Participant's Manual

Displays, Indicators and Controls E87

BMW Service

Aftersales Training

The information contained in this Participant's Manual is intended solely for the participants of this seminar run by BMW Aftersales Training.

Refer to the latest relevant "BMW Service" information for any changes/supplements to the Technical Data.

Information status: April 2004

conceptinfo@bmw.de

Participant's Manual

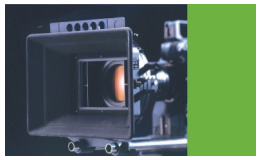
Displays, Indicators and Controls E87

Concise information at a glance

The controller also in the BMW 1 Series

Benefits for the customer "ConnectedService"

Contents



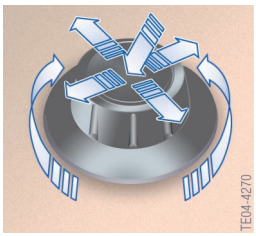
Introduction
Displays, Indicators and Controls

An inspired concept

This Participant's Manual TNU describes the display and control concept of the new BMW1 Series.

The Participant's Manual is subdivided into the following sections:

- Instrument cluster
- Central information display (CID)
- ConnectedService
- Personal profile



Depending on the equipment configuration, it is possible to operate all comfort functions and several vehicle functions via the controller in the BMW 1 Series.

Display and control concept

1 - Display, indicator and control concept

Index	Description	Index	Description
1	Steering column/steering wheel	3	Central Information Display (CID)
2	Instrument cluster	4	Controller

A classic two-dial design draws attention to both instruments. Each finished unobtrusively with two trim rings in pearl-finish chrome.

Instrument cluster

The BMW 1 Series is equipped with an instrument cluster featuring analogue instruments for:

- Road speed
- Engine speed
- Fuel level

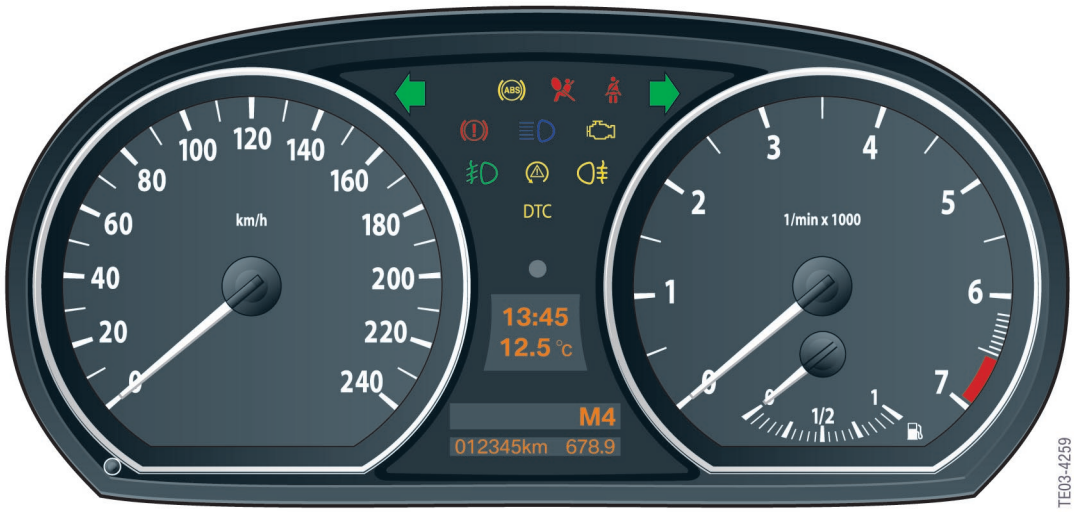
Two large pointer instruments show the road speed and engine speed.

A small pointer instrument in the rev counter indicates the current fuel level.

The scales in the instrument cluster are specific to the country, vehicle and engine.

The indicator lamps are arranged centrally in the top section between both large pointer instruments.

The LC display is located in the centre between the two large pointer instruments.



2 - Instrument cluster

Central Information Display (CID)

The smallest of the BMW models now offers the same convenient operating and control functions as the mid-range and luxury BMW models.

The central information display (CID) is the graphic display unit for the user interface of all convenience functions and several vehicle functions.

The main menu consists of four menu items:

- Communication
- Navigation
- Entertainment
- Climate control

All individual user settings are combined under the additional "Settings" menu.

The button for selecting the main menu is located behind the controller in the centre console.

As on the mid-range and luxury BMW models, the system is operated by means of the central control element, the controller.

3 - Central information display (CID)

The central information display is of identical design to that of the CID installed in the Z4 and X3.

In the BMW 1 Series, the same software is used in the central information display as in the BMW 5 Series. All functions are identical and are described in the BMW 1 Series Owner's Handbook.

TE04-4738

The KeyReader is an important ConnectedService module. Service Reception is able to read the data stored in the vehicle key with the KeyReader.

ConnectedService

ConnectedService has been part of the service concept of the BMW Group since the introduction of the BMW 7 Series.

ConnectedService is made up of several modules; some of these are already in operation while others have been further developed or introduced for the first time with the launch of the BMW 1 Series.

ConnectedService is an indication of how communications and networking between the car and Service are increasing.

TeleService1 can even make an automatic ServiceCall which informs the customer's home dealer that a service is due.

TE04-4740

4 - ConnectedService modules

Personal profile

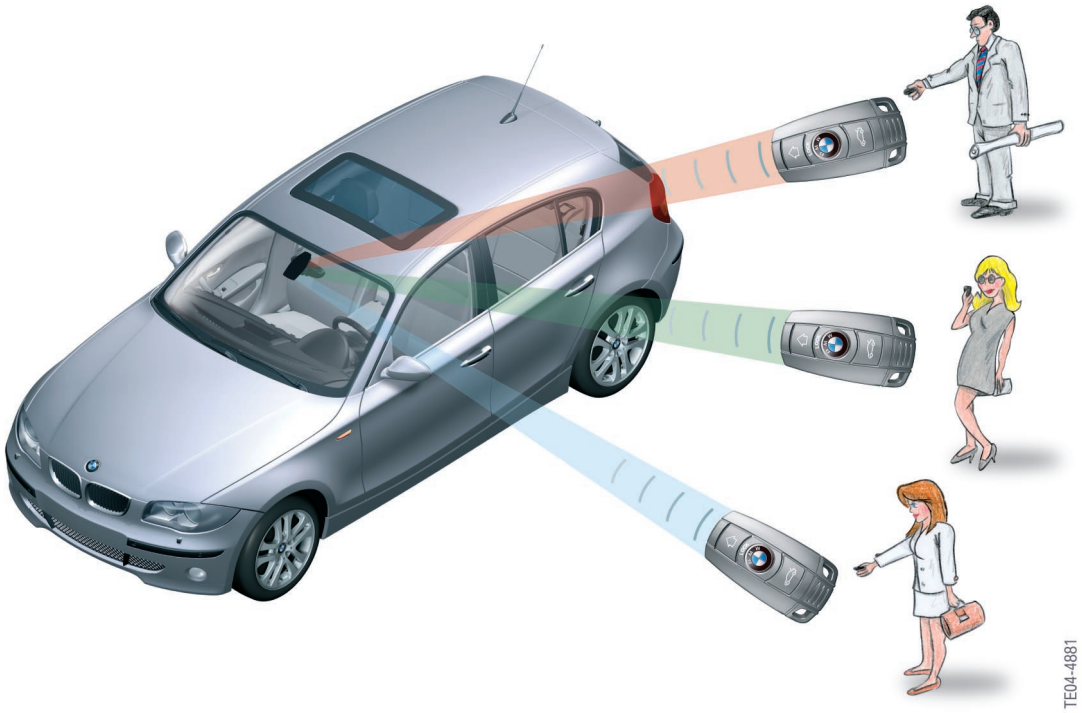
The "Personal profile" systems allows the driver to set several functions of the BMW 1 Series to suit his/her personal requirements.

