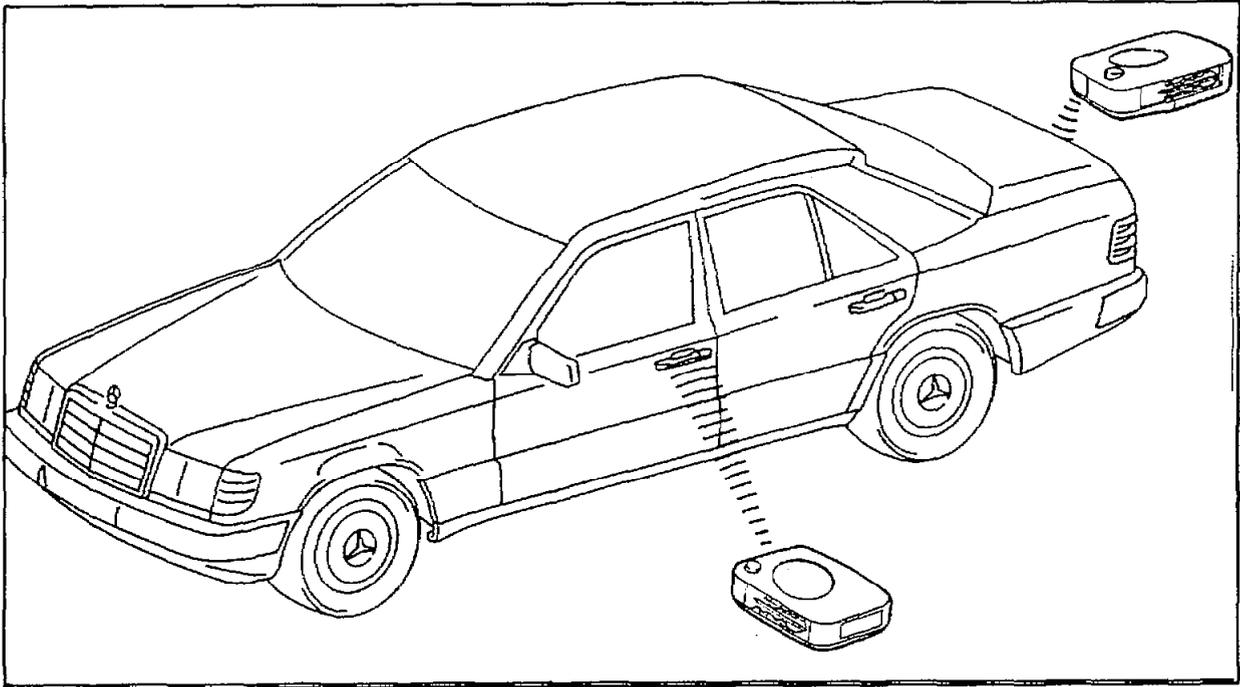


A. General



P80-5091-55

To improve convenience of operation, the central locking system and anti-theft warning system can be operated by an infrared transmitter in the key head. In addition, any side windows which may have been left open can be closed or opened again within 10 s after locking with the central locking system.

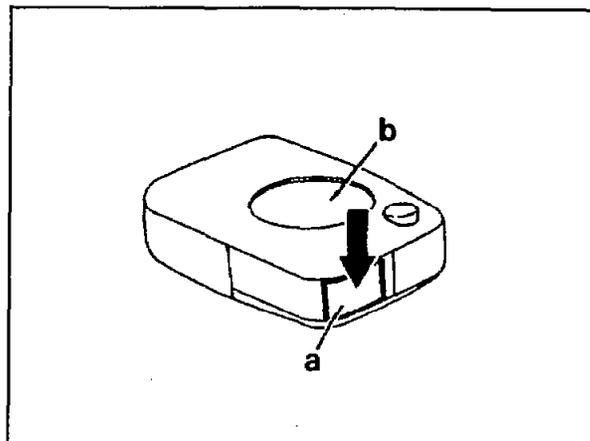
All processes are displayed by indicator lamps. When the transmitter batteries are fully charged, remote control is possible up to a distance of approx. 6 m, remote control of the convenience feature is possible up to a distance of approx. 3 m.

The receivers are located at the locking cylinders on the driver's door or next to the locking cylinder of the trunk lid. The front passenger's door only has a mechanical locking cylinder.

B. Operation

Unlocking the central locking system and disarming the anti-theft warning system

Hold transmitter with the transmitter window (a) in the direction of a receiver on the vehicle up to a distance of 6 m away. Press button (b) briefly, green indicator lamp flashes on the receiver above which unlocking has taken place. As soon as all commands have been carried out, the green indicator lamp goes out after approx. 3 seconds.



