Technical training.

Product information.

Displays and Controls 2018



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Technical Training

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General information

Symbols used

The following symbol is used in this document to facilitate better comprehension or to draw attention to very important information:



Contains important safety information and information that needs to be observed strictly in order to guarantee the smooth operation of the system.

Information status: June 2018

BMW Group vehicles meet the requirements of the highest safety and quality standards. Changes in requirements for environmental protection, customer benefits and design render necessary continuous development of systems and components. Consequently, there may be discrepancies between the contents of this document and the vehicles available in the training course.

The information contained in the training course materials is solely intended for participants in this training course conducted by BMW Group Technical Training Centers, or BMW Group Contract Training Facilities.

This training manual or any attached publication is not intended to be a complete and all inclusive source for repair and maintenance data. It is only part of a training information system designed to assure that uniform procedures and information are presented to all participants.

For changes/additions to the technical data, repair procedures, please refer to the current information issued by BMW of North America, LLC, Technical Service Department.

This information is available by accessing TIS at www.bmwcenternet.com.

Additional sources of information

Further information on the individual topics can be found in the following:

- Owner's Handbook
- Integrated Service Technical Application
- Aftersales Information Research (AIR)

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1. Introduction

1.1. Further information

This product information introduces the new features of and adaptations to the display and controls. The focus is particularly on **system-specific** features. The **vehicle-specific** descriptions of the display and operating elements can be found in the product information **G05 Displays and Controls** and **G15 Displays and Controls**.

1.2. Overview

With the introduction of the new Head Unit High 3 (HU-H3), a new display and operating concept (ID7) is used at BMW. The head unit functions of the new user interface are displayed in the 12.3" Central Information Display.

In the G12 the user interface **ID5** was introduced. This was designed especially for touch operation.

In the G30, **ID6** with tiles, which can show the content in real time, was introduced shortly thereafter.

ID7 is also designed for touch operation. The most obvious difference is the display of the tiles. With ID7 they are described as widgets and can be individually arranged.



Comparison of division of menus for ID6 and ID7

The **multi-functional instrument panel** receives a completely new design and extended display options. The Central Information Display and the multi-functional instrument panel continue to form a single unit for ID7.

Besides the controller and the touch operation, new **gestures** enable an even better way of performing certain functions.

The **voice control system** is based on that of the G12. The hardware in the head unit is prepared for a functional enhancement in the near future.

1. Introduction

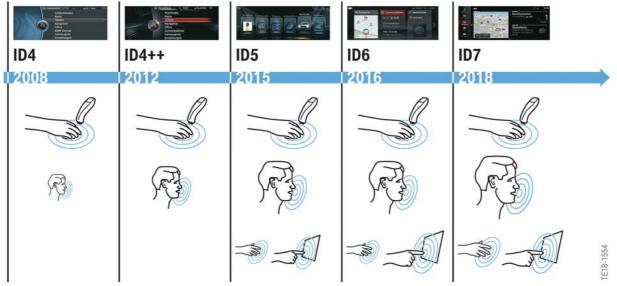
The **BMW Head-Up Display** is also still one of the most important display instruments in the vehicle thanks to newly designed displays and a larger display field, as the customer can keep his eyes on the road whilst receiving important information.

Showroom mode presents the customer a living vehicle with new animations in the showroom. Animations run in a continuous loop in the Central Information Display in order to arouse the customer's interest and to give an initial impression of the functions in the infotainment area.

2. Operating Elements

2.1. Overview

The latest generations of the operating elements are increasingly designed around several operating options. Some of the key operating options with ID7 (7th generation iDrive) include the touch operation of the Central Information Display (CID), the option of natural voice input and gesture control. The controller with touch operation is also the central operating element in vehicles with ID7.



Overview of operation of the previous generations

2.2. Central Information Display with touch function

In conjunction with the BMW Live Cockpit Professional (SA 6U3), a Central Information Display with a maximum screen diagonal of 12.3" or 10.25" is installed depending on the vehicle. The display resolution is 1920 x 720 pixels.

ID7 is designed for optimal touch operation.



2. Operating Elements

2.3. Multifunction steering wheel

For years the multifunction steering wheel has been offering a comfortable way of operating some systems. New, additional buttons and simplified operator prompting were added to the function keys on both sides.



