Workshop Manual

Audi A1 2011 ➤ , Audi A2 2001 ➤ , Audi A3 1997 ➤ , Audi A3 2004 ➤ , Audi A3 Cabriolet 2008 ➤ , Audi A4 1995 ➤ , Audi A4 2001 ➤ , Audi A4 2008 ➤ , Audi A4 Cabriolet 2003 ➤ , Audi A5 Cabriolet 2009 ➤ , Audi A5 Coupé 2008 ➤ , Audi A6 1998 ➤ , Audi A6 2005 ➤ , Audi A7 Sportback 2011 ➤ , Audi A8 1994 ➤ , Audi A8 2003 ➤ , Audi A8 2010 ➤ , Audi Q5 2008 ➤ , Audi Q7 2007 ➤ , Audi R8 2007 ➤ , Audi TT 1999 ➤ , Audi TT 2007 ➤

Fitting instructions: radio communication systems

Edition 10.2010

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Repair Group

91 - Radio, telephone, navigation

Technical information should always be available to the foremen and mechanics, because their careful and constant adherence to the instructions is essential to ensure vehicle road-worthiness and safety. In addition, the normal basic safety precautions for working on motor vehicles must, as a matter of course, be observed.

Contents

91 – Radio, telephone, navigation

1 Service installation of radio communication systems

1.1 General notes

Disconnect negative terminal of battery -A- before fitting radio communication and telephone systems ⇒ Electrical system; Rep. gr. 27 .

Use applicable current flow diagrams ⇒ Current flow diagrams, Electrical fault finding and Fitting locations.

Use cable ties to secure wiring harnesses. Pad plug-in couplings with foam sheaths.

Note operating and installation instructions issued by the manufacturers of mobile telephones, radio communication systems and aerials ⇒ Operating instructions .

- Disconnecting and connecting battery -A- ⇒ Electrical system; Rep. gr. 27 .
- Current flow diagrams, fuse assignment and fitting locations ⇒ Current flow diagrams, Electrical fault finding and Fitting locations.
- Removing and installing trim ⇒ General body repairs, interior; Rep. gr. 70 .
- Removing and installing factory-fitted systems ⇒ Communication; Rep. gr. 91 .
- Repairing aerial wiring ⇒ Electrical system; Rep. gr. 97 .
- Repairing wiring harnesses ⇒ Electrical system; Rep. gr. 97 .

1.2 Transmission power and possible fitting locations

Audi approves the installation and operation of radio communication systems, provided that the transmission power levels at the aerial base do not exceed the values listed in the table for the relevant model. The specified aerial fitting locations and transmission power levels are given in the tables ⇒ page 4 .

It may be necessary to reduce transmission power to comply with the maximum permitted values as per VDE 0848 Part 2 (maximum permitted field strength with respect to personal safety).

1.3 Voltage supply

The battery -A- is used for connection of the positive and negative cables when performing service installation of radio communication systems to the vehicle.

An additional wiring harness has to be made up accordingly:

- Positive cable: 2.5 mm thick, red cable
- Negative cable: 2.5 mm thick, brown cable
- Terminal 15 cable: 1.5 mm thick, black cable

The positive cable must be fitted with a fuse in the immediate vicinity of the battery -A- . This requires attaching a fuse holder (Part No. 441 937 501) next to the battery -A- . The positive and negative cables must be covered with an insulating sheath. Ap-

propriate terminals are to be fitted on the battery end. For the device end, proceed according to the operating instructions for radio communication systems ⇒ Operating instructions .

Additional wiring harness is to be routed separately from vehicle wiring (distance > 10 cm).

Note

Crossing of standard wiring is preferable to parallel routing.

1.4 Aerial and aerial wire

Use a screened wire between the transmitter/receiver unit and the aerial. The screen must be connected to the unit and aerial end. At the same time ensure that there is a good and permanent earth connection between aerial base wire and vehicle body.