P80-2011-13

Locking the central locking system and arming the anti-theft warning system

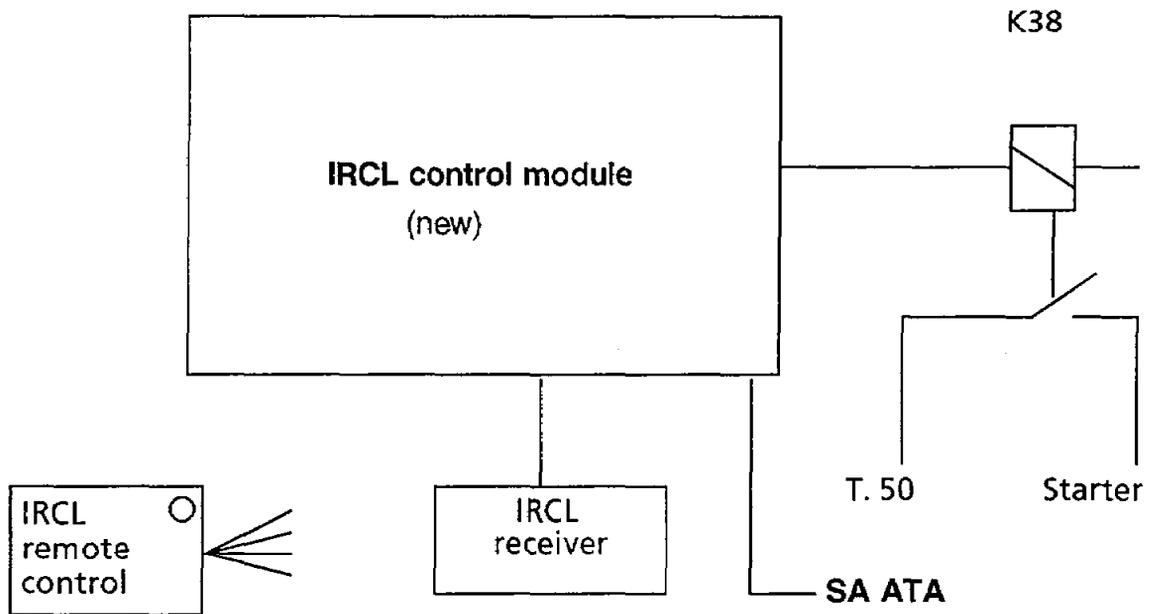
As when unlocking, point the transmitter window (a) at the receiver. Press button (b) briefly, the red lamp flashes on the receiver above which the door has been locked. As soon as all commands have been carried out, the red lamp goes out after approx. 3 seconds. If it is not possible to carry out a command, e.g. because a door or trunk lid is not completely closed, the red indicator lamp continues to flash for up to approx. 10 seconds, on vehicles for \textcircled{D} as of 03/94 or vehicles with code 885 the lamp flashes for approx. 3 seconds. After closing the door or trunk lid correctly the central locking system must first be unlocked and then locked again.

Closing windows and tilting/sliding roof with infrared remote control

When locking, hold down button (b) on the transmitter. After about 1 second any windows which may have been left open begin to close. The closing process is interrupted, if the button on the transmitter is released or the infrared beam between the transmitter and the receiver is interrupted.

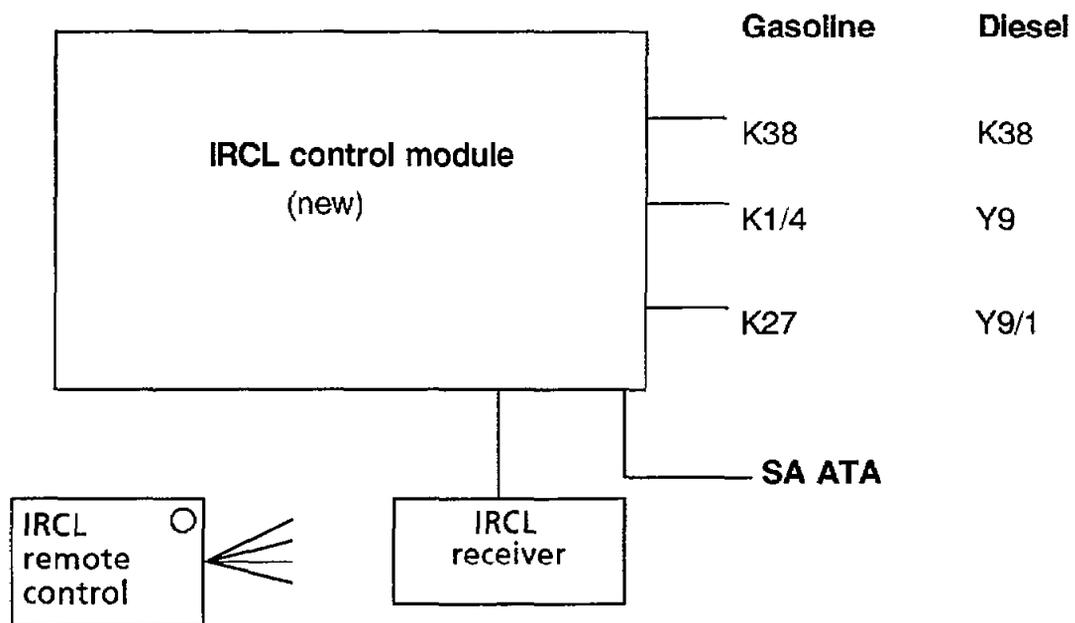
Immobilizer (vehicles for $\text{\textcircled{D}}$ as of 03/94 and vehicles with code 885)

Immobilizer stage 1a, model 124 with automatic transmission



IRCL = infrared remote control for central locking system

Immobilizer stage 1a, model 124 with manual transmission



IRCL = infrared remote control for central locking system

As of 03/94 the infrared remote control module (N54) is equipped with electrical outputs for the immobilizer function (interruption of ignition, fuel, starter or vacuum, fuel, starter).