Multimedia buttons on multifunction steering wheel

Index	Explanation
1	Reduce volume
2	Knurled wheel, list selection
3	LED display for assistance systems
4	Increase volume
5	Change station/track, long press: Fast forward the music track
6	Voice control system
7	Open entertainment lists
8	Telephone
9	Change station/track, long press: Fast reverse the music track

More information about the operation of the multimedia systems via the multifunction steering wheel can be found in the product information **G05 Displays and Controls** and **G15 Displays and Controls**.

2. Operating Elements



Buttons for assistance systems on multifunction steering wheel

Index	Explanation
1	Rocker switch for changing the set speed
2	LED display
3	Speed limit ON/OFF
4	Increase distance to the vehicle ahead
5	Button for selecting the assistance system Possible selection: Only ACC Stop&Go or ACC Stop&Go with Steering Assistant
6	Button for activating or deactivating the assistance system selected via the mode button (Assist button)
7	Cruise Control: Save speed
8	Reduce distance to vehicle ahead
9	Button for calling up a saved set speed/temporarily switching off the cruise control

Information about the operation of the assistance systems via the multifunction steering wheel can be found in the product information **G05 Driver Assistance Systems** and **G15 Driver Assistance Systems**.

2. Operating Elements

2.4. Steering column switches

Both steering column switches (turn signal/high beam switch and the wash/wipe switch) lock when actuated.

The right instrument cluster display (combo widget) including the on-board computer data is operated using a button on the turn signal/high beam switch. As the reset button is deleted in the instrument cluster, the functions of the reset button are also operated via the on-board computer button, such as resetting the trip distance.

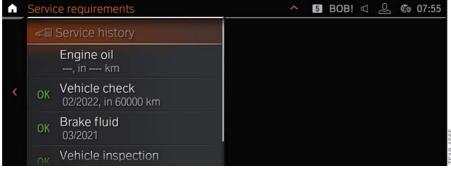


Steering column switch at the steering column switch cluster

Index	Explanation
1	On-board computer
2	High-beam assistant
3	Turn signal/high beam switch
4	Wash/wipe switch
5	Steering column switch cluster (SZL)

If the on-board computer button is pressed for between 5 s and 10 s, the CBS menu is opened in the instrument cluster. The next CBS range is displayed with a short keystroke (< 2 s). The CBS data is reset with a long keystroke (2-4 s).

The operation of the wash/wipe switch is already known from other vehicles (G30, G01, etc.)



Display of service data

2. Operating Elements

2.5. Gesture control

2.5.1. Gesture overview

The gesture control is an element of the BMW Live Cockpit Professional (SA 6U3).

The following table shows which gestures can currently be carried out:

Gesture	Operation	Function
TE14-1623	Move index finger to and fro in direction of Central Information Display (CID).	 Accept telephone call Confirm pop-up
TE14-1624	Move hand over the width of the Central Information Display (CID) in the direction of the passenger's side.	 Reject telephone call Close pop-up
TE14-1625	Move hand slowly in circular clockwise movement with index finger extended forward.	Increase volume

2. Operating Elements

Gesture	Operation	Function
TE14-1913	Move hand slowly in circular anti-clockwise movement with index finger extended forward.	Reduce volume
TE14-1627	Grip thumb and index finger together and move hand horizontally right or left.	Rotate Surround View camera view
TE14-1626	Extend index and middle fingers.	Configurable gesture

2. Operating Elements

2.5.2. New gestures

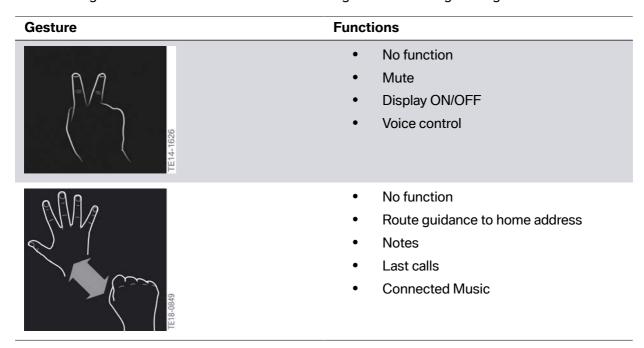
The gestures shown in the table are **new**:

Gesture	Operation	Function
TE18-0847	Move extended thumbs to the left	Skip back function
TE18-0848	Move extended thumbs to the right	Skip forward function
TE18-0849	Extend 5 fingers, form a fist and extend 5 fingers again.	Configurable gesture.

