



AAA CENTER FOR DRIVING SAFETY & TECHNOLOGY



2017 MERCEDES-BENZ C300



INFOTAINMENT SYSTEM* DEMAND RATING

Very High Demand



The Mercedes-Benz C300's COMAND® infotainment system* received an overall very high demand rating in the study. Drivers' visual (eyes-off-road) and cognitive (mental) attention was drawn away from the road as they attempted to navigate the center stack menu using a rotary control. This produced overall very high levels of demand for all functionalities.

Standard and Optional Features in the 2017 Mercedes-Benz C300

	C300 Sedan	AMG C 63 Sedan	AMG C 63 S Sedan	AMG C 43 4MATIC Sedan
○ Optional ● Standard				
Android Auto				
Apple CarPlay				
Mobile App Support				
Text Messaging	●	●	●	●
Navigation	○	○	○	○
Touch Screen				
Gesture Control				
Heads-Up Display	○	○	○	○
Voice Commands	○	○	○	○
Console Control♦	●	●	●	●

Additional trim levels available.

♦ Touchpad controller that can be used in conjunction with the console control is optional.

STRENGTHS

- Drivers cannot pair phones while the vehicle is in motion.

ABOUT THE STUDY

Researchers evaluated 40 new 2017/2018 vehicles' infotainment systems* to measure overall demand** placed on a driver when using voice command, touch screen and other interactive technologies to make a call, send a text message, program audio entertainment or program navigation, all while driving down the road.

WEAKNESSES

- Drivers were subjected to very high levels of cognitive demand for an average of 27 seconds[‡] across all interactions.
- Placing a call took an average of 30 seconds[‡].
- The center stack displays full text messages and required about 24 seconds[‡] to load messages for reading.

* Infotainment System: Vehicle system that combines entertainment and information content.

** Overall demand measured: visual (eyes-off road), cognitive (mental) and time-on-task.

‡ Compared to a recommended maximum of 24 seconds.

VEHICLE OVERVIEW: CONTROLS AND DISPLAYS



VOICE COMMANDS



STEERING WHEEL COMMANDS



INSTRUMENT CLUSTER



CENTER STACK



CENTER CONSOLE

INFOTAINMENT SYSTEM

The COMAND® In-Vehicle Infotainment System* offers the following features:

CALLING AND DIALING



The COMAND® infotainment system* in the Mercedes-Benz C300 allows drivers to place calls using the center console's rotary wheel and steering wheel buttons. Steering wheel buttons allow drivers to quickly answer and end calls, as well as place calls by selecting a number from the contacts list displayed in the instrument cluster. Drivers may call contacts and dial phone numbers using the center console's rotary wheel while the vehicle is in motion. If no phone is paired when the car is turned on, the system will prompt the user to connect a device using the rotary wheel while stationary. The system guides the user through the phone pairing process. Drivers cannot pair new devices while the vehicle is in motion.

Using the center console's rotary wheel to place calls generated very high demand overall. Drivers took an average of 30 seconds[‡] to navigate through the menu structure to select contacts or dial phone numbers, all while experiencing a very high level of cognitive (mental) demand. Researchers[‡] noted the significant attention required may have resulted from the numerous steps needed to complete the task. Furthermore, researchers[‡] reported that navigating the menu was complex and required high levels of visual (eyes-off-road) demand. Lastly, researchers[‡] found the blue color scheme provided low contrast between the current selection and inactive options.

TEXT MESSAGING



The Mercedes-Benz C300's COMAND® infotainment system allows drivers to receive and access text messages using the center console rotary wheel. Message content is shown on the center stack display while the vehicle is in motion. There is no option for messages to be read aloud or replied to, even if the vehicle is stopped.

Accessing text messaging via the center console and accompanying center stack display placed overall high demand on drivers. Drivers spent an average of 24 seconds[‡] attempting to navigate through the phone menu in order to load the message for viewing. The full text message contents are displayed in a small sized font on the center stack display, imposing high visual demand and even higher cognitive demand on drivers. Upon loading the telephone menu, there was no indication that text messaging was available. Researchers[‡] noted that drivers had to search through the hidden submenu to load the messaging menu. Once the menu was loaded, drivers could open and view message contents while driving but could not have them read aloud nor reply.

AUDIO ENTERTAINMENT



The Mercedes-Benz C300's audio entertainment system provides access to: AM, FM and XM radio; Bluetooth audio; and USB and SD card connections. All functions are fully accessible via rotary wheel controls and steering wheel buttons while the vehicle is in motion.

The audio entertainment system demonstrated overall very high demand. Drivers took an average of 26 seconds[‡] to program audio entertainment from a USB connected source. Searching through the audio menu proved to be a very high cognitively and high visually demanding task, likely due to the visually dense rotating menu layout in combination with hidden submenus. Moreover, the functions of the rotary wheel and on-screen buttons change depending on which menu is active. Researchers[‡] noted this may create a confusing experience for users and that while the audio menu structure is shallow, there are multiple submenus that branch off from the main menu, making it difficult to remember the function of each specific button.

* Infotainment System: Vehicle system that combines entertainment and information content.

[‡] Compared to a recommended maximum of 24 seconds.

[‡] Researchers with expertise about how humans interact with technology evaluated the usability of the infotainment system in stationary vehicles.

VEHICLE CONTROLS AND DISPLAYS

VOICE COMMANDS



Voice commands are only available with the optional Navigation function, which was not tested in this vehicle.

INSTRUMENT CLUSTER



The Mercedes-Benz C300's instrument cluster, located behind the steering wheel, features a central digital display housing the infotainment features. Analog gauges on either side of the central display include the speedometer and tachometer with small digital displays for the fuel gauge and engine temperature. The central display offers a range of menus detailing system status and infotainment components. Users can access content using buttons on the left and right sides of the steering wheel.

STEERING WHEEL CONTROLS



The steering wheel contains 12 buttons organized according to function. Buttons on the left provide access to content on the instrument cluster display and end voice command sessions. Buttons on the right provide access to simple phone functions, audio volume and voice command activation. Cruise control is located on a stem from behind the steering wheel on the left.

CENTER STACK



The center stack features an 8.4-inch digital display, the contents of which are controlled via the center console rotary wheel. The main menu utilizes a carousel of square submenu tiles that orient to the center of the screen as the user scrolls right and left using the rotary wheel. The menu provides access to navigation, audio entertainment, phone functions, climate control and other customizable “favorite” functions. Four buttons within the center stack provide shortcut menu navigation options.

Climate control can be accessed using the additional 11 buttons located within the center stack or the menu ribbon along the bottom of the center stack display.

CENTER CONSOLE



The center console consists of a rotary wheel and accompanying two buttons (“back” and “favorites”) that provide access to the center stack display. The rotary wheel can be rotated to scroll through menu options, pushed in all directions for menu navigation and to make selections.

VEHICLE SALES SUMMARY

The Mercedes-Benz C-Class is the 66th bestselling vehicle in the United States, with 77,447 sold in 2017 YTD.⁹

⁹Source: *GoodCarBadCar* at goodcarbadcar.net — data updated to Dec. 6, 2017.