Vehicles with automatic transmission are equipped with a starter lockout relay module (K38) for interruption of the starter circuit.

Vehicles with gasoline engine and manual transmission are equipped with an output for control of the HFM/PMS engine immobilization relay (K1/4) as well as the fuel pump relay module (K27).

Vehicles with diesel engine and manual transmission are equipped with an output for control of the fuel shut-off valve (Y9) as well as key shut-off switchover valve Y9/1).

If the vehicle is unlocked at one of the two control points with the transmitter key, the immobilization outputs are switched to ground so that the relays for solenoids pull in when the ignition is switched on allowing the vehicle to be started.

If the vehicle is locked at one of the two control points with the transmitter, the ground connection for the immobilization outputs is interrupted so that the vehicle cannot be started.

Notes

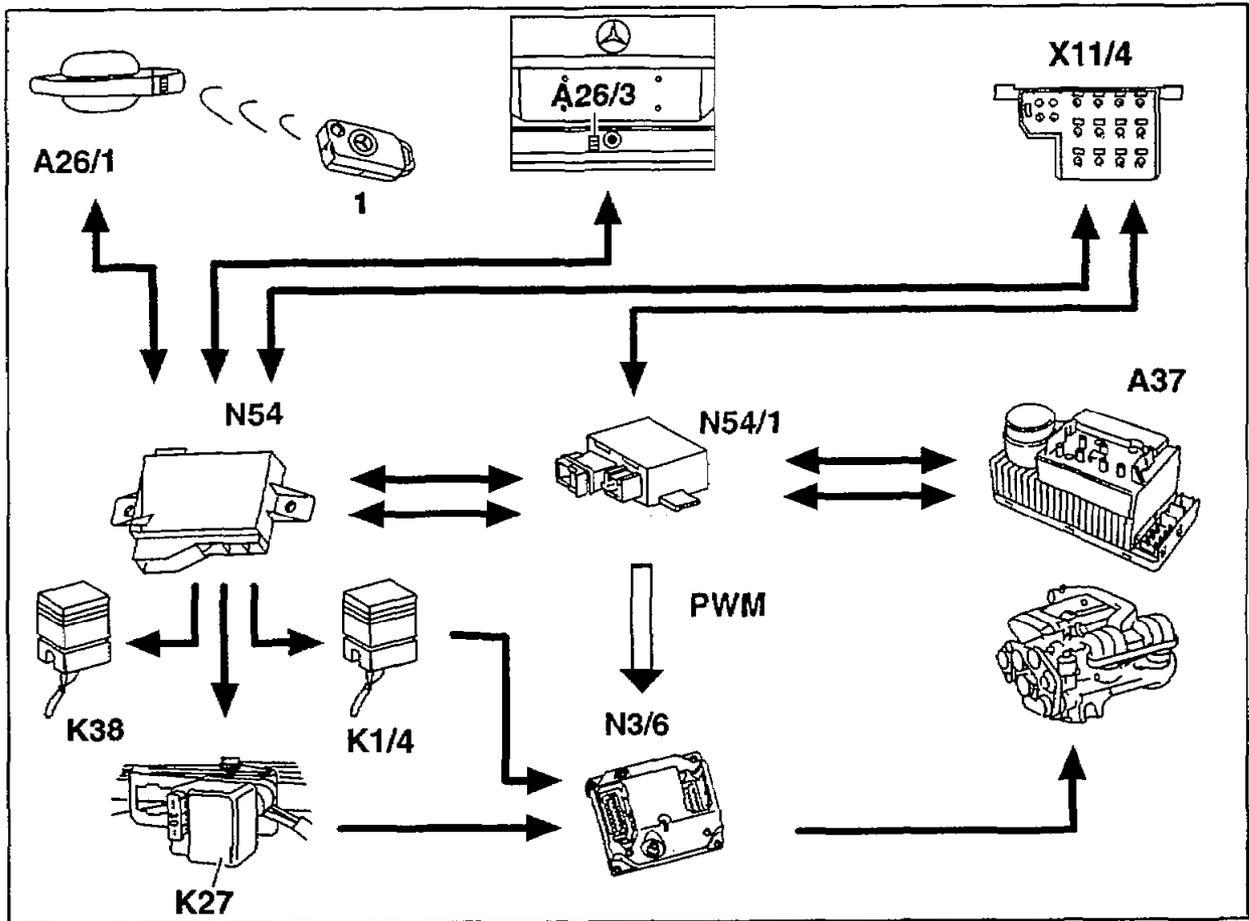
If the vehicle is unlocked with the mechanical key it cannot be started.

See diagnosis manual for checking immobilization outputs.

