

CES 2016 in Las Vegas

## **e-Golf Touch / Infotainment news**

Notes:

You will find this press release and images related to Volkswagen at the 2016 CES online at: [www.volkswagen-media-services.com](http://www.volkswagen-media-services.com). User ID: ces2016; password: vwjourney.

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Features and technical data of production models apply to models offered in Germany. Details for other countries may vary.

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### Bringing gesture control to mass production cars:

### The e-Golf Touch has some surprises in store with a new infotainment system of the next generation

Volkswagen will offer one of the world's first compact cars to feature gesture control

The new infotainment system has a configurable 9.2-inch home screen

#### Ten key facts – e-Golf Touch / Infotainment news

1. Volkswagen presents the world premiere of the close-to-production version of a newly developed infotainment system generation.
2. The top system of the new infotainment generation will also be launched with gesture control in compact cars.
3. The infotainment system presented in the e-Golf Touch is – apart from a few details – already the system that is set to go into the future production model.
4. The new top system has a high resolution 9.2-inch touchscreen (1280 x 640 pixels) with a stylish glass surface.
5. The new top system's home screen can be configured, and the display content can be displayed in function tiles.
6. These function tiles on the 9.2-inch screen can be configured to contain content on ten different themes (e.g. Music or Phone).
7. Volkswagen plans to launch a new voice control system with an improved control concept for the new Golf in the early summer.
8. New “electronic voice amplification” will make it much easier to communicate with the passengers sitting in the back.
9. In future, it will be possible to save the personalization of a Volkswagen in the cloud and thus transfer it to other cars.
10. Smartphone notifications will also make it possible to read and reply to SMSs while driving.

## **To the point – Volkswagen at the CES 2016**

**Wolfsburg / Las Vegas, January 2016.** Volkswagen is represented at the CES 2016 with two ground-breaking, progressive cars: the zero-emission BUDD-e van and the e-Golf Touch, which is also an electric vehicle. BUDD-e is a concept car that will take show visitors on a time journey to the year 2019. The e-Golf Touch, on the other hand, with an infotainment system of the latest generation, shows that technologies that still seemed to be a long way off in the future at the 2015 CES are already close to production readiness just a year later. Beyond that, there will be numerous electronic solutions making their debut at this year's CES in Las Vegas, which will also be introduced in series production in the near future. The new developments presented at the CES by Volkswagen illustrate how the car is currently undergoing immense transformation. These changes originate from various sources, but they all follow the same compass: electronics. They control the drive, which will be electric increasingly often in the future. They make assistance systems that can react faster than a human being possible. They bring the Internet into the car and put the car online, and they transform the instruments, displays and controls. Displays that are as clear as glass herald a new, clean style of car instrument panels as the visible level of the Human-Machine Interfaces (HMIs) of the future. Interactive HMI functions make new communication channels between humans and cars possible. It is also undeniable that the electronic devices that have become omnipresent in our everyday lives – such as smartphones, tablets, smartwatches and cameras – are also making their way into the car. Their potential benefits and operating patterns blend with those of the car. This process of fusion is accelerated by ever more powerful computers and more intelligent software. This results in evolutionary leaps that, as already mentioned above, are set to transform the motor car. The CES, as a regular event that takes place every January in Las Vegas, reflects the most important developments in the world of electronics. This is being underscored

this year by the world premieres of two of the most extraordinary Volkswagens ever:

- The BUDD-e is the first Volkswagen concept car based on the new Modular Electric Drive Kit (MEB). This zero-emission van gives us a glimpse of how Volkswagen defines automotive avant-garde and sustainability as we head towards the end of the current decade. (*See separate press kit.*)
- The e-Golf Touch – also a zero-emission vehicle – with a next generation infotainment system, reflects one of the key connectivity trends of the immediate future: intuitive gesture control, which is set to find its way into nearly every segment of the automotive sector thanks to manufacturers such as Volkswagen and models like the best-selling Golf.

#### **e-Golf Touch – Bringing gesture control to mass production cars**

**The Infotainment Toolkit of a new generation.** The Golf R Touch concept car shown at CES 2015 was the first mass production car from Volkswagen to feature a gesture control system. With the e-Golf Touch in January 2016, Volkswagen now presents a more advanced generation of the Modular Infotainment Toolkit (MIB) and thus, for the first time, an early series-production status of this intuitive control technology. The e-Golf Touch features the new top system of the MIB with a 9.2-inch high resolution display (1280 x 640 pixels). All of the functions and displays are embedded in a sophisticated, clear glass surface; on the left – facing the driver – there are four touch-sensitive buttons (Menu, Home, Car, App) and a rotary/push-button control. The top system's home screen 8.2"/209 mm wide and 4.1"/104.6 mm high, consists of a large main area as well as two configurable tiles (on the right of the home screen), each of which is 1.7"/42 mm high and 2.4"/60 mm wide. They can be assigned any of ten different functions – for instance Media (incl.

the cover art) or Telephone (incl. a photo of the person you are calling). Beyond that, it is also possible to drag the main area to fill the entire home screen, for example to display the navigation map as large as possible or to display the smartphone apps such as MirrorLink™, Android Auto™ (Google) or CarPlay™ (Apple) using Volkswagen's App-Connect.