Personal profile stores the data entered by the driver such as automatic setting of the outside mirrors or speed-dependent volume in the corresponding control units.

As soon as the vehicle is unlocked with the identification transmitter, the system recognizes the settings belonging to the respective identification transmitter.

Up to three different basic settings can be adapted for three different persons. The precondition is that each of the three persons has his/her own transmitter.

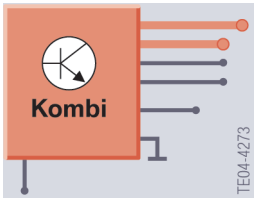
The BMW 1 Series caters for the driver's personal requirements.



5 - Personal profile

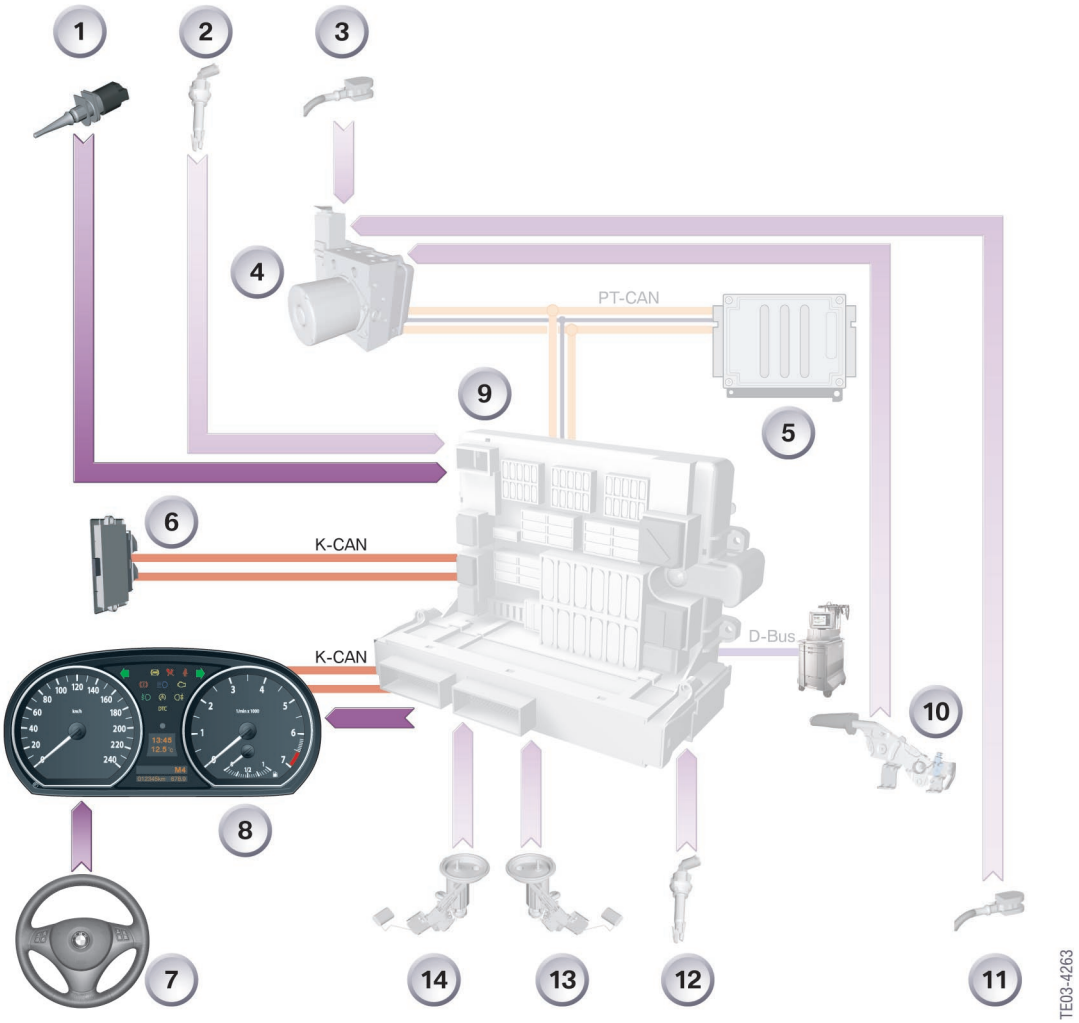
System overview
Displays, Indicators and Controls

Instrument cluster



The instrument cluster has no gateway function as on the previous model variants.