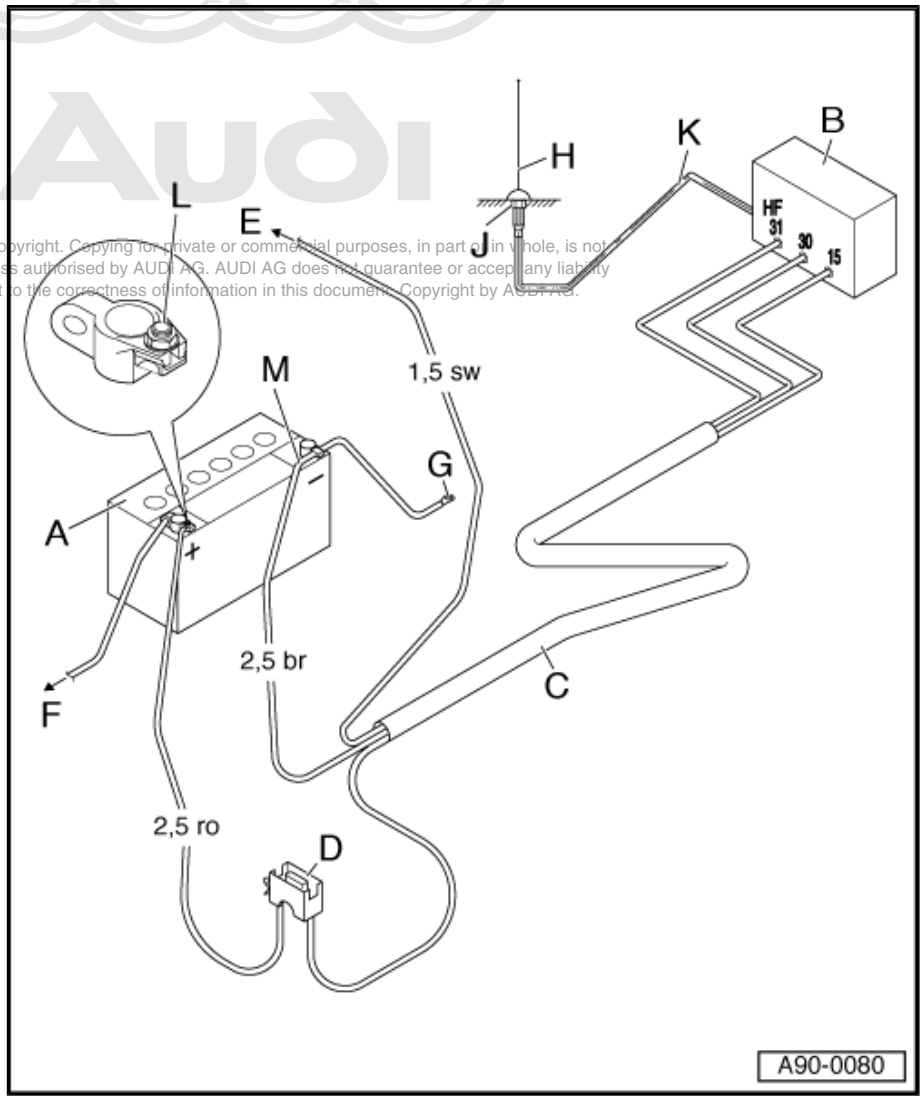
The transmission system must be tuned to prevent sheath waves on the aerial wire. This should be ensured by performing a power measurement to check and tune the radio communication system.

„Onglass“ aerials can only be fitted on vehicles without insulating glass.

1.5 Other auxiliary equipment

Installation of other electronic equipment, such as a business package (TV, FAX) or household package (electric refrigerator box) is only permitted if such items bear a CE or e mark. Power is also to be supplied by way of a separate wiring harness and provided with fuse protection.

1.6 Overview of battery -A- / transmitter and receiver unit / fuse / wiring harness



A - Battery -A-

- ❑ Installation position, disconnecting ⇒ Electrical system; Rep. gr. 27

B - Telephone transmitter and receiver unit

- ❑ Installation position, removing and installing ⇒ Communication; Rep. gr. 91

C - Wiring harness

- ❑ Has to be made up
- ❑ Positive cable (terminal 30) 2.5 ∅ (red)
- ❑ Earth cable (terminal 31) 2.5 ∅ (brown)
- ❑ Positive cable (terminal 15a) 1.5 ∅ (black)

D - Fuse holder

- ❑ In immediate vicinity of battery -A-

E - Terminal 15a

- ❑ Always connected to output of terminal 15a
- ❑ Wiring must be protected by a fuse
- ❑ Fuse max. 15 A

F - To starter -B-

- ❑ Original wire

G - Body earth

- ❑ Immediately next to battery -A-

H - Transmission/reception aerial

- ❑ Fitting locations ⇒ page 4

J - Aerial earth

- ❑ Good, firm connection/corrosion protection

K - Screened aerial wire

- ❑ Wire with coaxial connector

L - Positive connection

- ❑ Attach red cable with terminal A6-2.5 beneath nut
- ❑ Route wiring harness separately if possible

M - Negative cable

- ❑ Attach brown cable with terminal A6-2.5 beneath nut
- ❑ Route wiring harness separately if possible

1.7 Transmission power levels and aerial fitting locations for A2 (from model year 2001 onwards)

Designation	P_{max} (Watt)	Specified aerial fitting locations
Short wave (< 54 MHz)	100 (PEP)	Rear bumper
4 m band	20 (eff.)	Rear left wing
2 m band	50 (eff.)	Rear left wing
70 cm band	50 (eff.)	Rear left wing
Telephone, 450 MHz GSM	25 (eff.)	Rear left wing Rear of roof (12 cm from roof edge in centre of vehicle) Rear left side windows „onglass“
Telephone, 900 MHz GSM	20 (PEP)	Rear left wing Rear of roof (12 cm from roof edge in centre of vehicle) Rear left side windows „onglass“
Telephone, 1800 MHz GSM	10 (PEP)	Rear left wing Rear of roof (12 cm from roof edge in centre of vehicle) Rear left side windows „onglass“

eff. = effective transmission power

PEP = Peak Envelope Power

WARNING

If radio communication systems with higher output are installed, or if the aerial is not fitted at one of the locations specified in the table, the operating permit for the vehicle may be void.