Model 124.06 as of 03/96

Interlinkage of components

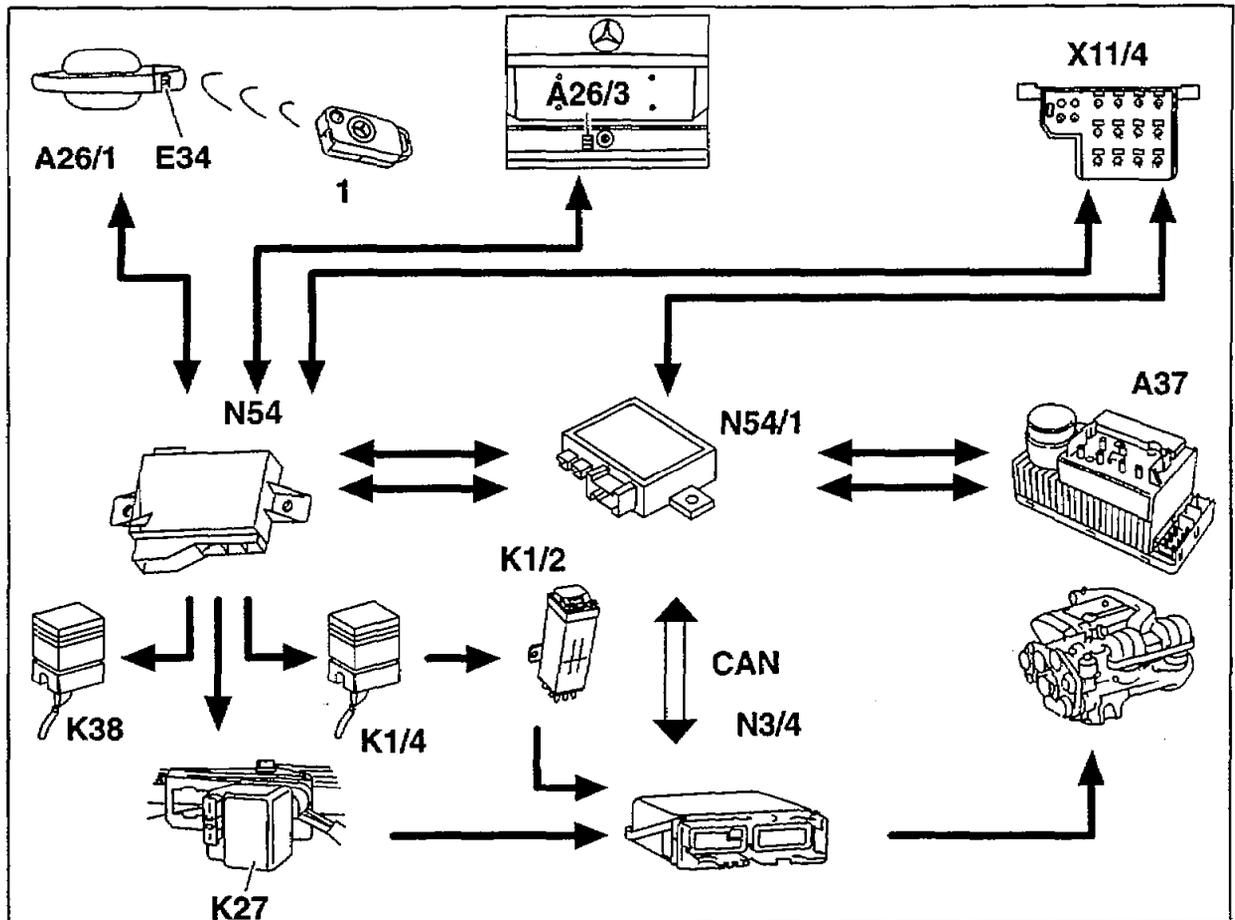
Connection, IR control module/engine control module via PWM (engines with PMS)



P80.30-0331-57

- | | | | |
|-------|-----------------------------------|-------|-----------------------------------|
| A26/1 | Left front door IR receiver | N3/6 | PEC control module |
| A26/3 | Trunk lid IR receiver | N54 | RCL control module |
| A37 | PSE control module | N54/1 | IR DAS control module |
| K1/4 | HFM-SFI interruption relay module | PWM | Pulse width modulation |
| K27 | FP relay module | X11/4 | Data link connector (DTC readout) |
| K38 | Starter lock-out relay module | 1 | IR remote control key |

Connection, IR control module/engine control module via CAN (engines with HFM-SFI)



P80.30-0332-57

A26/1	Left front door IR receiver	K1/4	Overvoltage protection relay module
A26/3	Trunk lid IR receiver	K27	FP relay module
A37	PSE control module	K38	Starter lock-out relay module
CAN	Controller area network (data bus)	N3/4	Engine control module (HFM-SFI)
K1/2	Overvoltage protection relay module	N54	RCL control module
		N54/1	IR DAS control module
		X11/4	Data link connector (DTC readout)
		1	IR remote control key

Infrared remote control for central locking

When the vehicle is locked or unlocked with the IR remote control key (1) via one of the two receiver units (A26/1 or A26/3) the coded IR signal is read in by the RCL control module (N54). If a valid IR signal is recognized, the RCL control module (N54) sends lock switch SN 1 and SN 2 signals to the IR DAS control module (N54/1). This actuates the PSE control module (A37) locking or unlocking the vehicle with the central locking feature.

The power supply for the receiver units (A26/1 and A26/3) and actuation of the indicator lamps in the receiver units is accomplished by the RCL control module (N54). The feedback is given only from the receiver unit activated by the IR remote control.

Drive authorization

After receiving a valid IR signal the following equipment is actuated depending on the engine and transmission version.