Input/output



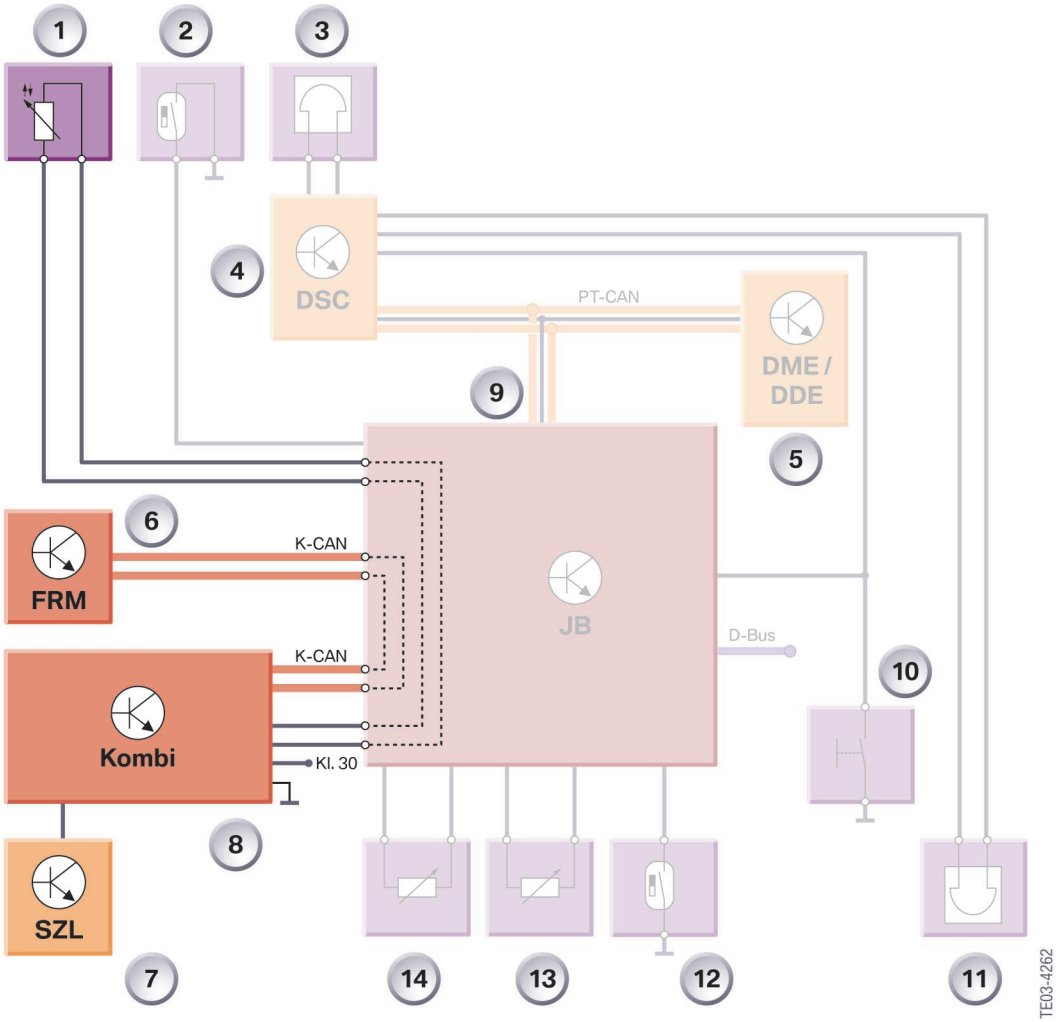
1 - Input/output

The input/output key is identical to that of the system circuit diagram and is provided after the system circuit diagram.

System circuit diagram

As can be clearly seen in the system circuit diagram, the instrument cluster on the BMW 1 Series has no gateway function.

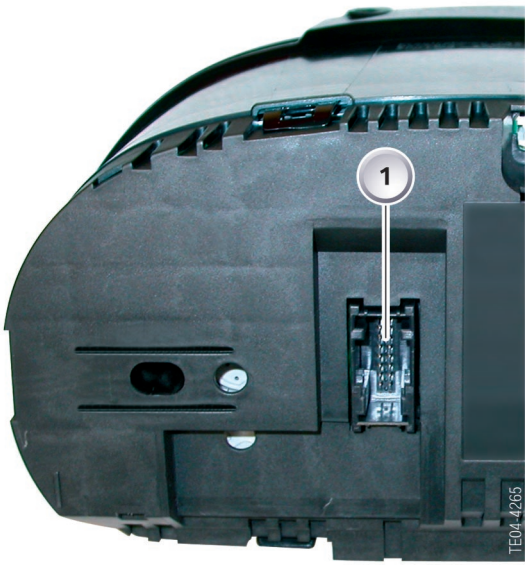
Only the temperature, the information from the steering column switch cluster and footwell module are shown directly in the display.



2 - System circuit diagram

Index	Description	Index	Description
1	Outside temperature sensor	11	Brake pad wear sensor, rear right
2	Coolant level switch	12	Washer fluid level sensor
3	Brake pad wear sensor, front left	13	Fuel level sensor, right
4	Dynamic Stability Control (DSC)	14	Fuel level sensor, left
5	Digital motor electronics DME or DDE	PT-CAN	Powertrain Controller Area Network
6	Footwell module FRM	D-bus	Diagnostics bus
7	Steering column switch cluster	K-CAN	Body Controller Area Network
8	Instrument cluster	Term. 30	Terminal 30 (power supply)
9	Junction box JB	Term. 31	Terminal 31 (ground)
10	Contact switch, handbrake		

Connector assignments of the instrument cluster



3 - 18-pin plug connection

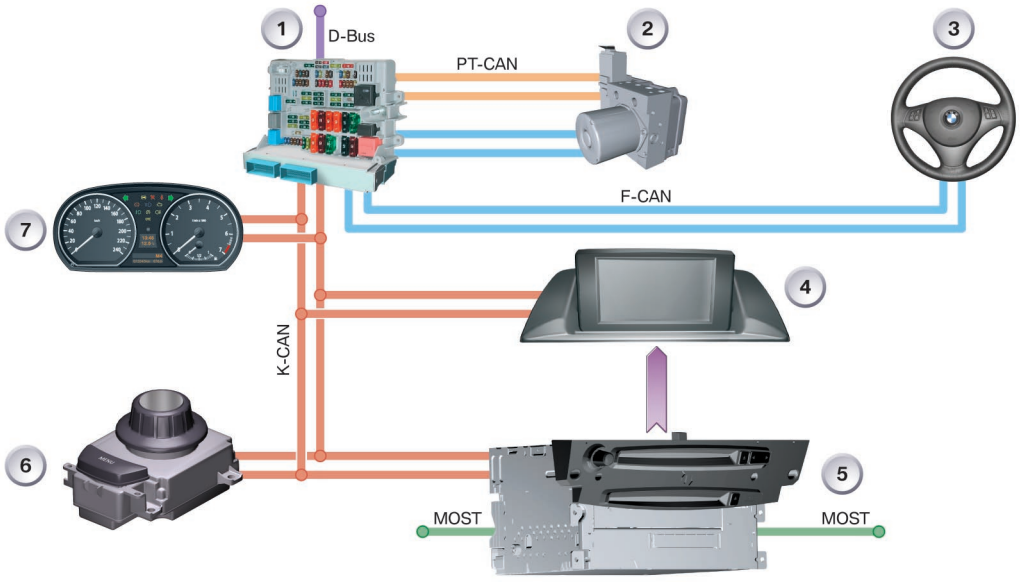
The 18-pin plug connection is located at the rear of the instrument cluster.

Central Information Display (CID)

Input/output

The following illustration shows all control units and control elements that are connected directly to the central information display CID.