2. Operating Elements

2.5.3. Individual gestures

The following table shows which functions can be assigned to the configurable gestures:



The functions of the gestures reflect the current state of the art. The selection of functions will be extended in the future.

2.6. Voice control

Voice control is another way of operating some vehicle functions and services. As already known from the G12, it is voice control, which can be carried out using natural voice commands, e.g. "Take me home" or "Call my boss".



Natural language understanding (NLU)

If an Apple iPhone is connected to the head unit via Bluetooth (Apple® CarPlay is not activated), with a long press on the voice input button (3 s) SIRI is activated.

If no mobile phone is paired with the head unit, then with a long press on the voice input button the connection menu in the Central Information Display (CID) is opened.

2. Operating Elements



Alexa

A new option of voice input in the vehicle is the integration of Amazon Alexa in the vehicle. This function is currently only possible for vehicles with a **Head Unit High 2** or **Head Unit Basic 2** from production date July 2016. An extension of the Alexa functions to the HU-H3 is planned for autumn 2018. More information about Amazon Alexa in Car can be found in the product information **Infotainment 2018**.

More information about Natural Language Understanding (NLU) can be found in the product information **G12 Navigation Systems**.

2.7. Controller

The new generation of the controller has a new design. With the direct access keys of the controller it is a user interface with active haptic feedback, which depending on the position of the finger provides haptic feedback by pressing the respective button. The controller now has 8 instead of 7 direct access keys. The Apps menu (ConnectedDrive) has its own direct access key. The direct access key for ConnectedDrive on the radio operating facility is deleted.

Input and operation via the touch control box is still possible. The touch recognition takes places in the head unit like in other vehicles.

2. Operating Elements



Controller

Index	Explanation
1	Communication
2	Media
3	Apps (ConnectedDrive)
4	Home
5	Navigation map
6	Navigation
7	Option
8	Back

3. 7th Generation of iDrive (ID7)

3.1. Overview

ID7 offers a completely new display and operating structure. The tiles as they were used for ID5 or ID6 are no longer present with ID7. The displays in the main menu can be customized even more by the driver.

Up to 4 contents can be displayed on the main page. There is also however the option to display one content bigger on a half page.



Main page of Central Information Display

Index	Explanation
1	Navigation widget
2	Radio/Media widget
3	Communication widget

3.1.1. Main menu bar

The individual menus are displayed in the toolbar in the left area of the main menu.

There is a total of 5 menus in the toolbar.



Menus on Central Information Display

3. 7th Generation of iDrive (ID7)

Index	Explanation
1	Media
2	Communication
3	Navigation
4	My Vehicle
5	Apps

There is direct access to some menus. However, this can only be effected with a touch input on the Central Information Display (CID). In the following you see which menus can be accessed directly and what settings can be made there:



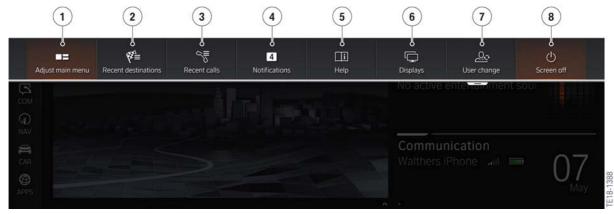
Displays on Central Information Display

Index	Display	Direct opening
1	Display bar	Information about the display bar is described in separate documentation.
2	Messages	Read current pending or unread messages
3	Signal strength of mobile phone	Communication setting
4	Entertainment source	Media setting
5	Volume control	Sound ON/OFF
6	Profile picture	Driver profiles
7	Time display	Time and date setting

3. 7th Generation of iDrive (ID7)

3.1.2. Display bar

If the display bar is dragged down by touch, a window is opened via which certain menus or settings can be called up. The content is predefined and cannot be personalized. However, the content may vary depending on which functions are currently carried out in the vehicle. For instance, with active route guidance the point "Recent destinations" is no longer displayed.