1.8 Transmission power levels and aerial fitting locations for A3 (from model year 1997 up to model year 2003)

Designation	P_{max} (Watt)	Specified aerial fitting locations
Short wave (< 54 MHz)	100 (PEP)	Centre of roof (rear) Rear bumper
4 m band	20 (eff.)	Centre of roof (rear)
2 m band	50 (eff.)	Centre of roof (rear) Rear right side panel
2 m band	20 (eff.)	Front of roof (15 cm from edge of windscreen in centre of vehicle) Centre of roof (rear) Rear left or right side panel
70 cm band	50 (eff.)	Centre of roof, rear Rear right side panel
Telephone, 450 MHz GSM	25 (eff.)	Centre of roof, rear (same as radio, telephone and navigation system aerial -R52-) Rear left or right side windows „onglass“
Telephone, 900 MHz GSM	20 (PEP)	Centre of roof, rear (same as radio, telephone and navigation system aerial -R52-) Rear left or right side windows „onglass“
Telephone, 1800 MHz GSM	10 (PEP)	Centre of roof, rear (same as radio, telephone and navigation system aerial -R52-) Rear left or right side windows „onglass“

eff. = effective transmission power

PEP = Peak Envelope Power

WARNING

If radio communication systems with higher output are installed, or if the aerial is not fitted at one of the locations specified in the table, the operating permit for the vehicle may be void.

1.9 Transmission power levels and aerial fitting locations for A3 (from model year 2004 onwards)

Designation	P_{max} (Watt)	Specified aerial fitting locations
4 m band	20 (eff.)	Centre of roof (rear)
2 m band	50 (eff.)	Centre of roof (rear)
70 cm band	50 (eff.)	Centre of roof (rear)
Telephone, 900 MHz GSM	20 (PEP)	Centre of roof (rear)
Telephone, 1800 MHz GSM	10 (PEP)	Centre of roof (rear)
Bluetooth (2400-2483 MHz)	500 mW	Under front passenger's seat
UMTS	10 W	Rear of roof Centre of rear lid
Short-range radar (76.5 GHz)	< 10 mW	Behind radiator grille

eff. = effective transmission power

PEP = Peak Envelope Power

WARNING

If radio communication systems with higher output are installed, or if the aerial is not fitted at one of the locations specified in the table, the operating permit for the vehicle may be void.

1.10 Transmission power levels and aerial fitting locations for A3 Cabriolet (from model year 2008 onwards)

Designation	P_{max} (Watt)	Specified aerial fitting locations
Short wave (< 54 MHz)	10 (PEP)	Centre of rear lid Rear bumper
4 m band	10 (eff.)	Centre of rear lid Rear left wing
2 m band	10 (eff.)	Centre of rear lid Rear left wing
70 cm band	10 (eff.)	Centre of rear lid Rear bumper
Telephone, 900 MHz GSM	10 (PEP)	Top centre of windscreen
Telephone, 1800 MHz GSM	10 (PEP)	Top centre of windscreen
Bluetooth (2400-2483 MHz)	500 mW	Under front passenger's seat
UMTS	10 mW	Top centre of windscreen
Short-range radar (76.5 GHz)	< 10 mW	Behind radiator grille

eff. = effective transmission power

PEP = Peak Envelope Power

WARNING

If radio communication systems with higher output are installed, or if the aerial is not fitted at one of the locations specified in the table, the operating permit for the vehicle may be void.

1.11 Transmission power levels and aerial fitting locations for A4 (from model year 1995 up to model year 2000)

Saloon

Designation	P_{max} (Watt)	Specified aerial fitting locations
Short wave (< 54 MHz)	100 (PEP)	Centre of rear lid Rear bumper
4 m band	20 (eff.)	Rear of roof (32.5 cm from edge of window in centre of vehicle) Rear left wing
2 m band	50 (eff.)	Centre of rear lid, rear bumper Rear left wing
2 m band	20 (eff.)	Rear of roof (32.5 cm from edge of window in centre of vehicle) Rear left or right wing
70 cm band	50 (eff.)	Centre of rear lid Rear right wing
Telephone, 450 MHz GSM	25 (eff.)	Rear left or right wing Rear window, top edge of window „onglass“
Telephone, 900 MHz GSM	20 (PEP)	Rear left wing Rear window, top edge of window „onglass“ Rear left or right side windows
Telephone, 1800 MHz GSM	10 (PEP)	Rear left wing Rear window, top edge of window „onglass“ Rear left or right side windows

eff. = effective transmission power

PEP = Peak Envelope Power

WARNING

If radio communication systems with higher output are installed, or if the aerial is not fitted at one of the locations specified in the table, the operating permit for the vehicle may be void.

Avant

Designation	P_{max} (Watt)	Specified aerial fitting locations
Short wave (< 54 MHz)	100 (PEP)	Centre of roof (rear) Rear bumper
4 m band	20 (eff.)	Centre of roof (rear)
2 m band	50 (eff.)	Centre of roof, rear Rear right side panel

Designation	P_{max} (Watt)	Specified aerial fitting locations
2 m band	20 (eff.)	Centre of roof (rear) Rear left or right side panel
70 cm band	50 (eff.)	Centre of roof (rear) Rear right side panel
Telephone, 450 MHz GSM	25 (eff.)	Rear of roof (same as radio, telephone and navigation system aerial -R52-) Rear left or right side window „onglass“
Telephone, 900 MHz GSM	20 (PEP)	Rear of roof (same as radio, telephone and navigation system aerial -R52-) Rear left or right side window „onglass“
Telephone, 1800 MHz GSM	10 (PEP)	Rear of roof (same as radio, telephone and navigation system aerial -R52-) Rear left or right side window „onglass“

eff. = effective transmission power

PEP = Peak Envelope Power

WARNING

If radio communication systems with higher output are installed, or if the aerial is not fitted at one of the locations specified in the table, the operating permit for the vehicle may be void.