Vehicles with PEC and automatic transmission

- IR DAS control module (N54/1)
 - Engine control module (N3/6) is enabled by the PWM signal
- RCL control module (N/54)
 - The starter lockout relay module (K38) is enabled

Vehicles with PEC and manual transmission

- IR DAS control module (N54/1)
 - Engine control module (N3/6) is enabled by the PWM signal
- RCL control module (N/54)
 - The starter lockout relay module (K38) is enabled
 - FP relay module (K27) enabled
 - HFM-SFI interruption relay module (K1/4) enabled

Vehicles with HFM-SFI and automatic transmission

- IR DAS control module (N54/1)
 - Engine control module (N3/4) enabled via CAN
- RCL control module (N/54)
 - The starter lockout relay module (K38) is enabled

Vehicles with HFM-SFI and manual transmission

- IR DAS control module (N54/1)
 - Engine control module (N3/4) enabled via CAN
- RCL control module (N/54)
 - The starter lockout relay module (K38) is enabled
 - FP relay module (K27) enabled
 - HFM-SFI interruption relay module (K1/4) enabled

C. Function

The infrared remote control can only be operated with the transmitter for the vehicle, because the transmitter and the control module installed in the vehicle are matched to one another.

The transmitter transfer the signal to the receiver in the form of an infrared light beam. After receiving the light beam the receiver filters out extraneous light, amplifies the signal and transfers it on to the control module via a control line.

The remote control signal consists of a fixed code which is coded again by a processor. This additional coding changes each time it is actuated. This makes it impossible to decode the remote control signal.

The control module decodes the remote control signal and, when the fixed code is correct actuates the central locking, the convenience feature and the ATA. Simultaneously the control module sets itself for the next remote control signal locking out the previous remote control signal.

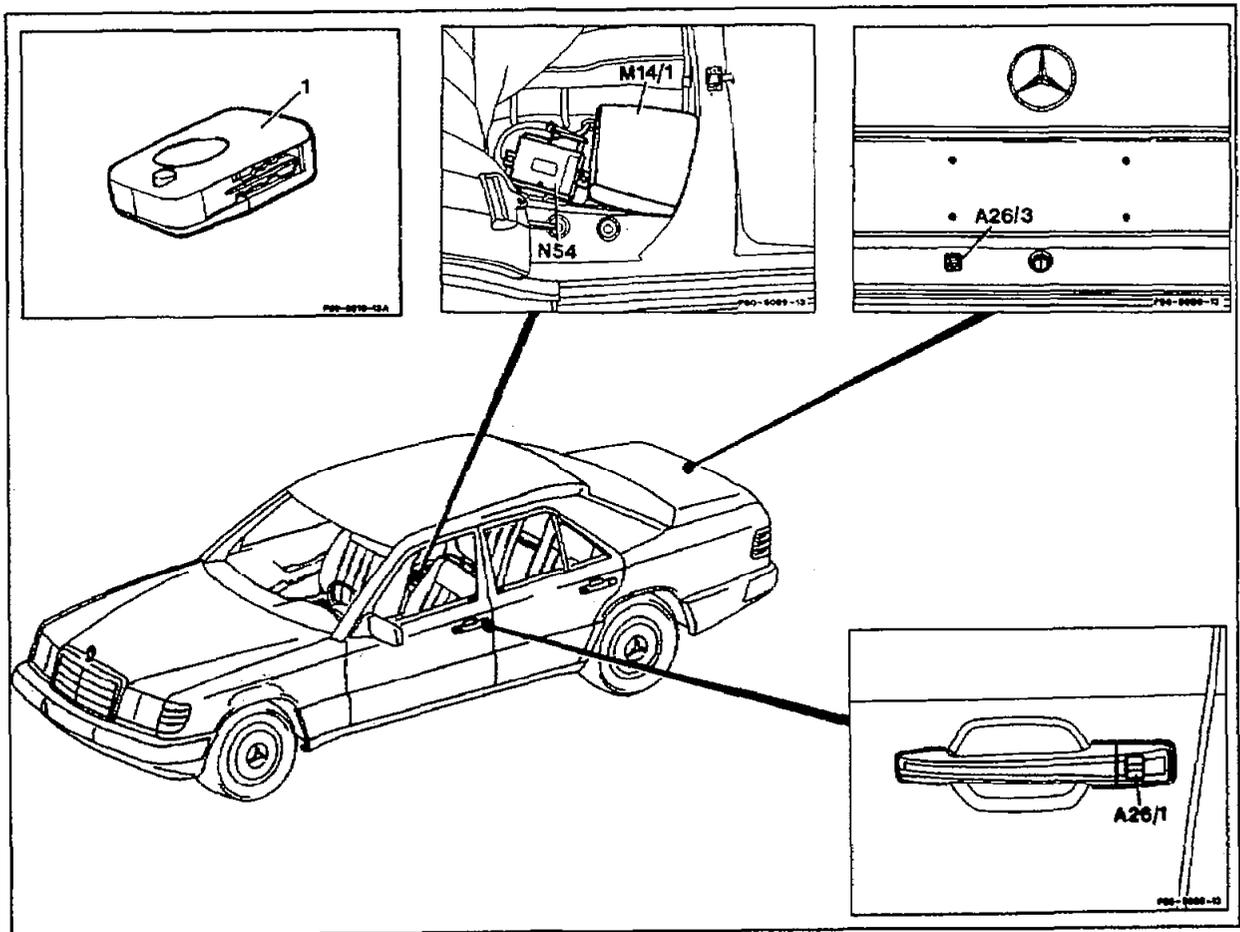
If the remote control is actuated outside of the reception range, the current remote control signal changes in the remote control, however, not in the control module. When the remote control is used again in the reception range, the remote control signal from the remote control no longer coincides with the signal expected by the control module. However, since the control module can calculate the next 250 switching operations, it automatically sets itself to the current remote control signal.