Display bar

Index	Explanation
1	Configuration of main menu
2	Recent destinations
3	Last calls
4	Current or unread messages
5	Help
6	Display settings
7	Select driver profiles
8	Display OFF

For ID7 there is **no longer** a favorites view (last 20 selected menus).

3. 7th Generation of iDrive (ID7)

3.1.3. Media

Via the Media menu all settings for the entertainment system can be made, e.g. radio or connection to external devices. Not all entertainment sources are listed in the following graphic. ConnectedMusic, USB stick or also CD, among others, are missing.



edia		

Index	Explanation
1	Radio
2	Music collection
3	Mobile phone
4	Screen mirroring
5	Personalize menu
6	Set up mobile devices
7	Add to favorites
8	Manual search
9	Increase display
10	Tone settings

3. 7th Generation of iDrive (ID7)

3.1.4. Communication

All telephone settings are made in the communication menu.



Communication menu

Index	Explanation
1	BMW Assistance (breakdown service, Concierge Service, etc.)
2	Contacts
3	Telephone functions
4	Short messages
5	Mobile devices
6	Personalize menu

3.1.5. Navigation

The settings in the navigation menu are made via the Navigation menu. These include the destination entry, display of points of interest, map views, etc.

More information about the menu and new functions in the BMW navigation system can be found in the product information **Infotainment 2018**.

3. 7th Generation of iDrive (ID7)



Navigation menu

Index	Explanation
1	Destination information
2	Quick search
3	Recent destinations
4	Home address
5	Points of interest
6	Favorites
7	Destination input
8	Contacts
9	GPS coordinates
10	Travel
11	Concierge Service
12	Personalize menu

3.1.6. My Vehicle

Information about the vehicle status and journeys is displayed in this menu.

The driver profiles are managed in this menu.

3. 7th Generation of iDrive (ID7)



My Vehicle menu

Index	Explanation
1	Vehicle information
2	Vehicle status
3	Settings
4	Driver profiles
5	Integrated operating instructions

The previously separate menus iDrive and vehicle settings can be found under Settings.

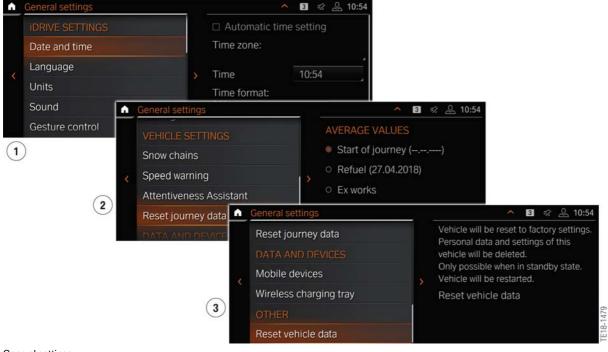


Settings

Index	Explanation
1	General settings
2	Driving mode
3	Exterior lights
4	Driver assistance
5	Displays
6	Doors/Vehicle access
7	Interior lighting
8	Climate comfort
9	ID transmitter

The vehicle settings can be found under the general settings.

3. 7th Generation of iDrive (ID7)



General settings

Index	Explanation
1	iDrive settings
2	Vehicle settings
3	Data and devices

3.1.7. Apps

The previous ConnectedDrive menu is replaced with the **Apps** menu. Besides the vehicle apps (OSPI, ParkNow, etc.), the BMW Apps (Connected App, M Laptimer, etc.) can be found in the Apps menu. More information about the BMW ConnectedDrive services can be found in the product information **Infotainment 2018**.



Installed services

3. 7th Generation of iDrive (ID7)

The services booked via the BMW ConnectedDrive Store or ex works can also be found in this menu, e.g. Concierge Service or Teleservices.

The BMW ConnectedDrive Store in the vehicle can be selected via this menu.



Apps menu

Index	Explanation
1	Installed apps
2	BMW ConnectedDrive Store

3.2. Main menu

The displays which are shown in the main menu can be individually adapted.

The content is displayed in real time.

The Configuration menu is called up using the button shown in the graphic.