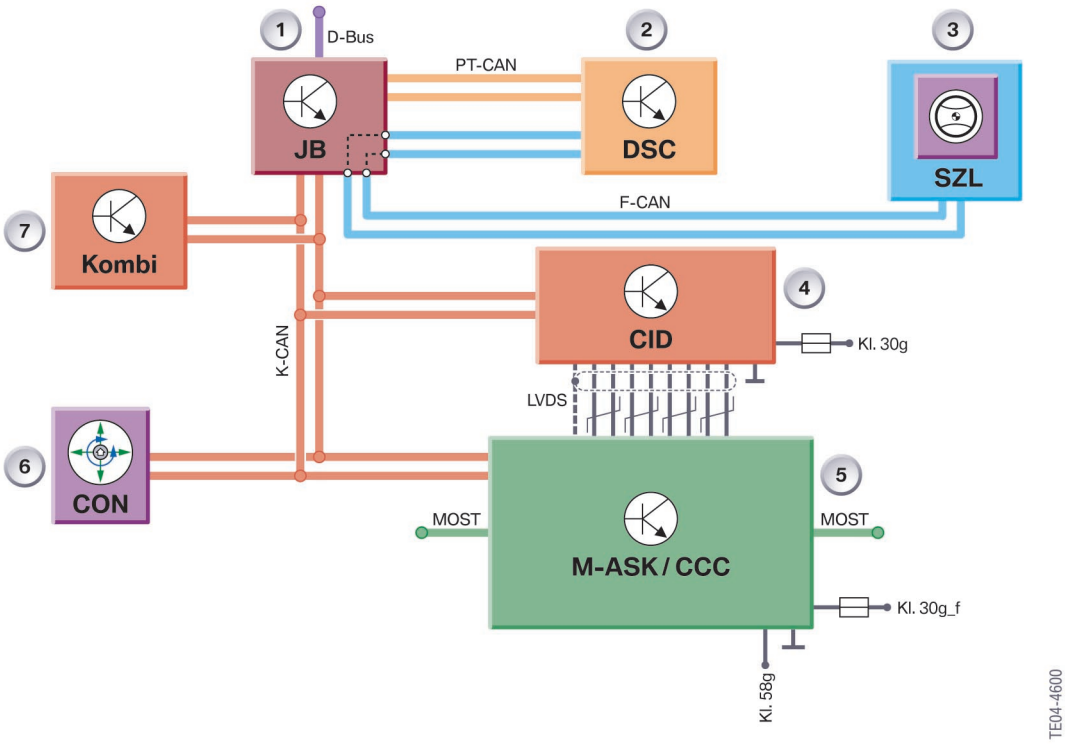
The input/output key is identical to that of the system circuit diagram and is provided after the system circuit diagram.



TE04-4601

4 - Input/output central information display CID

System circuit diagram



5 - System circuit diagram central information display CID

Index	Description	Index	Description
1	Junction box control unit	5	Multi-audio system controller
2	DSC control unit	6	Controller
3	Multifunction steering wheel	7	Instrument cluster
4	Central information display		

Instrument cluster

Location/components

Location

The instrument cluster is secured by means of two pan-head tapping screws to the instrument panel.

Components

The instrument cluster comprises the following components:

- Pointer instruments
- Indicator and warning lamps
- Program and gear display for automatic transmission and sequential manual gearbox
- Acoustic generator for audible direction indicators and CC gong
- Setting button for resetting the trip meter and operating the Condition Based Service in the CBS menu
- Connected components which serve to activate the displays in the instrument cluster (see system overview/system circuit diagram).

The following components are described in detail:

- Display areas
- Indicator and warning lamps
- LC display

Display areas

The instrument cluster features display areas for:

- Speedometer
- Rev counter
- Economy control (fuel consumption indicator)
- Fuel gauge
- Outside temperature display
- Indicator and warning lamps
- LC display
- Program and gear displays for automatic transmission and sequential manual gearbox SMG

Shrouds prevent reflections in the steeply inclined windscreen.

1 - Pointer instruments

Speedometer

Two variants of the speedometer are available for the BMW 1 Series. The signal chain is identical to the signal chain of the rev counter.

Variant	Unit	Reading
ECE, JP	km/h	0.20.40.60.80....240
UK	mph	0...20...40...60. ...140
	km/h	0 20 40 60 80 240

Rev counter

On the BMW 1 Series, engine speed is displayed using the following signal chain:

- The DME control unit sends the engine speed on the PT-CAN and K-CAN.
- Using a characteristic curve, step pulses for actuating the stepper motor are assigned to the effective engine speed.

There are two variants of the rev counter for vehicles with 4-cylinder engines:

- On petrol engines, up to 7000rpm
- On diesel engines, up to 5500rpm.

Economy control (fuel consumption indicator)

The economy control (fuel consumption indicator) is an integral part of the on-board computer and is not represented as an analogue gauge in the instrument cluster.

Fuel gauge

The fuel level is indicated by a pointer instrument integrated in the rev counter on the right.
A pictogram of a fuel gauge lights up in the instrument cluster when the level drops below a factory-coded threshold (standard = 8 l petrol, 6.5 l diesel).

A warning tone additionally sounds on reaching the reserve threshold.

Outside temperature display

A temperature sensor measures the outside temperature and displays it in the instrument cluster. In ignition key position 0, the instrument cluster applies terminal 30g current to the outside temperature sensor every 10 minutes.

The instrument cluster makes available the current outside temperature in the form of a data telegram via the K-CAN.

Indicator and warning lamps

The indicator and warning lamps are activated by the processor in the instrument cluster.

All important and legally stipulated indicator and warning lamps are activated at terminal 15 ON during the pre-drive check.

2 - Indicator and warning lamps

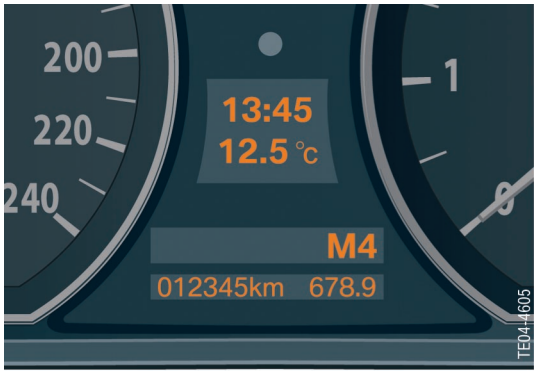
The indicator and warning lamps can be illuminated in different colours or combinations.
The significance of the indicator and warning lamps as well as the colour assignments are described in detail in the BMW 1 Series Owner's Handbook.

LC display

The LC display is divided into two areas.

The time and outside temperature are shown in the upper display along with the CC messages and CBS images.

The on-board computer functions, CBS messages, distance recorder as well as the program display for automatic transmission are shown in the lower display.



3 - LC display

Manipulation dot

Different data are stored in the instrument cluster and in the CAS when a dot appears to the left of the trip distance recorder.

The manipulation dot is indicated when, for example, comparison of the stored vehicle identification number does not agree.

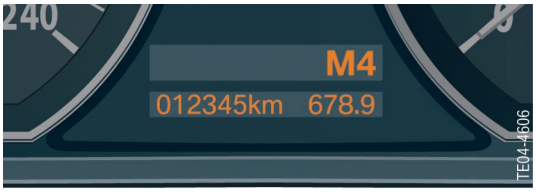
⚠ Different data may be caused, for example, by replacing on of these two control units. ◄

Program and gear display

The program and gear display is shown in the bottom window in the LC display on vehicles with automatic or manual transmission.

The program and gear display shows letters and numbers. The program mode is displayed all the time and is not overwritten by other information.

