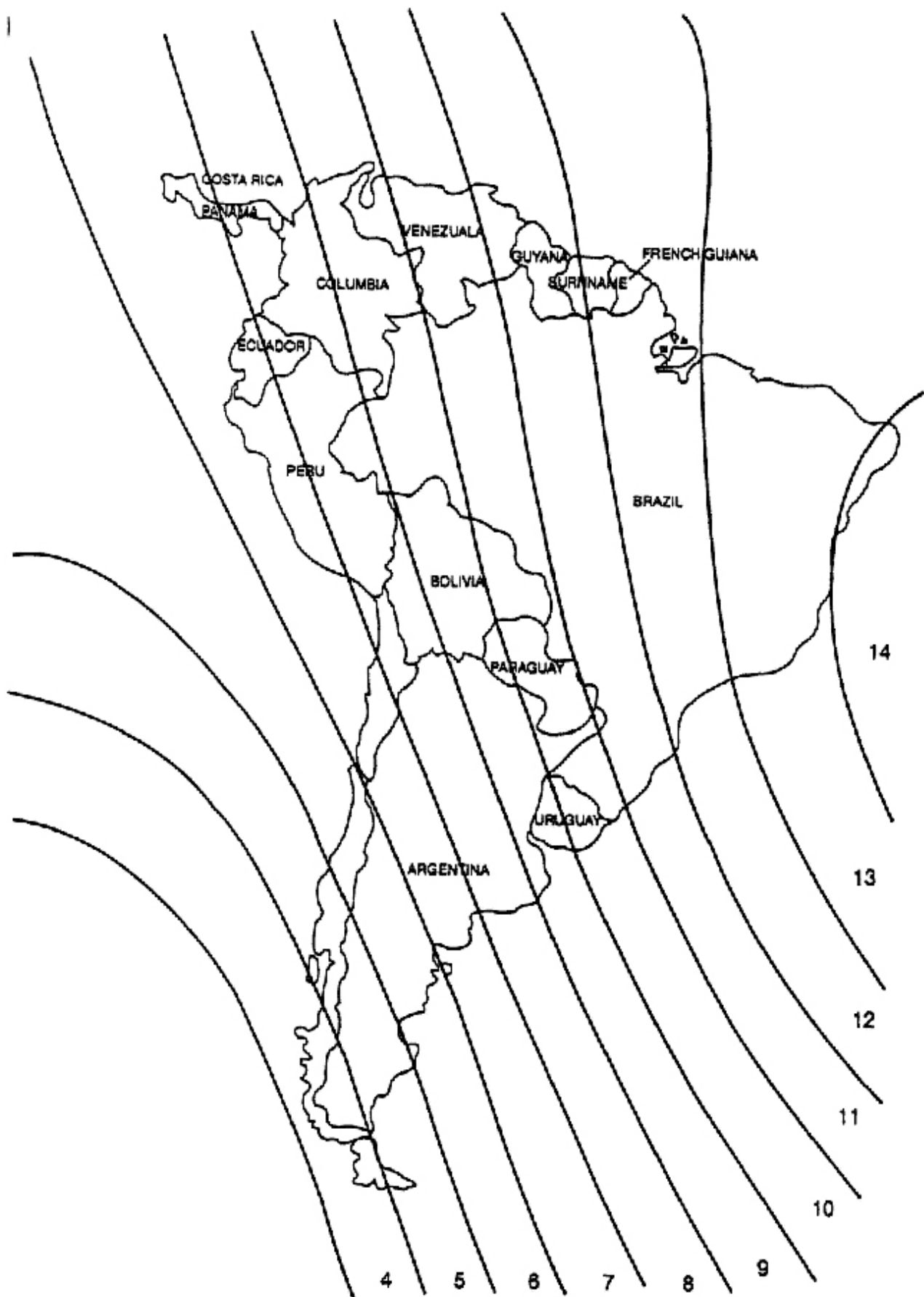
9. World maps with compass zones

Canada, North and Central America



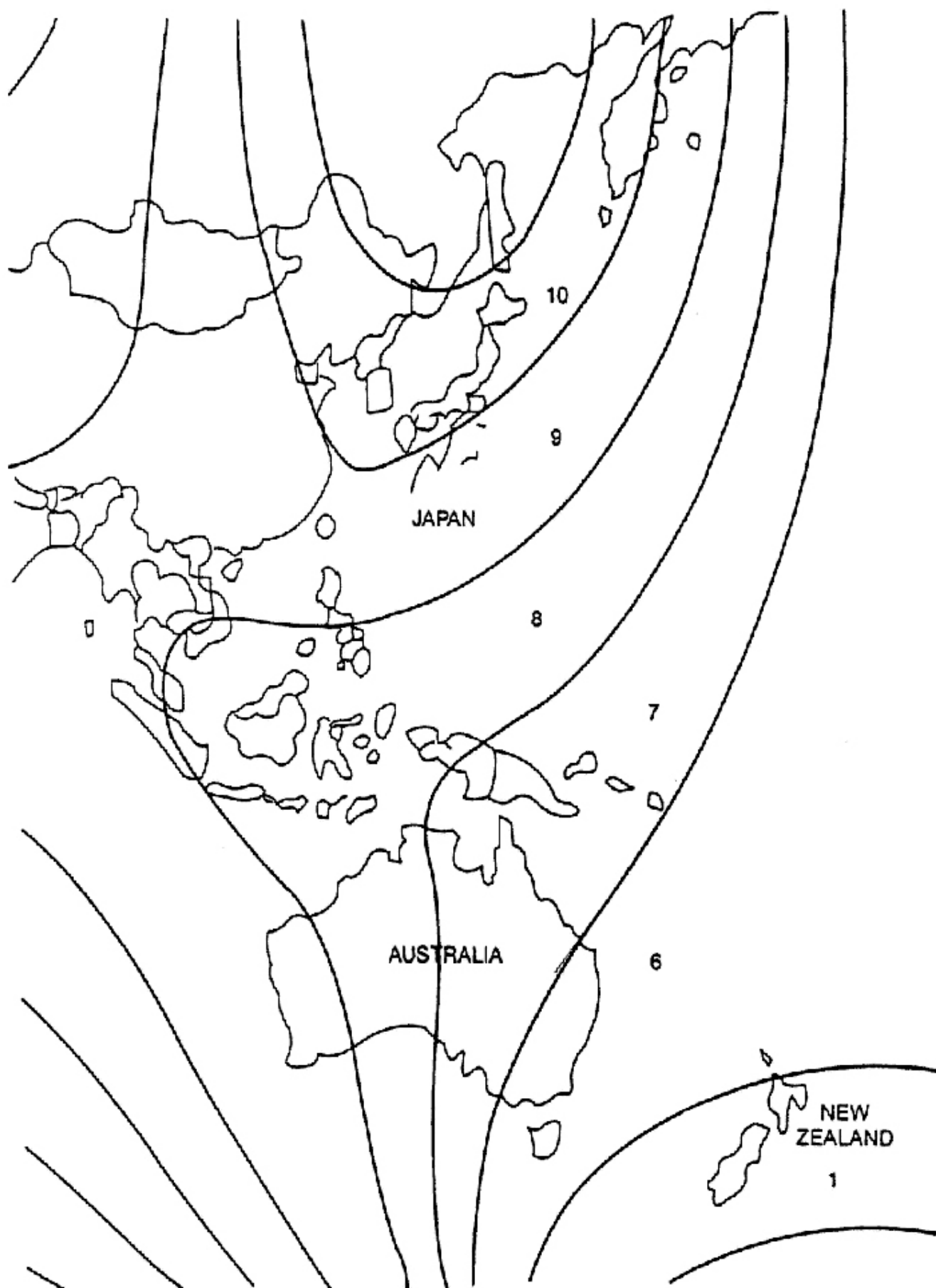
9. World maps with compass zones

South America

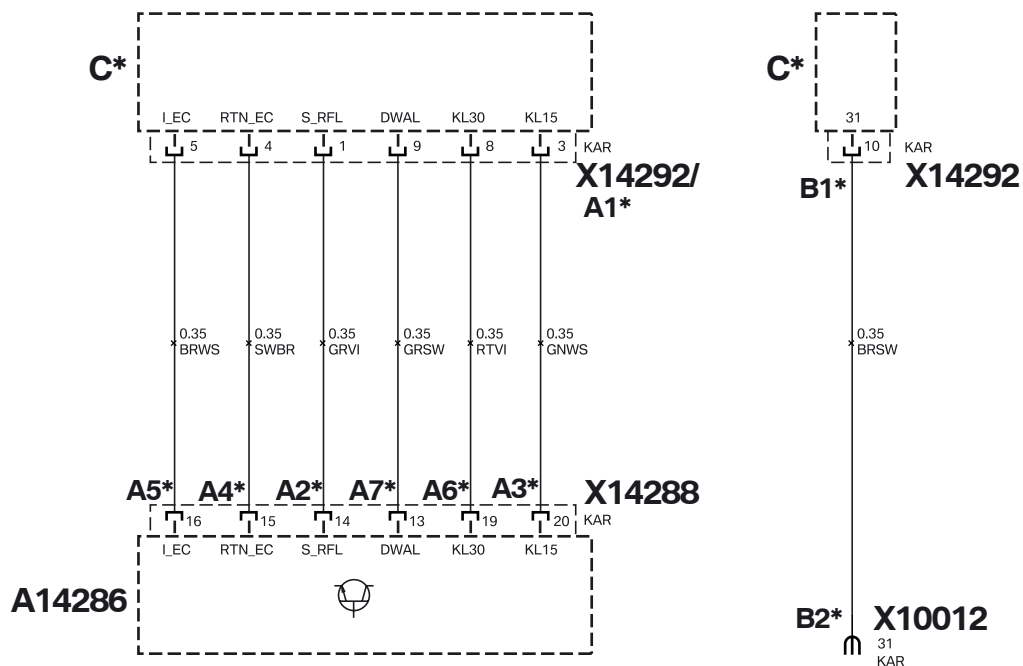


9. World maps with compass zones

East Asia and Australia



10. Circuit diagram



090 0529 Z

Legend

A14286 Roof function centre

C* Rear-view mirror

X10012 Joint connector, terminal 31 pick-up (**B2***)

X14288 Black 20-pin plug on roof function centre (**A2* – A7***)

X14292 Black 10-pin plug on interior mirror (**A1***)

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

Cable colours

BR	Brown
GN	Green
GR	Grey
RT	Red
SW	Black
VI	Violet
WS	White