Configuring the main page

Index	Explanation
1	Configure main page

3. 7th Generation of iDrive (ID7)



Configure main menu

Index	Explanation
1	Add widget in bottom area
2	Selection of content (here Navigation)
3	Add widget in top area
4	Delete widget
5	Selection of content (here Communication)
6	Selection of content (here Radio/Media)
7	Add another page
8	Delete page
9	Confirm settings made

The content is configured via the respective button. The following content can be set and displayed in the main menu:

- Communication
- Radio/Media
- Clock (analogue/digital)
- Navigation
- Sport displays
- Route preview
- Traffic
- Position
- Driving info
- Weather
- Country information
- News

For navigation the following settings can be configured:

3. 7th Generation of iDrive (ID7)

- Map and main map
- North up
- Heading up
- Perspective
- Route overview

A route overview is **not** possible if the map is displayed like in the main map.

A widget can be displayed either on a half or quarter page. A maximum of 4 widgets can be displayed on one page.

The widget content can be moved by touch within the Configuration menu.

There is the option to create several pages with content. A maximum of 10 pages can be created. The user can move between the pages by a touch setting (swipe) or using a controller (tilt and turn).



Index	Explanation
а	House icon displays the first page
b	The number of circles displays the number of other pages.

3. 7th Generation of iDrive (ID7)

3.3. Service

The Service menu is required for updating the Gracenote[®] data in the vehicle.

The Service menu is activated as follows:

- Tilt controller 10 s to the **left**
- Move controller 3 detents to the right
- Move controller 3 detents to the left
- Move controller 1 detent to the right
- Move controller 1 detent to the left
- Move controller 1 detent to the right
- Press controller

The Service menu appears in the "CAR" menu.



Service menu

Index	Explanation
1	Service menu
2	Gracenote® update

4. Display Elements

4.1. Instrument cluster

4.1.1. Overview

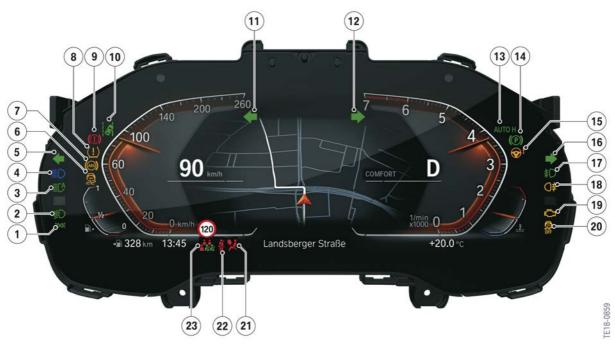
The displays of the new instrument cluster are shown on a 12.3" TFT display. The resolution of the instrument cluster is 1920 x 720 pixels.

With the new arrangement of the speed and revolution counter, there is an area in the center of the instrument cluster that can be used for displaying content. In the following graphic you see the display of the navigation map between the two displays in the instrument cluster.



4.1.2. Warning and indicator lights

Some of the warning and indicator lights are not shown in the digital instrument cluster. They are designed as fixed chamber lights.



Displays in the instrument cluster

4. Display Elements

Index	Explanation
1	Side lights
2	Low-beam headlight
3	High-beam assistant
4	High beam
5	Turn indicator, left (chamber light)
6	Dynamic Stability Control
7	Anti-lock Brake System (ABS)
8	Tire pressure control
9	Brake system
10	Lane departure warning
11	Turn indicator, left
12	Turn indicator, right
13	Automatic Hold
14	Parking brake
15	Steering system
16	Turn indicator, right (chamber light)
17	Fog light
18	Rear fog light (Not for US)
19	Engine function
20	Dynamic Stability Control deactivated/Dynamic Traction Control activated
21	Airbag system
22	Seat belt warning
23	Seat belt warning, rear passenger compartment

4.1.3. Modes

The driving modes can be changed using the driving experience switch. The instrument cluster is adapted to the individual modes. Three modes can be displayed in the instrument cluster:

- COMFORT mode
- SPORT mode
- ECO PRO mode

The display of the instrument cluster in COMFORT mode is the standard display.

4. Display Elements

SPORT

In SPORT mode the displays in the instrument cluster are red.



SPORT instrument cluster

ECO PRO

In ECO PRO mode the instrument cluster is blue. The displays in the instrument cluster are designed for a more fuel-efficient driving style.



ECO-PRO instrument cluster

The current consumption and brake energy regeneration are displayed in the right area of the instrument cluster. During an engine start-stop phase the time without combustion engine is shown in the ECO PRO display.