Audi Cabriolet

Designation	P_{max} (Watt)	Specified aerial fitting locations
Short wave (< 54 MHz)	10 (PEP)	Rear bumper
4 m band	10 (eff.)	Rear right wing
2 m band	10 (eff.)	Rear left or right wing Rear bumper
70 cm band	10 (eff.)	Rear bumper
Telephone, 450 MHz GSM	10 (eff.)	Rear left or right wing
Telephone, 900 MHz GSM	10 (PEP)	Rear left or right wing
Telephone, 1800 MHz GSM	10 (PEP)	Rear left or right wing

eff. = effective transmission power

PEP = Peak Envelope Power

WARNING

If radio communication systems with higher output are installed, or if the aerial is not fitted at one of the locations specified in the table, the operating permit for the vehicle may be void.

1.12 Transmission power levels and aerial fitting locations for A4 (from model year 2001 up to model year 2007)

Saloon

Designation	P_{max} (Watt)	Specified aerial fitting locations
Short wave (< 54 MHz)	100 (PEP)	Centre of rear lid Rear bumper
4 m band	20 (eff.)	Rear of roof (22 cm from edge of window in centre of vehicle) Rear left wing
2 m band	50 (eff.)	Centre of rear lid, rear bumper Rear left wing
2 m band	20 (eff.)	Rear of roof (22 cm from edge of window in centre of vehicle) Rear left or right wing
70 cm band	50 (eff.)	Centre of rear lid Rear left wing
Telephone, 450 MHz GSM	25 (eff.)	Rear of roof (22 cm from edge of window in centre of vehicle) Rear left or right wing
Telephone, 900 MHz GSM	20 (PEP)	Rear of roof (22 cm from edge of window in centre of vehicle) Rear left or right wing Rear left or right side windows „onglass“
Telephone, 1800 MHz GSM	10 (PEP)	Rear of roof (22 cm from edge of window in centre of vehicle) Rear left or right wing Rear left or right side windows „onglass“

eff. = effective transmission power

PEP = Peak Envelope Power

WARNING

If radio communication systems with higher output are installed, or if the aerial is not fitted at one of the locations specified in the table, the operating permit for the vehicle may be void.

Avant

Designation	P_{max} (Watt)	Specified aerial fitting locations
Short wave (< 54 MHz)	100 (PEP)	Centre of roof, rear (same as radio, telephone and navigation system aerial -R52-) Rear bumper
4 m band	20 (eff.)	Centre of roof, rear (same as radio, telephone and navigation system aerial -R52-) Centre of roof (61 cm from rear window in centre of vehicle)
2 m band	50 (eff.)	Centre of roof, rear (same as radio, telephone and navigation system aerial -R52-) Centre of roof (61 cm from rear window in centre of vehicle)
2 m band	20 (eff.)	Centre of roof, rear (same as radio, telephone and navigation system aerial -R52-) Centre of roof (61 cm from rear window in centre of vehicle)

Designation	P_{max} (Watt)	Specified aerial fitting locations
70 cm band	50 (eff.)	Centre of roof, rear (same as radio, telephone and navigation system aerial -R52-)
Telephone, 450 MHz GSM	25 (eff.)	Centre of roof, rear (same as radio, telephone and navigation system aerial -R52-)
Telephone, 900 MHz GSM	20 (PEP)	Centre of roof, rear (same as radio, telephone and navigation system aerial -R52-)
Telephone, 1800 MHz GSM	10 (PEP)	Centre of roof, rear (same as radio, telephone and navigation system aerial -R52-)

eff. = effective transmission power

PEP = Peak Envelope Power

WARNING

If radio communication systems with higher output are installed, or if the aerial is not fitted at one of the locations specified in the table, the operating permit for the vehicle may be void.

1.13 Transmission power levels and aerial fitting locations for A4 (from model year 2008 onwards)

Saloon

Designation	P_{max} (Watt)	Specified aerial fitting locations
Short wave (< 54 MHz)	100 (PEP)	Towing bracket Centre of rear lid
4 m band	20 (eff.)	Centre of roof (centre) Centre of roof, rear (15-30 cm from edge of rear window in centre of vehicle)
2 m band	50 (eff.)	Centre of roof (centre) Centre of roof, rear (15-30 cm from edge of rear window in centre of vehicle)
70 cm band	50 (eff.)	Centre of roof (centre) Centre of roof, rear (15-30 cm from edge of rear window in centre of vehicle)
Telephone, 900 MHz GSM	20 (PEP)	Centre of roof, rear (same as radio, telephone and navigation system aerial -R52-)
Telephone, 1800 MHz GSM	10 (PEP)	Centre of roof, rear (same as radio, telephone and navigation system aerial -R52-)

eff. = effective transmission power

PEP = Peak Envelope Power

WARNING

If radio communication systems with higher output are installed, or if the aerial is not fitted at one of the locations specified in the table, the operating permit for the vehicle may be void.

