



AAA CENTER FOR DRIVING SAFETY & TECHNOLOGY



2017 GMC YUKON SLT



INFOTAINMENT SYSTEM* DEMAND RATING

Very High Demand



The GMC Yukon SLT IntelliLink® infotainment system generated very high demand. Of all four tasks evaluated, programming the navigation system and texting features proved to be the most demanding on drivers.

Standard and Optional Features in the 2017 GMC Yukon

○ Optional

● Standard

	SLE	SLT	Denali
Android Auto	●	●	●
Apple CarPlay	●	●	●
Mobile App Support	●	●	●
Text Messaging	●	●	●
Navigation		○	●
Touch Screen	●	●	●
Gesture Control			
Heads-Up Display			
Voice Commands	●	●	●
Console Control			

ABOUT THE STUDY

Researchers evaluated 30 new 2017 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, tune the radio or program navigation, all while driving down the road.

STRENGTHS

- The voice system is flexible and accepts a range of intuitive phone-related voice commands.
- Touch-screen restrictions for some features while the vehicle is in motion are a helpful safety measure.

WEAKNESSES

- Some text messaging actions can take drivers an average of 30 seconds* to complete, taking eyes off the road and placing high mental demand on the driver.
- When using the navigation system, interactions take 61 seconds* to complete on average.

* 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

INFOTAINMENT SYSTEM

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

CALLING AND DIALING



The GMC Yukon SLT's IntelliLink® infotainment system allows drivers to make phone calls when a phone is paired. To pair a phone, drivers can follow simple instructions on the touch screen that appear automatically upon loading the phone menu. Once a phone is paired, drivers can dial numbers or call contacts stored on the phone using voice commands or the center stack. Using steering wheel buttons, drivers can access a list of favorite contacts. All phone functions are accessible whether the Yukon is stopped or in motion.

In the on-road study, the voice command system used to access calling had a moderate demand overall. While interactions were quick, given the intuitive commands and fast processing speed of the system, drivers still experienced high visual (eyes-off-road) and cognitive (mental) demand when placing calls.

Accessing calling and dialing functions through the touch screen, while not taking much time, requires a very high level of visual (eyes-off-road) and cognitive (mental) demand. The dial pad, while placed close to the driver, still requires excessive visual attention to dial a number. Access to the entire phonebook is not locked out while driving, and drivers must sort through multiple pages of text to find the desired contact.

Overall, the calling and dialing system poses high demand. The voice command functions in this vehicle offer a better way to make calls than the center stack touch screen.

TEXT MESSAGING



Drivers can read incoming text messages and send replies with a paired phone. Text messaging is accessible via only the center stack touch screen, although in-motion restrictions prevent drivers from viewing message contents unless at a standstill. As an alternative to viewing messages, drivers can choose to have the synthetic voice read the message aloud.

In the on-road study, drivers accessing text message functions were met with very high demand. Text messaging functionality varies somewhat depending on the paired phone's operating system. Android users can reply to a message in the inbox with one of 10 predefined responses, but custom predefined messages can be added while the vehicle is stopped. The system does not allow iPhone users to send outgoing replies.

While the text message interface appears clean and simple, the amount of time required to reply to a message was, on average, 30 seconds♦ and required very high visual (eyes-off-road) and cognitive (mental) demand in order to complete.

Although the Yukon includes restrictions to prevent drivers from viewing messages while the vehicle is in motion, the text messaging system still poses a very high demand and distraction from the forward roadway.

♦ Compared to a recommended maximum of 24 seconds

AUDIO ENTERTAINMENT



The audio entertainment system includes AM, FM and XM radio; Bluetooth; and USB input. It also supports Android Auto and Apple CarPlay. Drivers can access all audio sources using voice commands, the steering wheel via the instrument cluster display or the center stack. Functions are not locked out while driving.

In the on-road study, accessing audio entertainment using voice commands generated moderate demand. Drivers are able to keep their eyes on the road while adjusting audio but were subjected to high levels of cognitive (mental) demand. However, voice commands are simple and intuitive to use. Additionally, visual prompts are listed on the display for increased aid.

When using the touch screen to interact with the audio entertainment, drivers were met with overall high demand. While interactions were quick, due in part to a responsive touch screen, tasks still required a very high amount of cognitive (mental) and visual (eyes-off-road) attention. The media menu provides an overabundant number of options and is visually cluttered, requiring drivers to take their attention off the road to find a selection.

Overall, audio entertainment poses moderate demand. The voice command system is a less demanding option in this vehicle compared with the touch screen and does a better job keeping drivers' eyes on the forward roadway.

TURN-BY-TURN NAVIGATION SYSTEM



The turn-by-turn navigation system displays directions to a set destination on both the touch screen and instrument cluster display. To set a destination, drivers can choose a point of interest via voice commands or the touch screen. Few navigation features are locked out while driving. However, the system limits the length of menus and options displayed at one time.

On-road data shows the navigation system generates very high demand when using voice commands. Interaction times took an excessive 61 seconds♦ on average. Interactions also required high cognitive (mental) and visual (eyes-off-road) demand. To make a final destination selection, the system requires drivers to stop using voice commands and choose via manual input on the touch screen. The sudden, forced switch between two different methods of interaction with the system can be confusing and inefficient.

In the on-road study, drivers using the center stack touch screen to access navigation functions were met with very high demand. Tasks took a noticeable amount of time to complete and imposed high cognitive (mental) and very high visual (eyes-off-road) demand on drivers. The navigation menu is cluttered with excessive submenus and categories to sort through, and the design of the menu structure makes it difficult for drivers to keep track of where they currently are in the menu structure.

The Yukon's turn-by-turn navigation system had very high demand associated with it. Evaluators advise programming a destination only while the vehicle is not in motion.

♦ Compared to a recommended maximum of 24 seconds

VEHICLE CONTROLS AND DISPLAYS

INSTRUMENT CLUSTER



The Yukon SLT's instrument cluster, located behind the steering wheel, contains a 4.2-inch digital display that offers access to phone functions, audio entertainment, turn-by-turn navigation and a variety of other menus. Drivers can access the cluster display using steering wheel buttons. The digital display is surrounded by familiar analog gauges and dials.

STEERING WHEEL CONTROLS



The steering wheel contains 13 buttons that give access to the cluster display, phone functions, audio entertainment, a variety of vehicle settings and the voice command system. Four buttons are located on the back of the steering wheel and control audio entertainment.

CENTER STACK



The center stack features an 8-inch full-color touch screen that houses main menus for the IntelliLink® infotainment system's core phone, audio, text messaging and turn-by-turn navigation functions. Drivers can also access the touch screen using the 10 buttons and dials located just below the screen. Farther down the center stack, 23 buttons, dials, and switches allow drivers to control the vehicle's climate.

VOICE COMMANDS



The Yukon has a voice command system that allows drivers to access phone calling and dialing, audio entertainment and some limited turn-by-turn navigation functionality via voice commands. The voice system plays back a synthetic female voice.

VEHICLE SALES SUMMARY

The 2017 GMC Yukon is the fourth best-selling vehicle in the large-size SUV segment (93rd best-selling vehicle overall), with 53,447 units sold during 2016¹.

¹ Source: Automotive News at autonews.com; Wall Street Journal at wsj.com; Forbes at forbes.com; FleetCarma at fleetcarma.com – data updated to 6/25/2017.