If the remote control is actuated more than 250 times outside of the reception range, it is necessary to resynchronize the remote control (see 80-420).

If a remote control key is lost, the alternating code portion of the remote control signal can be reset (desynchronized) by connecting terminal 31 on the RCL diagnostic connection to the data link connector X11/4 for 30-40 seconds with the ignition ON.

Desynchronization is also possible with the pulse counter and with the hand-held tester. This means that is only necessary to replace the mechanical lock when one of the transmitter keys is lost. Then it is necessary to resynchronize the infrared remote control for the central locking system (see 80-420).

D. Components



P80-5092-57

1 Transmitter key
 A26/1 Driver door infrared remote control (IFZ) receiver unit

A26/3 Trunk lid infrared remote control (IFZ) receiver unit
 N54 Infrared remote control module (IFZ)

Transmitter key

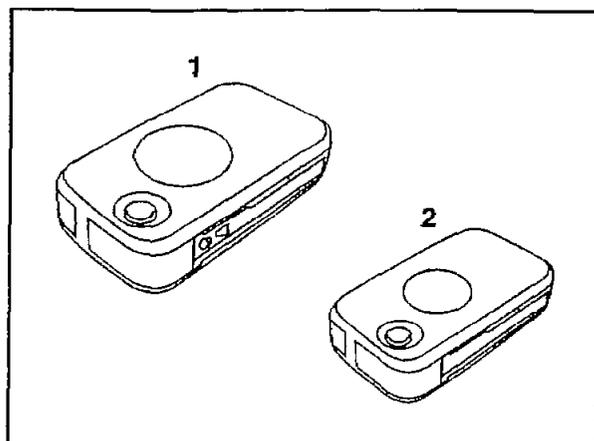
An infrared transmitter with transmitter window (a), a pushbutton for operating (b), a battery compartment (c) with four button cells and a foldable 4-way key (d) are accommodated in the key head. The key is folded out by means of a pushbutton (e). If a transmitter key is lost, it can be ordered in the usual way by specifying the locking mechanism number.

Up to 8 transmitters can be adapted to a locking mechanism by the manufacturer.

If the locking mechanism on a vehicle is replaced, the transmitter and the infrared remote control module also have to be replaced. The folding key in the transmitter can be replaced.

When the transmitter button (b) is operated continuously the transmitter switches off after about 30 seconds to avoid discharging the batteries.

As of 10/93 the size of the transmitter key was reduced by approximately 40 %. For this reason the mechanical key shaft on transmitter keys up to 09/93 are not interchangeable with those in transmitter keys as of 10/93.



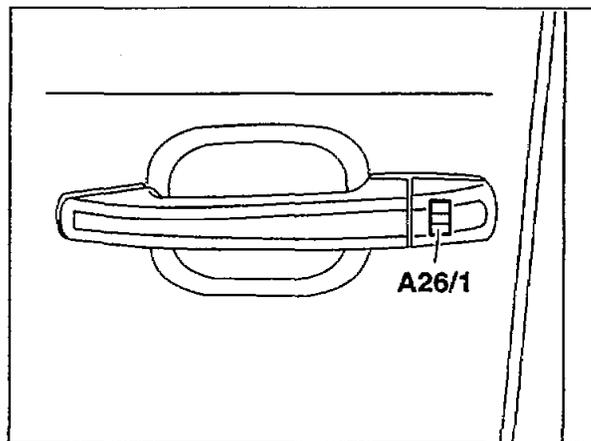
P80.30-0200-01

- 1 Transmitter key up to 09/93
- 2 Transmitter key as of 10/93

Infrared remote control (IFZ) receiver units (A26/1, A26/3)

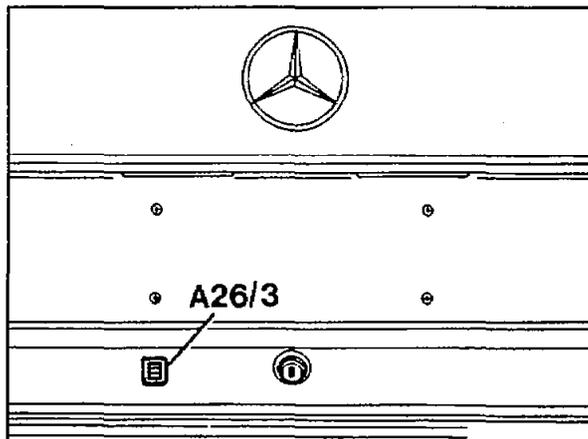
Only the infrared window (a) and the two indicator lamps, red (b) and green (c) are visible on the receiver units from outside.

The driver door infrared remote control (IFZ) receiver unit (A26/1) is located next to the door handle.



P80-5088-13

The trunk lid infrared remote control (IFZ) receiver unit (A26/3) is fixed to the rear center panel with an additional bracket in the case of W/C/A 124. In the case of S 124, the receiver unit is mounted on the trunk lock as in the 140 series and the R 129.

