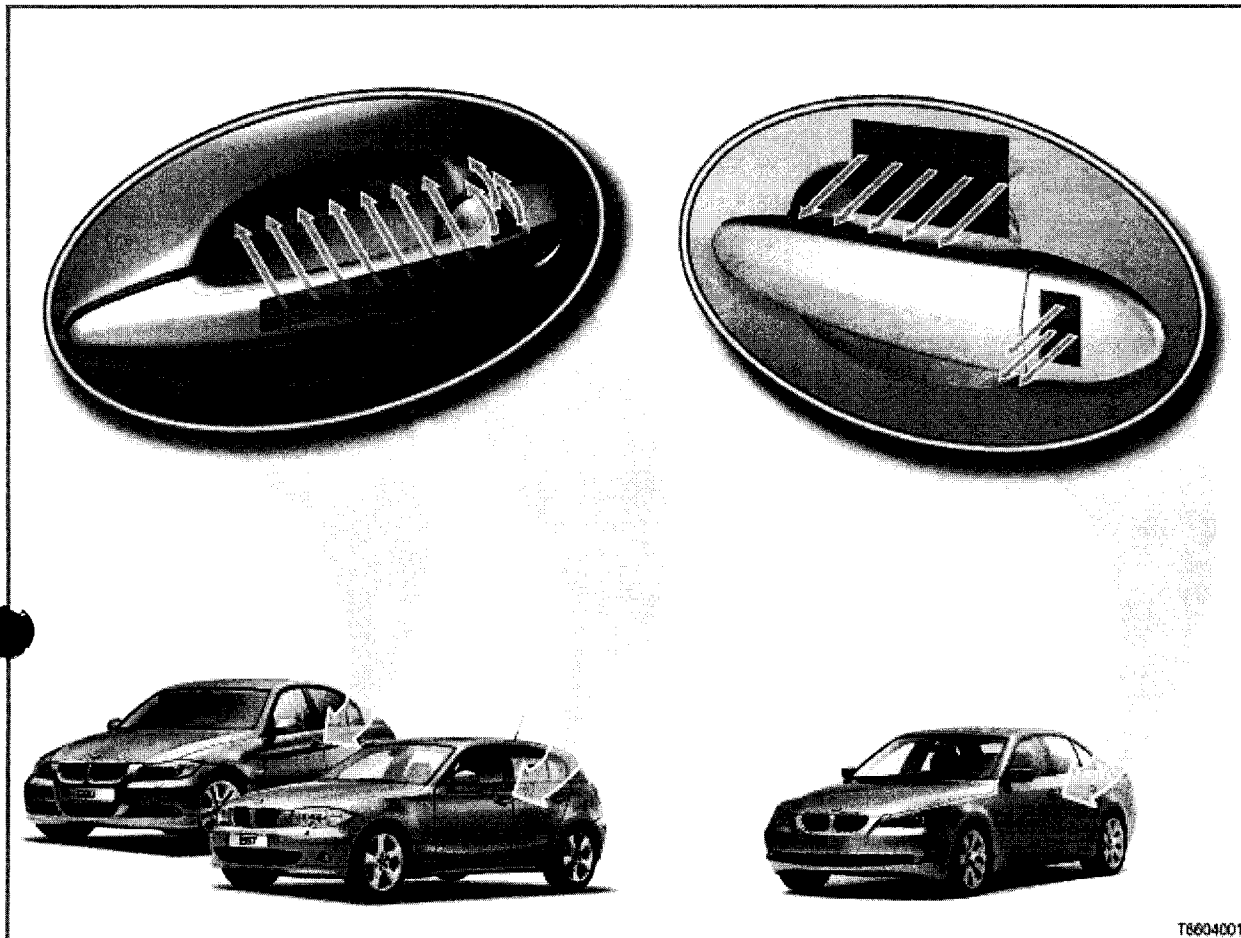


## Comfort Access

E60, E61, E63, E64, E87, E90, E91



### Introduction

The BMW 1-Series and BMW 3-Series can be equipped with option 322 "Comfort Access".

The illustration shows the comfort system on the BMW 7-Series.

The BMW 1-Series and the new BMW 3-Series enjoy a leading position in their class of vehicle, including when it comes to comfort.

From 09/2005, Comfort Access will also be introduced on the BMW 5-Series and BMW 6-Series. The system has been taken from the BMW 3-Series, albeit with a few modifications.