ECO-PRO instrument cluster

4. Display Elements

Index	Explanation
1	Display of speed including the ECO PRO speed limit
2	Display of current and average consumption
3	Display of energy recovery

If ECO PRO mode is activated, the displays are also shown in blue in the Central Information Display (CID) and in the BMW Head-Up Display (HUD).





Display of ECO PRO mode

4.1.4. Configure displays

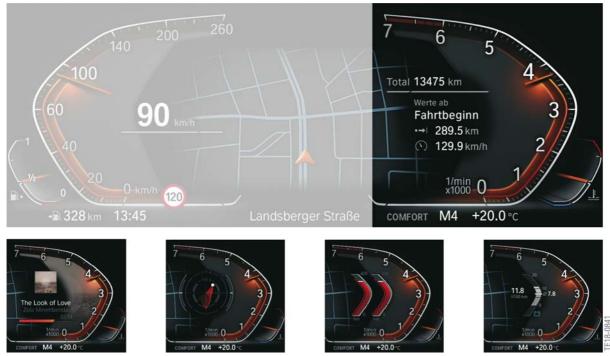
Widgets can be displayed in the area of the revolution counter. These widgets are called up using the on-board computer button on the turn signal/high beam switch (short press). You can shift through the widgets by pressing the button multiple times.

The following widgets can be displayed in the instrument cluster:

- Trip data
- Sport displays
- Acceleration forces
- Entertainment display
- Consumption display

4. Display Elements

The following graphic shows selected widgets in the instrument cluster.



Content of displays in the instrument cluster

4.1.5. Entertainment list

The entertainment list contains an overview of all set entertainment sources. The entertainment list is called up using the selection list button on the multifunction steering wheel. After the source is selected you are taken to the respective radio stations or music tracks. You can also select these using the knurled wheel. The list is either shown in the instrument cluster or in the Head-Up Display. The "Displays" menu determines where the content should be displayed.



Entertainment list

Some of the widgets can only be displayed in one of the 3 displays (Instrument Cluster, Central Information Display or BMW Head-Up Display).

4. Display Elements

4.1.6. Navigation displays

With active route guidance the navigation display can be shown in the instrument cluster. The display of a map navigation in the instrument cluster is new here. The view of the map navigation is not as generous as in the Central Information Display. However, before manoeuvring a High Guiding display is shown in the instrument cluster. Alternatively, the display can be switched to a route overview. For the first time this display can be effected parallel in the instrument cluster and in the Head-Up Display.

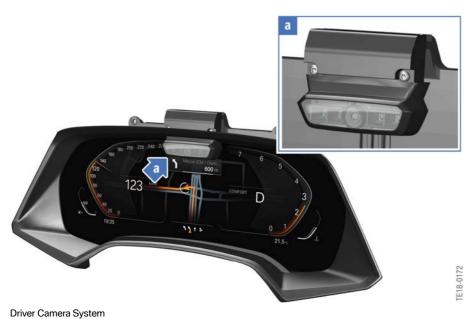


Display of navigation in the instrument cluster

4.1.7. Driver Camera System

Depending on the equipment, a camera is installed in the upper area of the instrument cluster. The Driver Camera System (DCS) is connected directly to the instrument cluster via an Ethernet cable. The Driver Camera System monitors the eye opening state and the viewing direction of the driver and is required for certain assistance systems.

More information about the Driver Camera System can be found in the product information **Driver Assistance Systems 2018**.



4. Display Elements

4.1.8. Test functions

Using the test functions values can be read out or checks on the instrument cluster can be performed.

The test functions are activated via the steering column switch. The test functions are activated as follows:

- Activate PAD mode
- Hold down on-board computer button on the steering column switch for 10 s.

The following test functions are possible:

Test function	Description
01	Identification
02	System test
03	Rolling mode
04	Initialization of on-board computer, range
05	End of test
06	Unlocking

Go to other menus under "Unlocking". The function is unlocked by inputting the checksum of the last 7 digits of the vehicle identification number.