On manual transmission vehicles, the gear display is blanked out by means of the coding and an enlarged version of the BC display is coded instead of it.



4 - Program and gear display

Acoustic generators

Audible warnings are given in support of check control messages. The instrument cluster controls these warnings via the K-CAN. The warning signals are output by the MASK/CCC control unit when installed as an option.

The acoustic generator in the instrument cluster sounds the warnings if no radio or radio 1 or radio 2 is installed in the vehicle.

The footwell module is responsible for control of the direction indicator function via the K-CAN.

Lighting/dimming of display instruments

The instrument cluster is illuminated in the lights ON setting.
The instrument cluster calculates the brightness of the lighting (dimming) of the display, pointer instruments. The brightness setting is distributed over the K-CAN to further control units such as the CID in the vehicle.

When the vehicle lighting is switched on, the dimmer control is matched with the phototransistor integrated in the instrument cluster. The lighting intensity can be set individually in the BC menu via the rocker switch on the steering column.

When the vehicle lighting is switched off, the system is controlled only by the phototransistor so that the display brightness is determined by the ambient light.

On-board computer

There are two versions of the computer available for the BMW 1 Series:

- On-board computer as basic version and on-board computer as journey computer; which can be activated by encoding, depending on the vehicle equipment specification.

The basic on-board computer contains the following functions:

- Average fuel consumption 1
- Range
- Current consumption
- Average speed

For the journey computer, the computer is expanded to include the following additional functions:

- Start of journey
- Duration of journey
- Distance covered
- Arrival time
- Average fuel consumption 2
- Average speed 2
- Remaining distance.

The individual functions of the basic version of the computer can be shown in succession in the LC display of the instrument cluster. The data description is the same as that for the other BMW models.

⚠ The journey computer is shown only in the option SA 555 CID. ◄

Display variants

There are two display variants of the on-board computer functions in the instrument cluster.

TE04-4872

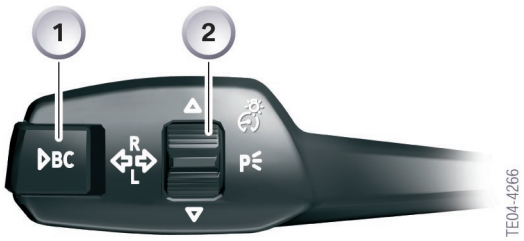
5 - Display of on-board computer functions

Index	Description
1	Computer in vehicle with automatic transmission
2	Computer in vehicle with manual transmission

The menu rocker switch must be pressed for at least 2 seconds in one direction to enable fast scrolling of all menu items. The menu is then scrolled through at intervals of 0.5 seconds.

Show displays

The BC displays are shown and scrolled in the instrument cluster via a menu rocker switch on the steering column stalk for the direction indicator lights.



6 - Steering column stalk for direction indicator lights

Index	Description
1	BC button
2	Menu rocker switch

The individual functions are displayed in the lower display window of the instrument cluster.

Once terminal R is switched on, the computer will display the computer function that was displayed last.

All other functions can be selected by means of the rocker switch on the steering column stalk.
The order in which the BC functions are shown is always the same.

The main menu is described in detail in the section "Functions".

Central Information Display (CID)

Location/components

Location

The central information display CID is secured by means of 4 pan-head tapping screws in the centre area of the instrument panel, i.e. two behind the fresh air grille on the unit carrier of the instrument panel and two on the inside of the shell behind the display.

7 - Central Information Display (CID)

Components

The CID consists of a display with LCD lighting and control pc-board. The display is integrated in a plastic casing. By arranging the connections to the electrical drive on both sides, the casing is mounted such that it can be swivelled in a shell.

The controller which is used to control the displays and indicators in the CID is also an integral part of the CID system.

LC display

The display is equipped with a digital 6.5" TFT screen (thin film transistor) with a visible area of 144 mm x 79.5 mm. The resolution of the TFT display is 400 x 240 pixels.

Controller

The controller is the central operating control for all comfort functions and selected options for some vehicle functions that are displayed on the central information display.

The controller is located in the centre console immediately behind the gear selector lever, within reach of the user (driver and front passenger).

There are two variants, as follows:

- Variant A
  The base variant has a mechanical latch system with 24 latches per full turn.
- Variant B
  On the high-end version, the tactile feedback for the rotational movement of the controller is generated electrically. The tactile feedback for the rest position, the main directions of movement and the depressed position is created by mechanical means.

The operating principle of the controller is identical to that of the E60 and E65 models.

The menu button which can be used to show the main menu in the CID is additionally located directly behind the controller.

In a second variant, in addition to the menu button, another button is provided to activate/ deactivate the voice recognition system SVS.

The button signals are read into the controller and converted into K-CAN telegrams.

ConnectedService

Condition Based Service (CBS)

In the same way as the mid-range and luxury models, the BMW 1 Series will also be offering service intervals that are geared towards the current condition of selected components, i.e. servicing that depends on the condition of components and maintenance requirements; this is known as Condition Based Service (CBS).
Condition based service therefore means - servicing only when a part is worn.

The system calculates when a service operation, e.g.an oil change is due and informs the customer of this via the LC display in the instrument cluster.

CBS sorts all the data according to date due and can determine when the vehicle should be taken into service.

If a central information display CID is installed, the instrument cluster passes on the sorted data to the CID where the data can be displayed in the service menu.

There are ten different types of service, with each of these types being assigned to a specific service group, e.g. oil change.

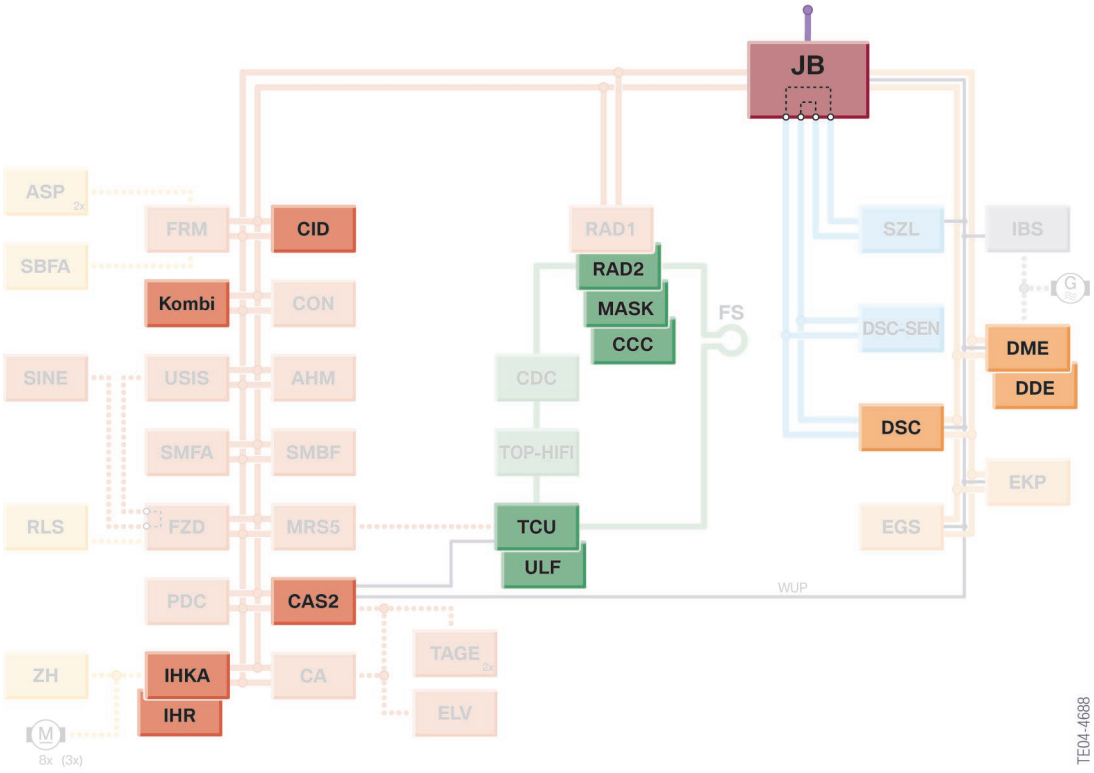
The system comprises the following components with their sensors:

- Instrument cluster
- External control units such as DME, IHKA and DSC
- Car access system (CAS) 2
- Central information display CID.

Block diagram

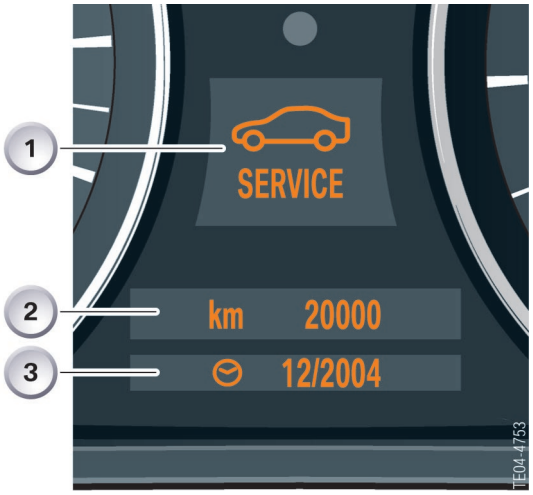
All information that the CBS system requires is sent on the K-CAN bus .

The CBS requests from all the control units are therefore sent via the K-CAN to the instrument cluster and to the Central Information Display.



8 - Block diagram of the Condition Based Service (CBS)

CBS displays in the instrument cluster



9 - CBS display in the instrument cluster

Index	Description
1	CBS symbol
2	Remaining distance display
3	Final date information

The CBS display always comprises the following two separate displays:

- A coloured symbol in the upper display
  - Orange for normal
  - Yellow for service due
  - Red for service overdue
- and information on remaining distance and/ or due date in the lower display.

You will find further information on the CBS displays in the BMW 1 Series Owner's Handbook under Servicing Systems.

CBS symbols

Normal condition	Service due	Service overdue	Explanation
			Engine oil
			Micro-filters
			Front brakes
			Rear brakes
			Brake fluid
			Vehicle check
			Spark plugs
			General inspection
			Exhaust emission test
			Particle filter

Displays in the central information display

All information on the individual service operations can be displayed in the CID.

The CBS functions are accessible under the <Settings> menu item.

Selecting CBS menu

Press the controller, the "Settings" menu will appear.

Turn the controller until "Service" is highlighted, then press to activate the CBS menu.

The following operating and display fields are shown:

- Status bar
- Menu bar 1
- Menu bar 2
- Display field for CBS symbol
- Display field for service operation.

10 - Service menu

Index	Description
1	Menu bar 1 - Service requirement, CC messages - Service
2	Menu bar 2 - Status - There are currently no requirement messages
3	Display field for CBS symbols
4	Status bar
5	Display field for service operation
6	Target date

The service operation display field always shows the first five messages.

Any overdue service operations and symbols marked in red in the list are always at the top of the list of messages.

To display the information concerning a specific service operation on the CID, turn the controller to select the required service operation and display the selection by pressing the controller.

The following display appears in the CID if, for example, the service operation "§ Vehicle inspection" is selected and activated:

11 - Example "Legally required vehicle inspection"

Index	Description
1	Exit display, return to last setting
2	Date for general inspection
3	Text field for further information
4	Schedule date for service

Once the service date has been set and confirmed by pressing the controller, the priority of the service operation changes, e.g.from red to green and the service operation is sorted in the list.

Functions
Displays, Indicators and Controls

Instrument cluster

The instrument cluster receives information on the wiring harness in the form of analogue and digital electrical signals. These signals are processed and displayed in the instrument cluster or passed on as information to other control units.

The instrument cluster on the BMW 1 Series features several functions that have been changed compared to previous models.

Fuel gauge

Fuel reserve

The fuel reserve level is not indicated by an indicator lamp as in the previous models. A fuel pump symbol lights up for 23 seconds in the LC display as soon as the reserve level is reached.

This display is permanently activated at a range below approx. 50 km.

On-board computer

Main menu

A graphic symbol in the upper display window is assigned to each main menu item. Menu items that are deactivated during vehicle operation are not shown.

Each menu can be interrupted at a certain position by briefly pressing the BC button. In addition to this active termination, there is an automatic termination that takes place 15 seconds after the last entry.

Depending on the equipment variant and on the radio/navigation systems, several menu items are blanked out and can therefore only be adjusted via an external control unit. The display for the M-ASK and CCC are shown on the central information display CID.

BC main menu

TE04-4536

1 - BC main menu

The following table lists all BC functions that can be selected in the instrument cluster depending on the options.

Function	Display	Active as from	Activities	RAD1/2	MASK/ CCC
Instrument lighting		BUS active Terminal 58g	Settings are stored immediately	X	X
Check Control messages		KL.R EIN	Error message system with max. 72 symbols Error prioritization Audible warning Text message as from radio stage 3/4	X	X
Engine oil level measurement		Terminal 15	Measurement with vehicle stationary and in operation Clock symbol in servicing mode No electrical measurement for diesel engines "Service2" displayed in case of fault	X	
Tyre failure indicator RPA/ RDC		Terminal 15	Multiple initialization possible	X	
Time		KL. R ON	Menu selection via cursor	X	X
Date		KL. R ON	Menu selection via cursor	X	X
CBS4 workshop mode		KL.15	Activation via reset button ON time > 10 sec	X	
CBS4		KL.15	Setting of main inspection/ exhaust emission inspection same as data entry	X	
Personal profile settings		KL. 15	Changing/resetting units	X	

X = Can be selected via instrument cluster

Operating example:
Tyre failure indicator RPA

Initialization must be performed immediately after correcting the tyre pressure, a tyre change or a wheel change.