Avant

Designation	P_{max} (Watt)	Specified aerial fitting locations
Short wave (< 54 MHz)	100 (PEP)	Towing bracket
4 m band	20 (eff.)	Centre of roof (centre) Centre of roof (rear)
2 m band	50 (eff.)	Centre of roof (centre) Centre of roof (rear)
70 cm band	50 (eff.)	Centre of roof (rear)
Telephone, 900 MHz GSM	20 (PEP)	Centre of roof (rear)
Telephone, 1800 MHz GSM	10 (PEP)	Centre of roof (rear)

eff. = effective transmission power

PEP = Peak Envelope Power

WARNING

If radio communication systems with higher output are installed, or if the aerial is not fitted at one of the locations specified in the table, the operating permit for the vehicle may be void.

1.14 Transmission power levels and aerial fitting locations for A4 Cabriolet (from model year 2003 onwards)

Designation	P_{max} (Watt)	Specified aerial fitting locations
Short wave (< 54 MHz)	10 (PEP)	Rear bumper
4 m band	10 (eff.)	Rear left wing
2 m band	10 (eff.)	Rear left wing
70 cm band	10 (eff.)	Rear left wing
Telephone, 450 MHz GSM	10 (eff.)	Rear left wing
Telephone, 900 MHz GSM	10 (PEP)	Centre of rear lid Rear left wing
Telephone, 1800 MHz GSM	10 (PEP)	Centre of rear lid Rear left wing

eff. = effective transmission power

PEP = Peak Envelope Power

WARNING

If radio communication systems with higher output are installed, or if the aerial is not fitted at one of the locations specified in the table, the operating permit for the vehicle may be void.

1.15 Transmission power levels and aerial fitting locations for A5 Cabriolet (from model year 2009 onwards)

Designation	P_{max} (Watt)	Specified aerial fitting locations
Short wave (< 54 MHz)	100 (PEP)	Rear bumper/rear lid
4 m band	20 (eff.)	Centre of rear lid, rear left wheel housing

Designation	P_{max} (Watt)	Specified aerial fitting locations
2 m band	50 (eff.)	Centre of rear lid, rear left wheel housing
70 cm band	50 (eff.)	Centre of rear lid, rear left wheel housing
Telephone, 900 MHz GSM	20 (PEP)	Centre of rear lid, rear left wheel housing
Telephone, 1800 MHz GSM	10 (PEP)	Centre of rear lid, rear left wheel housing

eff. = effective transmission power

PEP = Peak Envelope Power

WARNING

If radio communication systems with higher output are installed, or if the aerial is not fitted at one of the locations specified in the table, the operating permit for the vehicle may be void.

1.16 Transmission power levels and aerial fitting locations for A5 Coupé (from model year 2008 onwards)

Designation	P_{max} (Watt)	Specified aerial fitting locations
Short wave (< 54 MHz)	100 (PEP)	Towing bracket Centre of rear lid
4 m band	20 (eff.)	Centre of roof (centre) Centre of roof, rear (15-30 cm from edge of rear window in centre of vehicle)
2 m band	50 (eff.)	Centre of roof (centre) Centre of roof, rear (15-30 cm from edge of rear window in centre of vehicle)
70 cm band	50 (eff.)	Centre of roof (centre) Centre of roof, rear (15-30 cm from edge of rear window in centre of vehicle)
Telephone, 900 MHz GSM	20 (PEP)	Centre of roof (centre) Centre of roof, rear (same as radio, telephone and navigation system aerial -R52-)
Telephone, 1800 MHz GSM	10 (PEP)	Centre of roof (centre) Centre of roof, rear (same as radio, telephone and navigation system aerial -R52-)

eff. = effective transmission power

PEP = Peak Envelope Power

WARNING

If radio communication systems with higher output are installed, or if the aerial is not fitted at one of the locations specified in the table, the operating permit for the vehicle may be void.

1.17 Transmission power levels and aerial fitting locations for A6 (from model year 1998 up to model year 2004)

Saloon

Designation	P_{max} (Watt)	Specified aerial fitting locations
Short wave (< 54 MHz)	100 (PEP)	Centre of rear lid Rear bumper
4 m band	20 (eff.)	Rear of roof (22 cm from edge of window in centre of vehicle) Rear left wing
2 m band	50 (eff.)	Centre of rear lid Rear bumper Rear right wing
2 m band	20 (eff.)	Rear of roof (22 cm from edge of window in centre of vehicle) Rear left or right wing
70 cm band	50 (eff.)	Centre of rear lid Rear right wing
Telephone, 450 MHz GSM	25 (eff.)	Rear left or right wing Rear window, top edge of window „onglass“
Telephone, 900 MHz GSM	20 (PEP)	Rear left wing Rear window, top edge of window „onglass“ Rear left or right side window
Telephone, 1800 MHz GSM	10 (PEP)	Rear left wing Rear window, top edge of window „onglass“ Rear left or right side window

eff. = effective transmission power

PEP = Peak Envelope Power

WARNING

If radio communication systems with higher output are installed, or if the aerial is not fitted at one of the locations specified in the table, the operating permit for the vehicle may be void.