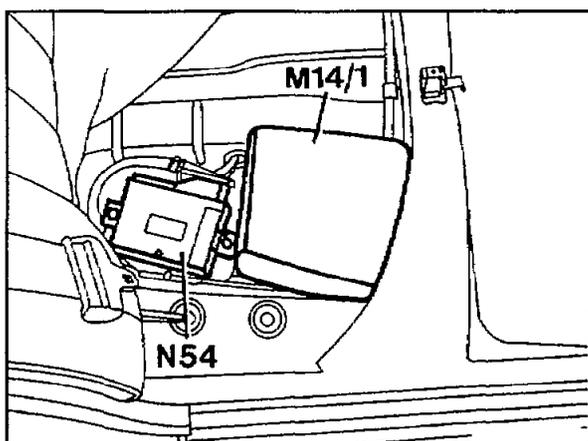


P80-5090-13

The receiver units can be replaced individually without specifying the locking mechanism number.

Infrared remote control module (N54), 124.06 only up to 02/96

The control module is attached to the right under the rear seat bench or individual rear seat. The electrical connection is equipped with a removal and insertion aid. To remove, press the locking catch and pull up the plug on the cable side. When replacing the control module or the transmitter, it is essential to specify the locking mechanism number since both parts are matched.

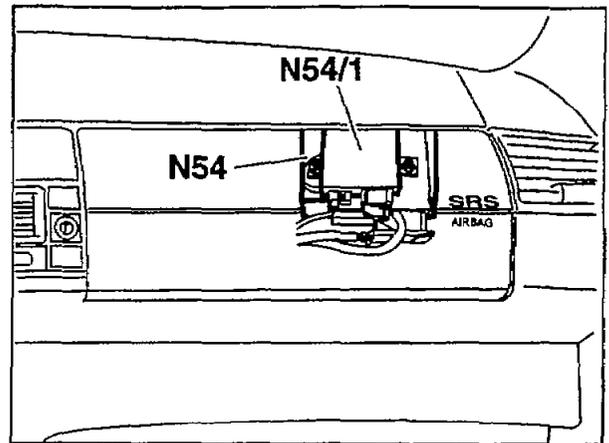


P80-5089-13

Note

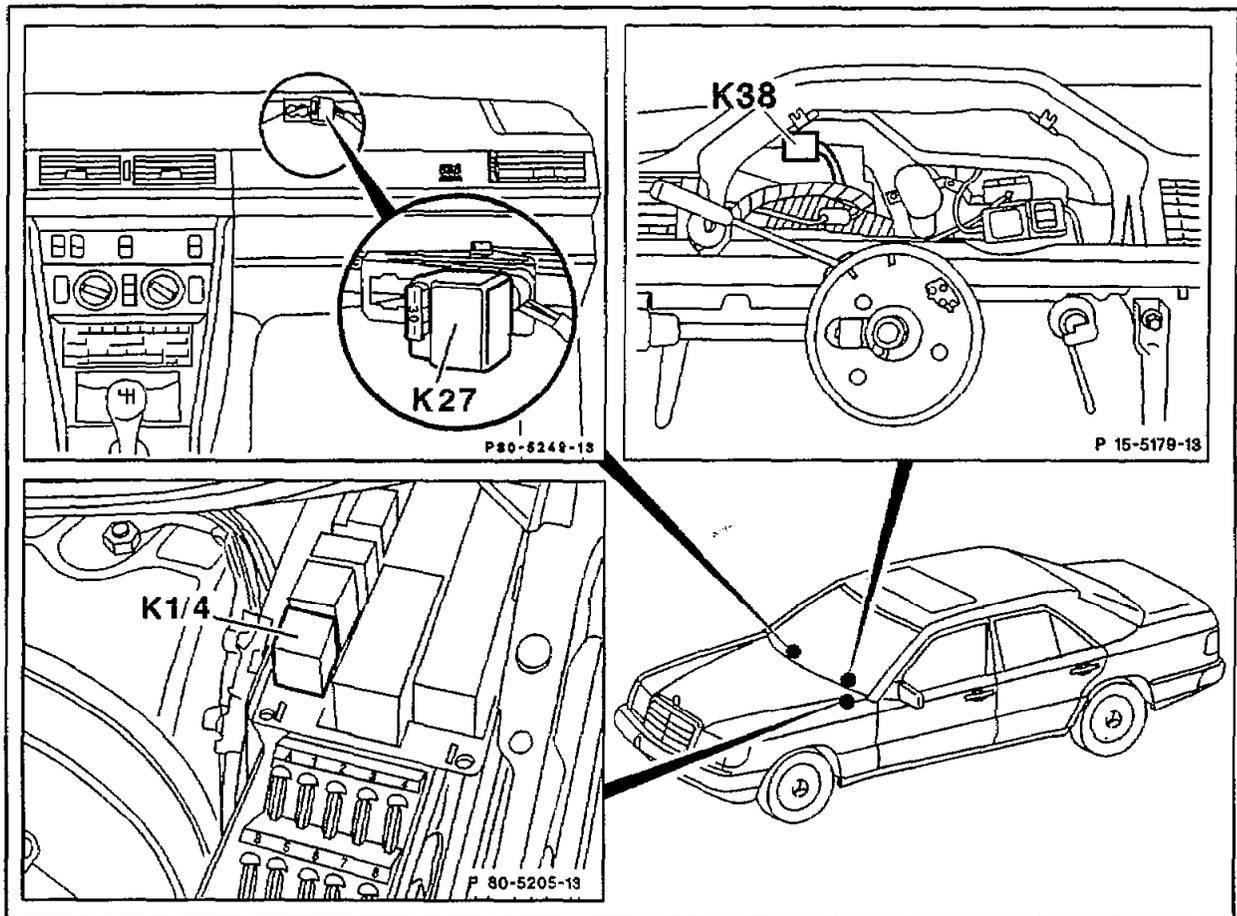
On vehicles for  as of 03/94 and vehicles with code 885 the infrared remote control module as well as the pneumatic control module with logic circuit (SN 1, SN 2) from series 202 are installed. See diagnosis manual for testing.