The following procedure must be performed to initialize the system:

1. Start the engine but do not drive off.
2. Press the rocker switch on the steering column stalk until the "initializing tyre failure indicator" function is shown in the instrument cluster.
3. Confirm the display by briefly pressing the BC button on the steering column stalk.
4. Press and hold the BC button on the steering column stalk for approx. 5 seconds until the RPA display lights up in the instrument cluster.
   The tyre failure indicator is now ready for initialization.
   If no tick is shown in the display, this indicates that the tyre failure indicator cannot be initialized due to a fault.
5. Release the BC button to conclude initialization.

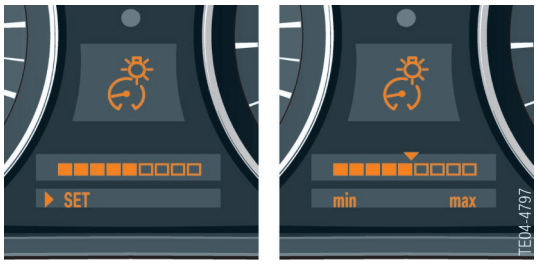
2 - Initialization of the tyre failure indicator RPA

Operating example:
Instrument lighting

The side lights or low beam headlights must be switched on in order to control the lighting intensity (dimming).

The following procedure must be performed to set the system:

1. Press the rocker switch in the steering column stalk up or down until the "instrument lighting" function appears in the instrument cluster.
2. Confirm the display by briefly pressing the BC button on the steering column stalk.
3. Press the rocker switch up or down to select the lighting intensity. Each setting is saved immediately.
4. Press the BC button on the steering column stalk to exit the menu.



3 - Setting instrument lighting

The procedure for selecting and correcting the functions

- Check control messages
- Oil level measurement
- Time
- Date
- CBS4 and
- Personal profile PP settings

is identical and is described in the BMW 1 Series Owner's Handbook.

Central Information Display (CID)

The central information display CID is designed the same as the CID installed in the BMW Z4 and BMW X3 models.

User interface

The user interface in the CID is identical to that of the CID installed in the BMW 5 Series.

A detailed description of the main menu and of the procedure for selecting the individual functions is provided in the BMW 1 Series Owner's Handbook.

TE04-4641

4 - User interface in the central information display (CID)

Opening/closing the screen

Opening the screen

The screen pops up automatically at terminal R ON.

The driver can make fine adjustments to the screen. The set position is saved and the screen assumes this position when opened.

⚠ The screen closes automatically as soon as an inappropriate position is set with the fine adjustment function. ◄

Closing the screen

The screen closes after removing the identification transmitter.

Personal Profile

Display in the instrument cluster

Display formats and units of measure

The following display formats and units of measure can be changed in the instrument cluster:

- Fuel consumption (l/100 km, mpg, km/l)
- Distance (km, mls)
- Time format (12h/24h)
- Date format (dd/mm, mm/dd)
- Temperature (°C, °F)
- Reset of display formats and units of measure, the factory setting is adopted.

The procedure for selecting and changing all display formats and units of measure is identical. By way of example, the procedure for changing the unit of measure is described in detail.

Changing unit of measure

The following procedure must be carried out in order to change the unit of measure:

1. Press the rocker switch in the steering column stalk up or down until the "Personal Profile" function appears in the instrument cluster.
2. Press the BC button on the steering column stalk.
3. Press the rocker switch up or down until the required unit of measures is shown.
4. Press the BC button on the steering column stalk.
5. Use the rocker switch to make the necessary change.
6. Press the BC button to adopt the change.

5 - Changing unit of measure

Instrument Cluster

All the described test functions can also be performed via the BMW diagnostics system.

Information for technicians

Test functions

The test functions are shown in the LC display of the instrument cluster.

The test functions are used by the BMW service mechanics to check the coding. They also provide help in troubleshooting without the diagnostic tester.

To start function test

- Terminal R ON or terminal 15 ON
- Press and hold the reset button in the instrument cluster for 10 seconds (set/ reset)

In addition, the test functions can also be called up by holding down the setting button in the instrument cluster and simultaneously switching on terminalR.

Display of test functions

The test functions are shown in the upper and lower LC display.

Locking and unlocking the test functions (test function 19)

Only the first two test functions are freely accessible.
As from the third, all further test functions are locked. The functions can be unlocked only via test function 19.
The test functions are unlocked by entering the sum of the digits in the vehicle identification number.

To end test function

- Ignition key at terminal R or terminal 15 ON
- Press and hold the setting button for longer than 5 seconds or
- Select test function21

Visual system test

In the visual system test, all the indicator lamps and lights are lit briefly.

The pointer instruments are moved from the lower to upper stop and back again.

1 - Test function 02, visual system test

Overview of test functions

Only the main test functions are listed in the following table. In addition to the majority of test functions there are further equivalent functions for which a similar display appears in the instrument cluster.

Test function	Description	Display
01	Instrument cluster identification - Vehicle identification number, last 5 digits	01.00 FGSTNR AB12345
02	System test	02.00 KI TEST
03	Not used	03.00 Not used
04	Electric load values	04.00 VERB-MOM 12,6 l/100km
05	Range consumption	05.00 RW-VERBR
06	Fuel level	06.00 TANK L R S 24.5 26.7 50
07	Current display values	07.00 KTMP-MOM 104°C
08	Speed	08.00 V-EFF 123 km/h
09	System voltage	09.00 Ub 13.3 V
10	Not used	10.00 Not used
11	Units	11.00 ZEIT-EINH 24h
12	Calculated time of arrival	12.00 V-ANKUNFT 67,8 km/h
13	Audible signals	13.00 AUDIO LICHT-WARN BLINKER ZS-WARN
14	Self-diagnostics	14.00 FSP-Einträge 10
15	I/O ports processor	15.00 PORT 00 01010111
16	Dimming	16.00 DIMMRAD-CAN 46h

Test function	Description	Display
17	Contrast	17.00 DISP-HEIZ Ein io
18	Not used	18.00 Not used
19	Locking	19.00 LOCK LOCK: ON LOCK. 25
20	Fuel consumption correction	20.00 KORR-VERBR 1000 1er KORR 10er KORR 100er KORR
21	Reset (software reset)	21.00 Reset?

Component replacement and trial replacement

There are three possible combinations for replacing the instrument clusters and car access system 2 CAS 2.

- Instrument cluster defective, CAS 2 OK
- CAS 2 defective, instrument cluster OK
- CAS 2 and instrument cluster must be replaced.

Simultaneous replacement of CAS 2 and the instrument cluster should be avoided. The odometer reading will be lost as a result.

In principle, it is also possible to carry out a trial replacement of the instrument cluster and CAS 2.

To select check control messages in the instrument cluster

The instrument cluster shows a series of vehicle statuses and consequently generates CC messages.

The following procedure must be performed to select a CC message:

1. Press the rocker switch in the steering column stalk up or down until the "Check Control" function appears in the instrument cluster.
2. Press the BC button on the steering column stalk and confirm the display.
3. Press the rocker switch up or down to select the CC messages.
4. Press the BC button on the steering column stalk to exit the menu.