Unlocking test function	Description
01	Tank
02	Temperature
03	On-board computer average
04	Correction factor

4. Display Elements

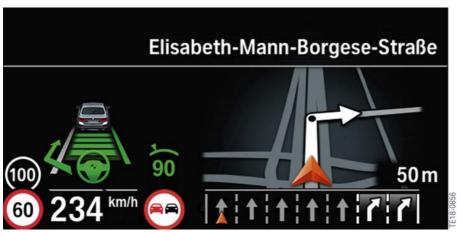
4.2. Head-Up Display

4.2.1. Overview

The BMW Head-Up Display is an element of the Live Cockpit Professional (SA 6U3). The full-color BMW Head-Up Display has a larger image compared to the G12.

The virtual image is roughly 2.4 m away from the eye of the viewer.

The Head-Up Display is connected to the instrument cluster via an APIX interface.



Head-Up Display

4.2.2. Settings

The following settings can be performed using the controller on the BMW Head-Up Display:

- Head-Up Display ON/OFF
- Height
- Display brightness
- Image rotation

The picture geometry can also be corrected via the ISTA diagnosis system.

Reduced height

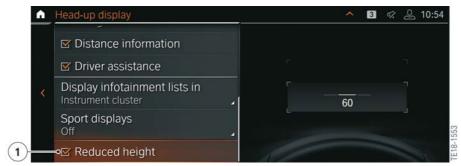
The option to reduce the height of the displayed figure is new. The content is summarized in the display in a more compact fashion. This can be useful, e.g. if the driver is not able to detect the upper area of the displayed information owing to its size.

4. Display Elements



Index	Explanation
1	Full image
2	Reduced height

The setting of the reduced height is effected in the menu of the BMW Head-Up Display.



Setting for reduced height of BMW Head-Up Display

Index	Explanation
1	Reduced height

4. Display Elements

4.3. Central Information Display

In conjunction with the BMW Live Cockpit Professional (SA 6U3), a Central Information Display with a maximum screen diagonal of 12.3" is installed depending on the vehicle. The display resolution is 1920×720 pixels.

ID7 is designed for touch operation.

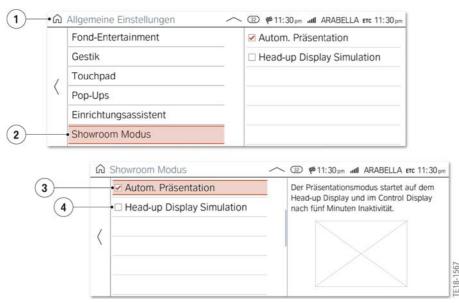


Central Information Display

5. Showroom Mode

5.1. Activation

Showroom mode is activated via the ISTA diagnosis system. After activation Showroom mode is added in the menu General settings.



Showroom mode menu

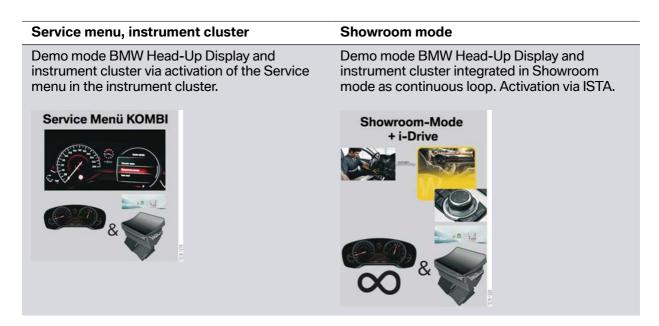
Index	Explanation
1	General settings
2	Showroom mode
3	Automatic presentation
4	Head-Up Display simulation

5.2. Presentation

If the automatic presentation is selected, the Demo mode starts after roughly 5 minutes in the BMW Head-Up Display and in the Central Information Display. Videos from the integrated operating instructions are played on the Central Information Display during the presentation mode.

If an operation is carried out in the vehicle (e.g. press controller), the automatic presentation of the videos stops. The automatic presentation only starts again after a further 5 minutes without activity in the vehicle.

5. Showroom Mode



Demo mode is **no longer** interrupted by a CC message in vehicles with the Service Pack 2018.

More information about Showroom mode can be found in the product information **Infotainment 2017**.

5.2.1. Demo mode navigation

In addition to the Showroom mode of the BMW Head-Up Display, a demo mode of the navigation can be started for the showroom. Here you input a destination in the system and start the Demo mode from the options. Then a simulation of the route guidance is displayed in the Central Information Display and in the instrument cluster. This is a similar function to the antenna view from the vehicles with ID5 and ID6.