**Voice control perfected.** The e-Golf Touch will also feature the debut of Volkswagen's latest generation of voice control technology. This system will impress with its significantly improved control concept, as the voice commands implemented and recommended in the relevant dialog are simultaneously displayed on the screen to accompany the command in a new format, meaning that the user can always see which voice commands make sense in a given situation. The new version of the voice control system will already be launched in the early summer of 2016 in the first markets such as the USA.

- **Voice control with keyword activation.** As well as that, Volkswagen will also be the first manufacturer to present the new Keyword Activation voice recognition function in the e-Golf Touch. This feature allows the driver to start voice recognition simply by saying something like "Hello Volkswagen" to the system, instead of having to press a button, as customary in the past.

**Wireless charging.** In the context of electric cars, we automatically think of inductive charging of the car battery when we hear the term wireless charging, but in the case of the e-Golf Touch, wireless charging refers to wireless charging of smartphones, as Volkswagen has integrated an inductive charging system into the mobile phone tray (under the infotainment system). And for the first time, it is also possible to charge smartphones by wireless charging in the back, too – in the rear armrests. Beyond that, the e-Golf Touch is also equipped with a new USB Type C port, which permits high speed USB data transfer, with the phone being charged simultaneously,

which will drastically reduce the time it takes to charge it in the future.

**Electronic voice amplification.** The electronic voice amplification used in the e-Golf Touch improves the acoustics, making it easier for the driver and front-seat passenger to talk to the back-seat passengers. This system uses the hands-free microphone and the rear loudspeakers. The volume of the electronic voice amplification is automatically adjusted to suit the speed of the vehicle. If the music volume is very high, the volume of the electronic voice amplification is reduced.

### **Infotainment news – Next generation connectivity**

**Exit screen.** There are already some displays on the infotainment system's home screen that are briefly displayed when parking, for example "Don't forget your telephone". The range of functions of this Exit screen is going to grow considerably: For the first time ever, the Exit screen will offer personalized, simplified access (One Touch) to functions that are relevant in the current situation before leaving the car. This makes it possible, for instance, to program the auxiliary heating system within a matter of seconds, as the infotainment system displays the predefined functions for a predetermined length of time. Volkswagen plans to offer the Exit screen in all future generations of vehicles. Analogously, an individually configurable Entry screen is also currently under development.

**Personalization 2.0.** The number of convenience and assistance systems and the associated range of configuration options increases with every new generation of vehicles. Many of these systems are individually adjusted and used by different drivers of the same car, meaning that a lot of personal settings need to be constantly reset. Volkswagen conceived Personalization 2.0 to make this simpler.

This allows the individual settings for one driver to be saved in a user account and saved to the cloud using Volkswagen Car-Net ID. If that driver then gets into another compatible Volkswagen, they can simply call up his Car-Net ID settings in its infotainment system and activate them in the new car in a flash. This effectively means that drivers always have their own individual settings with them – which is especially handy for using rental cars or switching between company cars. Using the Volkswagen Car-Net ID app it is also possible to change your settings in your user account and save the changes in the cloud. You can also use the app to familiarize yourself with a new Volkswagen in advance. Of course, all of the user's data is protected against unauthorized access by third parties and can also be deleted in next to no time.

**Media control generation 3.0.** The Volkswagen Media Control app allows you to control almost all of the main infotainment functions conveniently using your tablet. Volkswagen Media Control is thus a kind of rear-seat entertainment system of the future. Simply connect the tablet via the WiFi hotspot with the infotainment system and you're done. Controllable systems here include the radio, all media sources (e.g. USB, CD, DVD, hard drive, online song search) and navigation. At the CES Volkswagen is now presenting the third generation of Media Control. It is set to be launched on the market early this summer. The following new functions have now been added:

- Video streaming between tablets with remote control.
- Remote control of the media playing on tablets via the infotainment system. This makes it possible, for example, to play a movie simultaneously on two separate tablets in the back – the most typical use when travelling with children.
- Audio streaming a playlist via tablet or smartphone to the infotainment system (synchronized audio playback via the car's loudspeakers). The current playlist can be customized by all of the users of the app who have a suitable device and are also in the car.



**App Connect & WiFi.** App Connect reflects the compatible apps on a smartphone on the screen of the infotainment system. For example, the iPhone: If the smartphone is linked to the infotainment system, the Telephone app can be used via the infotainment system's touchscreen with the accustomed graphics and operating structure, just like on the iPhone. Similarly, Apple's Siri voice control app or the Maps and Music apps can also be used. Using App Connect and the integrated platforms MirrorLink™, Android Auto™ (Google) and CarPlay™ (Apple) it is compatible with all current smartphones above Android 5.0 and Apple iOS 8.1. So far, however, it has been necessary to connect the smartphone to the infotainment system using a cable, whichever platform was concerned. Volkswagen's presentation of App Connect & WiFi, and thus the wireless second generation of App Connect (initially in conjunction with CarPlay™ Wireless and MirrorLink™ 1.2 Miracast) at CES 2016, is a genuine world premiere. Once the function has been set up, the smartphone can even be left in the user's handbag or jacket pocket. On longer journeys it is, of course, advisable to put the smartphone in the Volkswagen's inductive charging cradle – which is also wireless – to supply it with power.