RCL control module (N54) and IR DAS control module (N54/1), 124.060 as of 03/96
 Both control modules are located behind the passenger airbag. The RCL control module (N54) has a 27-pin electrical connector with installation and removal aid. To disconnect press the locking catch and pull the connector up on the cable side. The IR DAS control module (N54/1) has two electrical connections. The 12-pin connection is provided with an installation and removal aid. To disconnect press the locking catch and swing the shackle over. The 2-pin connector is secured with a retainer. To disconnect press the locking catch and slide the retainer to the side.



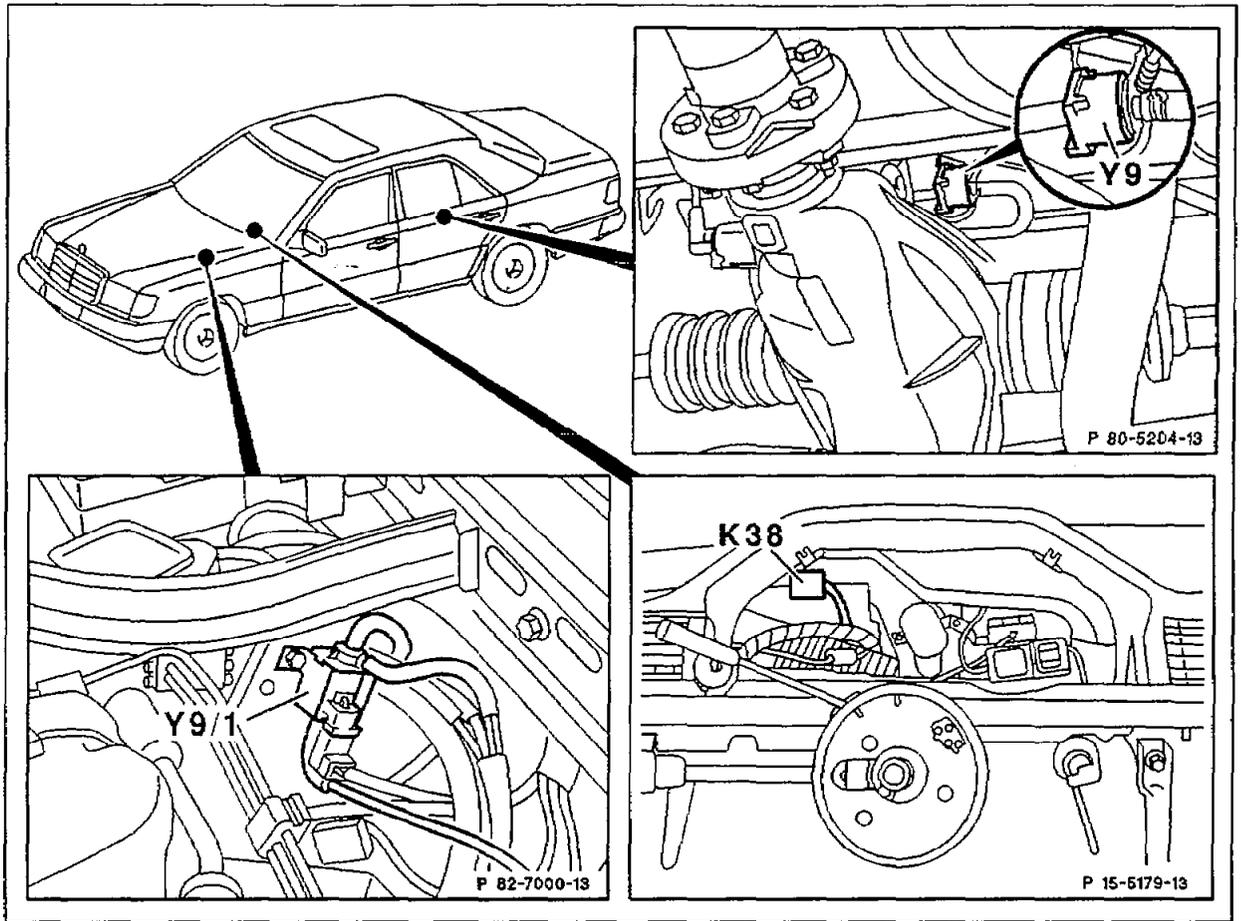
P80.30-0330-13

Location of components, immobilization (only $\text{\textcircled{D}}$ as of 03/94 and code 885)



P80-5248-57

- K1/4 HFM-SFI interruption relay module (only on vehicles with manual transmission)
- K27 FP relay module (only on vehicles with manual transmission)
- K38 Starter lock-out relay module



P80-5189-57

- K38 Starter lockout relay module
- Y9 Fuel shut-off valve (only on vehicles with manual transmission)
- Y9/1 Key shut-off switchover valve (only on vehicles with manual transmission)