Avant

Designation	P_{max} (Watt)	Specified aerial fitting locations
Short wave (< 54 MHz)	100 (PEP)	Centre of roof (rear) Rear bumper
4 m band	20 (eff.)	Centre of roof (rear)
2 m band	50 (eff.)	Centre of roof (rear) Rear right side panel
2 m band	20 (eff.)	Centre of roof (rear) Rear left or right side panel
70 cm band	50 (eff.)	Centre of roof (rear) Rear right side panel
Telephone, 450 MHz GSM	25 (eff.)	Centre of roof, rear (same as radio, telephone and navigation system aerial -R52-) Rear left or right side window „onglass“
Telephone, 900 MHz GSM	20 (PEP)	Centre of roof, rear (same as radio, telephone and navigation system aerial -R52-) Rear left or right side window „onglass“

Designation	P_{max} (Watt)	Specified aerial fitting locations
Telephone, 1800 MHz GSM	10 (PEP)	Centre of roof, rear (same as radio, telephone and navigation system aerial -R52-) Rear left or right side window „onglass“

eff. = effective transmission power

PEP = Peak Envelope Power

WARNING

If radio communication systems with higher output are installed, or if the aerial is not fitted at one of the locations specified in the table, the operating permit for the vehicle may be void.

1.18 Transmission power levels and aerial fitting locations for A6 (from model year 2005 onwards)

Saloon

Designation	P_{max} (Watt)	Specified aerial fitting locations
Short wave (< 54 MHz)	100 (PEP)	Rear bumper Edge of roof (centre) near rear window
4 m band	20 (eff.)	Rear left wing Edge of roof (centre) near rear window
2 m band	50 (eff.)	Rear left wing Edge of roof (centre) near rear window
70 cm band	50 (eff.)	Rear left wing Edge of roof (centre) near rear window
Telephone, 900 MHz GSM	20 (PEP)	Rear left wing Edge of roof (centre) near rear window
Telephone, 1800 MHz GSM	10 (PEP)	Rear left wing Edge of roof (centre) near rear window

eff. = effective transmission power

PEP = Peak Envelope Power

WARNING

If radio communication systems with higher output are installed, or if the aerial is not fitted at one of the locations specified in the table, the operating permit for the vehicle may be void.

Avant

Designation	P_{max} (Watt)	Specified aerial fitting locations
Short wave (< 54 MHz)	100 (PEP)	Rear bumper Edge of roof (centre) near rear window
4 m band	20 (eff.)	Rear left side panel Edge of roof (centre) near rear window
2 m band	50 (eff.)	Rear left side panel Edge of roof (centre) near rear window

Designation	P_{max} (Watt)	Specified aerial fitting locations
70 cm band	50 (eff.)	Rear left side panel Edge of roof (centre) near rear window
Telephone, 900 MHz GSM	20 (PEP)	Rear left side panel Edge of roof (centre) near rear window
Telephone, 1800 MHz GSM	10 (PEP)	Rear left side panel Edge of roof (centre) near rear window

eff. = effective transmission power

PEP = Peak Envelope Power

> ⚠ WARNING
>
> *If radio communication systems with higher output are installed, or if the aerial is not fitted at one of the locations specified in the table, the operating permit for the vehicle may be void.*

1.19 Transmission power levels and aerial fitting locations for A8 (from model year 1994 up to model year 2002)

Designation	P_{max} (Watt)	Specified aerial fitting locations
Short wave (< 54 MHz)	100 (PEP)	Rear bumper
4 m band	20 (eff.)	Rear right wing
2 m band	50 (eff.)	Rear bumper Rear right wing
2 m band	20 (eff.)	Rear left or right wing
70 cm band	50 (eff.)	Rear right wing
Telephone, 450 MHz GSM	25 (eff.)	Rear left or right wing Rear window, top edge of window „onglass“
Telephone, 900 MHz GSM	20 (PEP)	Rear left wing Rear window, top edge of window „onglass“ Rear left or right side window
Telephone, 1800 MHz GSM	10 (PEP)	Rear left wing Rear window, top edge of window „onglass“ Rear left or right side window

eff. = effective transmission power

PEP = Peak Envelope Power

> ⚠ WARNING
>
> *If radio communication systems with higher output are installed, or if the aerial is not fitted at one of the locations specified in the table, the operating permit for the vehicle may be void.*

1.20 Transmission power levels and aerial fitting locations for A8 (from model year 2003 onwards)

Designation	P_{max} (Watt)	Specified aerial fitting locations
Short wave (< 54 MHz)	100 (PEP)	Towing bracket
4 m band	20 (eff.)	Rear left or right wing

Designation	P_{max} (Watt)	Specified aerial fitting locations
2 m band	50 (eff.)	Rear left or right wing
70 cm band	50 (eff.)	Rear right wing
Telephone, 900 MHz GSM	20 (PEP)	Rear left wing Top right of rear window (in black area) „onglass“
Telephone, 1800 MHz GSM	10 (PEP)	Rear left wing Top right of rear window (in black area) „onglass“

eff. = effective transmission power

PEP = Peak Envelope Power

WARNING

If radio communication systems with higher output are installed, or if the aerial is not fitted at one of the locations specified in the table, the operating permit for the vehicle may be void.