**Volkswagen Car-Net.** The various online services offered by Volkswagen Car-Net include the packages Guide & Inform, Security & Service, App Connect and e-Remote. At the CES, Volkswagen now presents numerous new programs and feature add-ons for Volkswagen Car-Net. In future it will also be possible to integrate a smartwatch.

- **e-Remote becomes Volkswagen Car-Net App.** The Car-Net app e-Remote – which was developed for Volkswagen's plug-in hybrid and electric cars – will be reconfigured and will in future also be available for gasoline and diesel-powered cars. As part of this process, the app's functions are being expanded to give the multifunction program itself a new name: Volkswagen Car-Net App. One of the new functions is called Calendar Import. The clever thing about this is that when information about a

destination is imported from your smartphone (via Facebook events or Google Calendar), the data can be transferred to the navigation system's Frequent Routes menu in the order of the calendar entries, if so desired. From here the data can then be integrated directly in the route guidance. Another new extension is Intelligent Route Planning, where the app calculates the optimum route to several selected POIs. For example: The driver enters several different shops as POIs in a certain order – for instance a shoe shop, a jeweler's and a supermarket. The Volkswagen Car-Net App then automatically suggests the best route and then sends it to the infotainment system.

- **New app for MirrorLink™**. A fun and extremely useful new program for MirrorLink™ is called My Rules. My Rules helps to get things done, because with this app you can program everything in simple steps, allowing you to tailor it to suit your own needs. The principle behind the app is: basically just “if this, then that”. Here are three examples of this programming, or simply data input, that cause an event during the journey to result in an interaction with the car. Example 1: refueling/reserve indicator lights up: “Take me to the nearest gas station, as soon as the reserve indicator on the fuel gauge lights up.” Example 2: the temperature is above 25°C/the weather forecast is sunny: “Play the song ‘Summer in the City’.” Example 3, it's the weekend and the car is approaching a supermarket: “Message, don't forget the weekend shopping.”
- **Feature add-ons.** For Volkswagen, the focus of the feature add-ons is on the service aspect. For example, the new Service assistant recommends switching to winter tires due to persistent low temperatures; the Charging assistant for electric cars shows the next charging stations that are within range and indicates how long it will take to charge; the Accident Note app, meanwhile, helps to record all the necessary information, should the worst happen; the Parking Position service shows where the car is parked on your smartphone and can even show how to get

there on foot using Google Street View; the Route Info app suggests charging stations that are along the planned route and provides information on the applicable road traffic rules when you cross a national border; and last but not least, the Calendar assistant can be used to manage the availability of a shared company car online with your colleagues.

**Smartphone notifications.** Almost everyone had this experience before while driving: Your smartphone buzzes and flashes to notify you that a new voicemail or a newsletter with an urgent update has been received, but it is impossible to check the message, because – as we all know – it is not only illegal but also dangerous to use a smartphone while driving. Now Volkswagen has come up with a solution that allows drivers to stay informed, legally and without being distracted – with smartphone notifications. It works like this: as soon as the smartphone is linked to the infotainment system by WiFi, the messages (notifications) received by the smartphone are briefly displayed on the instrument cluster and the infotainment system's display as a pop-up menu. If the driver wants to know more, the notification can also be read aloud completely. At speeds below 5 km/h (3 mph) the whole notification is displayed. Above 6 km/h (4 mph) this function is deactivated for safety reasons, in which case only the headlines or the first few words of the message are displayed.

- **Social media notifications.** Beyond this, Volkswagen will present a two-stage extension of the smartphone notifications at CES in Las Vegas, which will not only allow the driver to have social media notifications from Facebook and Twitter displayed, but also to reply to them right away.

**Step 1:** The driver can reply to Facebook and Twitter messages that are displayed as a pop-up message, as described above, using the reply option while driving. The reply options correspond to those we are accustomed to in social networks (for instance like retweeting). In the future it will also be possible to reply by voice command. At speeds

below 5 km/h (3 mph) it is also possible to enter free text using a keyboard.

**Step 2:** In the second stage of the extension, the car will be given its own identity and thus a Twitter account. On the basis of its own timeline the car can then post messages itself, although the driver will still have to approve them. If the current speed falls below 20 km/h (12 mph) for a predetermined length of time, the car could, for example, post: “Damn, there’s a jam! Sorry guys, I’m going to be late. I’m just crawling along at 10 miles an hour.” If the temperature falls below 0°C when ESP is active, the message could be: “Hey guys, drive carefully. It’s -2°C here and really slippery! #Thanks, ESP.” This allows friends and family who are “friends” with the car to automatically stay informed about the state of the car and road conditions.