With Comfort Access, an ID transmitter is needed instead of the usual remote control. The ID transmitter also performs standard remote control functions.

Comfort Access can be used to carry out the following functions:

#### Passive Entry

Opening the vehicle or luggage compartment without actively using the ID transmitter

#### - Passive Go

Engine start without actively using the ID transmitter

#### - **Passive Exit**

Closing the vehicle without actively using the ID transmitter

Comfort Access prevents an ID transmitter being disabled accidentally.

The CAS control unit is the master control unit for all functions carried out via Comfort Access. Vehicles with Comfort Access are fitted with a CA control unit.

>E87, E90, E91

[system overview ...]

> E60, E61, E63, E64

[system overview ...]

#### **New or modified for the E90/E91 compared to E87:**

- The detection range of the interior aerials has been modified as a consequence of the different vehicle design.
- The remote control receiver is integrated in the aerial amplifier.

#### **New or modified for the E60, E61, E63, E64:**

- The outside door handle electronics is on the reverse of the door handle mounting bracket.
- The CA control unit is installed in the carrier behind the glove compartment.

#### **Brief description of components**

The following components are described for Comfort Access:

#### - **Internal and exterior aerials**

Different aerials are required for communication with the ID transmitter: Internal and exterior aerials.

The number of aerials depends on the model concerned:

<b>Interior aerials</b>	<b>E60</b>	<b>E61</b>	<b>E63</b>	<b>E64</b>	<b>E87</b>	<b>E90</b>	<b>E91</b>
Front centre console	x	x	x	x	x	x	x
Rear centre console	x	x	x	x	x	x	x
Rear window shelf (parcel shelf)	x	---	x	---	---	---	---
Back of rear seat	---	x	---	---	---	---	---
Luggage compartment, middle	x	x	x	---	x	x	x
Luggage compartment, right	---	---	x	x	---	---	---
Luggage compartment, load edge	---	x	---	---	---	---	---
<b>Exterior aerials</b>	<b>E60</b>	<b>E61</b>	<b>E63</b>	<b>E64</b>	<b>E87</b>	<b>E90</b>	<b>E91</b>
Rear bumper, left	x	---	x	x	---	---	---
Rear bumper, middle	---	x	---	---	x	x	x
Outside door handle electronics	4	4	2	2	2	2	2

The aerials emit 125 kHz radio signals which are evaluated by the ID transmitter.

[more ...]

#### - **Outside door handle electronics**

The number of outside door handle electronic units depends on the model concerned (see table above).

The 3 sensors in the outside door handle electronics send the following signals to the CAS control unit and the CA control unit:

- Unlock: When a hand reaches into the handle recess via capacitive sensor 1
- Unlock: When a hand pulls on the outside door handle via tension sensor (redundant to capacitive sensor 1)
- Locking and deadlocking: On contact with the sensitive area of the door handle via capacitive sensor 2

A built-in aerial also sends radio signals in order to check for an ID transmitter located on the outside of the driver's door or front-passenger door.

> E87, E90, E91

The outside door handle electronics are installed in the bow handle.

[more ...]

> E60, E61, E63, E64

The outside door handle electronics are behind the grip recess plate.

[more ...]

#### **ID transmitter**

The ID transmitter evaluates the signals from the aerials. It also sends high-frequency radio signals to the FBD receiver.

Inserting the ID transmitter into the insert compartment deactivates all Comfort Access functions.

#### - **Receiver for remote control services**

The receiver for remote control services (FBD receiver) is, in the E87 and E64, located in the interior mirror. In all other models, the FBD receiver is installed in the aerial amplifier. The FBD receiver receives the radio signals from the ID transmitter and forwards them to the CAS control unit. The Comfort Access control unit (CA control unit) activates the FBD receiver.

#### - **CAS control unit**

The CAS control unit is the master control unit for all Comfort Access functions. The CAS control unit is the interface to the START-STOP button as well as to the insert compartment for the ID transmitter. The electronic steering lock is also activated by the CAS control unit.

The CAS control unit is connected with the following components via the K-bus (sub-bus):

- Outside door handle electronics (number depends on model concerned)
- Comfort Access control unit (CA control unit)
- Electronic steering lock

When the vehicle is idle, communication may take place on the K-bus without waking up the vehicle.

#### - **START-STOP button**