1.21 Transmission power levels and aerial fitting locations for A8 (from model year 2010 onwards)

Designation	P_{max} (Watt)	Specified aerial fitting locations
Short wave (< 54 MHz)	100 (PEP)	Towing bracket
4 m band	20 (eff.)	Rear left or right wing
2 m band	50 (eff.)	Rear left or right wing
70 cm band	50 (eff.)	Rear right wing
Telephone, 900 MHz GSM	20 (PEP)	Centre of roof, rear (position for roof aerial -R216-)
Telephone, 1800 MHz GSM	10 (PEP)	Centre of roof, rear (position for roof aerial -R216-)

eff. = effective transmission power

PEP = Peak Envelope Power

WARNING

If radio communication systems with higher output are installed, or if the aerial is not fitted at one of the locations specified in the table, the operating permit for the vehicle may be void.

1.22 Transmission power levels and aerial fitting locations for Q5 (from model year 2008 onwards)

Designation	P_{max} (Watt)	Specified aerial fitting locations
Short wave (< 54 MHz)	100 (PEP)	Towing bracket
4 m band	20 (eff.)	Centre of roof (centre) Centre of roof (rear)
2 m band	50 (eff.)	Centre of roof (centre) Centre of roof (rear)
70 cm band	50 (eff.)	Centre of roof (rear)
Telephone, 900 MHz GSM	20 (PEP)	Centre of roof (rear)
Telephone, 1800 MHz GSM	10 (PEP)	Centre of roof (rear)

eff. = effective transmission power

PEP = Peak Envelope Power

WARNING

If radio communication systems with higher output are installed, or if the aerial is not fitted at one of the locations specified in the table, the operating permit for the vehicle may be void.

1.23 Transmission power levels and aerial fitting locations for Q7 (from model year 2007 onwards)

Designation	P_{max} (Watt)	Specified aerial fitting locations
Short wave (< 54 MHz)	100 (PEP)	Towing bracket
4 m band	20 (eff.)	Centre of roof (centre) Centre of roof (rear)
2 m band	50 (eff.)	Centre of roof (centre) Centre of roof (rear)
70 cm band	50 (eff.)	Centre of roof (rear)
Telephone, 900 MHz GSM	20 (PEP)	Centre of roof (rear)
Telephone, 1800 MHz GSM	10 (PEP)	Centre of roof (rear)

eff. = effective transmission power

PEP = Peak Envelope Power

WARNING

If radio communication systems with higher output are installed, or if the aerial is not fitted at one of the locations specified in the table, the operating permit for the vehicle may be void.

1.24 Transmission power levels and aerial fitting locations for R8 (from model year 2007 onwards)

Designation	P_{max} (Watt)	Specified aerial fitting locations
CB radio (11 m band)	25 (PEP)	Centre of roof (rear)
2 m band	25 (eff.)	Centre of roof (rear)
70 cm band	25 (eff.)	Centre of roof (rear)
23 cm band	10 (PEP)	Centre of roof (rear)
Telephone, 900 MHz GSM	20 (PEP)	Centre of roof (rear)
Telephone, 1800 MHz GSM	10 (PEP)	Centre of roof (rear)

eff. = effective transmission power

PEP = Peak Envelope Power

WARNING

If radio communication systems with higher output are installed, or if the aerial is not fitted at one of the locations specified in the table, the operating permit for the vehicle may be void.

1.25 Transmission power levels and aerial fitting locations for R8 Spyder (from model year 2010 onwards)

Designation	P_{max} (Watt)	Specified aerial fitting locations
CB radio (11 m band)	10 (PEP)	Rear left or right wing
2 m band	10 (eff.)	Rear left or right wing
70 cm band	10 (eff.)	Rear left or right wing
23 cm band	10 (PEP)	Rear left or right wing
Telephone, 900 MHz GSM	10 (PEP)	Rear left or right wing
Telephone, 1800 MHz GSM	10 (PEP)	Rear left or right wing

eff. = effective transmission power

PEP = Peak Envelope Power

WARNING

If radio communication systems with higher output are installed, or if the aerial is not fitted at one of the locations specified in the table, the operating permit for the vehicle may be void.

1.26 Transmission power levels and aerial fitting locations for TT (from model year 1999 up to model year 2006)

Coupé

Designation	P_{max} (Watt)	Specified aerial fitting locations
Short wave (< 54 MHz)	100 (PEP)	Rear bumper
4 m band	20 (eff.)	Rear left wing
2 m band	50 (eff.)	Rear of roof (12 cm from roof edge in centre of vehicle) Rear left wing
70 cm band	50 (eff.)	Rear left wing
Telephone, 450 MHz GSM	25 (eff.)	Rear left wing Rear of roof (12 cm from roof edge in centre of vehicle) Rear window, top edge of window „onglass“
Telephone, 900 MHz GSM	20 (PEP)	Rear left wing Rear of roof (12 cm from roof edge in centre of vehicle) Rear window, top edge of window „onglass“ Rear left or right side windows
Telephone, 1800 MHz GSM	10 (PEP)	Rear left wing Rear of roof (12 cm from roof edge in centre of vehicle) Rear window, top edge of window „onglass“ Rear left or right side windows

eff. = effective transmission power

PEP = Peak Envelope Power

WARNING

If radio communication systems with higher output are installed, or if the aerial is not fitted at one of the locations specified in the table, the operating permit for the vehicle may be void.