2 - CC Message

⚠ The outside temperature or a previous priority 1 message is displayed again if the rocker switch is not operated for 8 seconds. ◄

Central Information Display (CID)

Information for technicians

Service mode (as from 03.2005)

The controller can be used to activate the Service mode functions.

Service mode is a special facility which provides information about the status of the display and user control system.

Service mode can be used, for example, to read out hardware/software statuses for the central information display or control units in the M-ASK/CCC system network.

As an addition to the comprehensive facilities of the diagnosis system, Service mode acts as a simple means of quickly accessing diagnostic data without the need for a diagnosis tester.

3 - Service mode

Sources of information

In Service mode, information on the following functions can be selected from the upper menu bar:

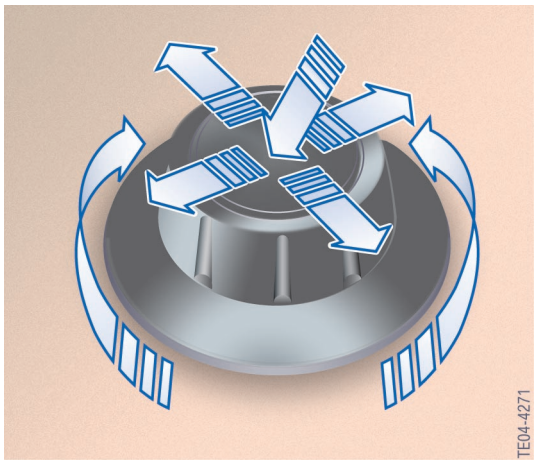
- Radio
- Version control
- Navigation
- GPS
- Sensor test.

Push the controller in any direction to return to the main menu.

Activating service mode

Select main menu and press and hold the controller. Tactile feedback will then be generated.

- Turn controller 3 stops clockwise
- Turn controller 3 stops anticlockwise
- Turn controller 1 stop clockwise
- Turn controller 1 stop anticlockwise
- Turn controller 1 stop clockwise
- Press the controller to confirm, Service mode will then appear in the CID.



4 - Activating Service mode

ConnectedService

Information for technicians

Resetting the service operations

When one or more service operations have been carried out, e.g. front brake pads have been changed, these operations must be resetto their full service interval.

There are two options for resetting the service operations:

1. Legally required service operations such as the vehicle inspection (HU) and exhaust emission inspection (AU) can only be reset in the "Service" menu.
2. All vehicle servicing service functions such as changing spark plugs are reset via the reset button for the trip distance recorder in the instrument cluster. If the reset button is pressed for longer than ten seconds, the reset mode opens automatically.

"Reset?" is displayed in the lower display window.

In the upper display window, the CBS symbol , e.g. for "engine oil service overdue" will be displayed.

Press the reset button until the time/distance-dependent displays in the lower display window are replaced with dashes.

Reset is no longer possible once 80 percent of the interval has expired. A reset lock will be shown in the display with "OK".

Entering due date

The due date for the legally required general inspection and exhaust emission inspection can be entered only in the central information display with the aid of the controller.

Since different laws are applicable depending on the country, country-specific intervals can be found at this point. For markets where no such regulation applies for general inspection and exhaust test, this function can be suppressed by the software.

Carry out the following procedure to enter the due date:

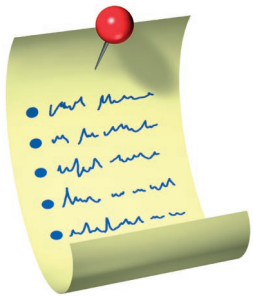
- Select "Service" from the "Settings" menu and confirm
- Select service operation "§ Vehicle inspection" for example and confirm. "Set service date" is marked.
- Press controller to activate the input box.
- Enter the date by turning and pressing the controller.
- Select "Exit display" and confirm to return to the last setting.

5 - Entering due date

Index	Description
1	Exit display, return to last setting
2	Date for statutory vehicle inspection
3	Text field for further information
4	Activate deadline in (2)

Summary
Displays, Indicators and Controls

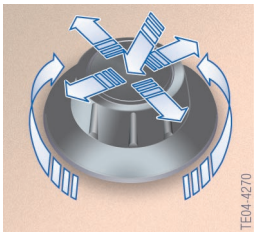
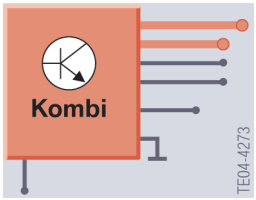
Points to remember



Theoretical and practical notes for day to day use.

The most important information concerning the display, indicator and control concept in the BMW 1 Series is summarized in the following table.

The list is intended to provide you with the contents and important points of this Participant's Manual in concise form.

Operating concept	
	It is possible to operate all comfort functions and several vehicle functions via the controller in the BMW 1 Series.
Instrument cluster	
	A classic two-dial design draws attention to both instruments. Compact display and indicator units convey the most important information to the driver at a glance. There is no economy control (fuel consumption indicator) in the form of a pointer instrument in the instrument cluster. The current fuel consumption is shown as a digital display in the BC functions.
	The instrument cluster has no gateway function as on the previous model series. Only the outside temperature, the information from the steering column switch cluster and footwell module are shown directly in the display.
	Indication of the fuel reserve is an integral part of the on-board computer and is not represented as an analogue gauge in the instrument cluster. The fuel reserve level is not indicated by an indicator lamp as in the previous models. A fuel pump symbol is illuminated for 23 seconds in the LC display as soon as the reserve level of 8 or 6.5 litres respectively is reached. This display is permanently activated at a range below approx. 50 km.

Operating concept - steering column stalk

A graphic symbol in the upper display window is assigned to each main menu item.
Menu items that are deactivated during vehicle operation are not shown.

Each menu can be interrupted at a certain position by briefly pressing the BC button.

Depending on the equipment variant and on the radio/navigation systems, several menu items are blanked out and can therefore only be adjusted via an external control unit. The display for the M-ASK and CCC are shown on the central information display CID.

Central information display

The smallest of the BMW models now offers the same convenient operating and control functions as the mid-range and luxury BMW models.

The central information display CID is designed the same as the CID installed in the BMW Z4 and BMW X3 models.

The user interface in the CID is identical to that of the CID installed in the BMW 5 Series.

Personal Profile

Through the Personal Profile, the BMW 1 Series also caters for the driver's personal requirements.

The Personal Profile allows the driver to set several functions of the BMW 1 Series to suit his/her personal requirements.

Personal Profile stores the data entered by the driver such as automatic setting of the outside mirrors or speed-dependent volume in the corresponding control units.

All test functions described in the Participant's Manual can also be performed via the BMW diagnostics system.

TE04-4738

ConnectedService is made up of several modules; some of these are already in operation in other BMW models while others have been further developed or introduced for the first time with the launch of the BMW 1 Series.

BMW Service
Aftersales Training
80788 München
Fax. +49 89 382-34450