Roadster

Designation	P_{max} (Watt)	Specified aerial fitting locations
Short wave (< 54 MHz)	10 (PEP)	Rear bumper
4 m band	10 (eff.)	Centre of rear lid Rear left wing
2 m band	10 (eff.)	Centre of rear lid Rear left wing
70 cm band	10 (eff.)	Centre of rear lid Rear bumper
Telephone, 450 MHz GSM		Centre of rear lid Rear left wing
Telephone, 900 MHz GSM	10 (PEP)	Rear left wing
Telephone, 1800 MHz GSM	10 (PEP)	Rear left wing

eff. = effective transmission power

PEP = Peak Envelope Power

WARNING

If radio communication systems with higher output are installed, or if the aerial is not fitted at one of the locations specified in the table, the operating permit for the vehicle may be void.

1.27 Transmission power levels and aerial fitting locations for TT (from model year 2007 onwards)

Coupé

Designation	P_{max} (Watt)	Specified aerial fitting locations
Short wave (< 54 MHz)	100 (PEP)	Rear bumper
4 m band	20 (eff.)	Rear left wing
2 m band	50 (eff.)	Centre of roof (rear) Rear left wing
70 cm band	50 (eff.)	Rear left wing
Telephone, 900 MHz GSM	20 (PEP)	Centre of roof (rear) Rear left wing Rear window, top edge of window „onglass“ Rear left or right side windows
Telephone, 1800 MHz GSM	10 (PEP)	Centre of roof (rear) Rear left wing Rear window, top edge of window „onglass“ Rear left or right side windows

Designation	P_{max} (Watt)	Specified aerial fitting locations
Bluetooth (2400-2483 MHz)	500 mW	Under front passenger's seat
UMTS	10 W	Centre of roof (rear)
Short-range radar (76.5 GHz)	< 10 mW	Behind radiator grille

eff. = effective transmission power

PEP = Peak Envelope Power

WARNING

If radio communication systems with higher output are installed, or if the aerial is not fitted at one of the locations specified in the table, the operating permit for the vehicle may be void.

Roadster

Designation	P_{max} (Watt)	Specified aerial fitting locations
Short wave (< 54 MHz)	10 (PEP)	Centre of rear lid Rear bumper
4 m band	10 (eff.)	Centre of rear lid Rear left wing
2 m band	10 (eff.)	Centre of rear lid Rear left wing
70 cm band	10 (eff.)	Centre of rear lid Rear bumper
Telephone, 900 MHz GSM	10 (PEP)	Top centre of windscreen
Telephone, 1800 MHz GSM	10 (PEP)	Top centre of windscreen
Bluetooth (2400-2483 MHz)	500 mW	Under front passenger's seat
UMTS	10 mW	Top centre of windscreen
Short-range radar (76.5 GHz)	< 10 mW	Behind radiator grille

eff. = effective transmission power

PEP = Peak Envelope Power

WARNING

If radio communication systems with higher output are installed, or if the aerial is not fitted at one of the locations specified in the table, the operating permit for the vehicle may be void.

1.28 Transmission power levels and aerial fitting locations for A1 (from model year 2010 onwards)

Designation	P_{max} (Watt)	Specified aerial fitting locations
2 m band	50 (eff.)	Centre of roof (rear)
70 cm band	50 (eff.)	Centre of roof (rear)
Telephone, 900 MHz GSM	20 (PEP)	Centre of roof (front or rear)
23 cm band	25 (PEP)	Centre of roof (rear)

Designation	P_{max} (Watt)	Specified aerial fitting locations
Telephone, 1800 MHz GSM	10 (PEP)	Centre of roof (front or rear)
UMTS	10 (PEP)	Centre of roof (front or rear)

eff. = effective transmission power

PEP = Peak Envelope Power

WARNING

If radio communication systems with higher output are installed, or if the aerial is not fitted at one of the locations specified in the table, the operating permit for the vehicle may be void.

1.29 Transmission power levels and aerial fitting locations for A7 Sportback (from model year 2011 onwards)

Designation	P_{max} (Watt)	Specified aerial fitting locations
Short wave (< 54 MHz)	100 (PEP)	Towing bracket
4 m band	20 (eff.)	Centre of roof, rear (near rear window) Rear left wing (10 to 30 cm from rear edge of vehicle)
2 m band	50 (eff.)	Centre of roof, rear (near rear window) Rear left wing (10 to 30 cm from rear edge of vehicle)
70 cm band	50 (eff.)	Centre of roof, rear (near rear window) Rear left wing (10 to 30 cm from rear edge of vehicle)
Telephone, 900 MHz GSM	20 (PEP)	Centre of roof, rear (position for roof aerial -R216- , standard)
Telephone, 1800 MHz GSM	10 (PEP)	Centre of roof, rear (position for roof aerial -R216- , standard)

eff. = effective transmission power

PEP = Peak Envelope Power

WARNING

If radio communication systems with higher output are installed, or if the aerial is not fitted at one of the locations specified in the table, the operating permit for the vehicle may be void.