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> [aonav Android 13 Qualcomm 685 Car Radio Dual System for Mercedes Benz ML W166 GL X166 \(2012-2015\) - User Manual](#)

## **aonav Qualcomm 685 Chip Car Radio Dual System For Mercedes Benz ML W166 GL X166 GL300 ML350 NTG 4.5**

### **aonav Android 13 Qualcomm 685 Car Radio Dual System User Manual**

Model: Qualcomm 685 Chip Car Radio Dual System For Mercedes Benz ML W166 GL X166 GL300 ML350 NTG 4.5

Brand: aonav

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#### **1. PRODUCT OVERVIEW**

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The aonav Android 13 Qualcomm 685 Car Radio Dual System is designed to upgrade your Mercedes Benz ML W166, GL X166, GL300, or ML350 (2012-2015) with advanced multimedia and navigation capabilities. This unit features an Android 13 operating system, 8GB RAM, 128GB ROM, and a powerful Qualcomm Snapdragon 685 CPU. It supports wireless Apple CarPlay and Android Auto, GPS navigation, Bluetooth 5.1, and Wi-Fi connectivity, while retaining your original car's CD host and audio system. The 12.3-inch IPS HD capacitive touch screen offers a 1920x720 resolution with a 178° viewing angle for clear visuals.

**8 GB**  
High-Speed  
Storage

**128 GB**  
Solid State  
Memory

**685**  
8 Core CPU 20  
GHZ 8 DDR4

**Carplay**  
Built-in wireless Carplay  
and Android Auto

# Android 13 TESLA-STYLE SCREEN

The best stable CPU for the Android Screen

25%↑  
GPS Performance

30%↑  
Processing Speed

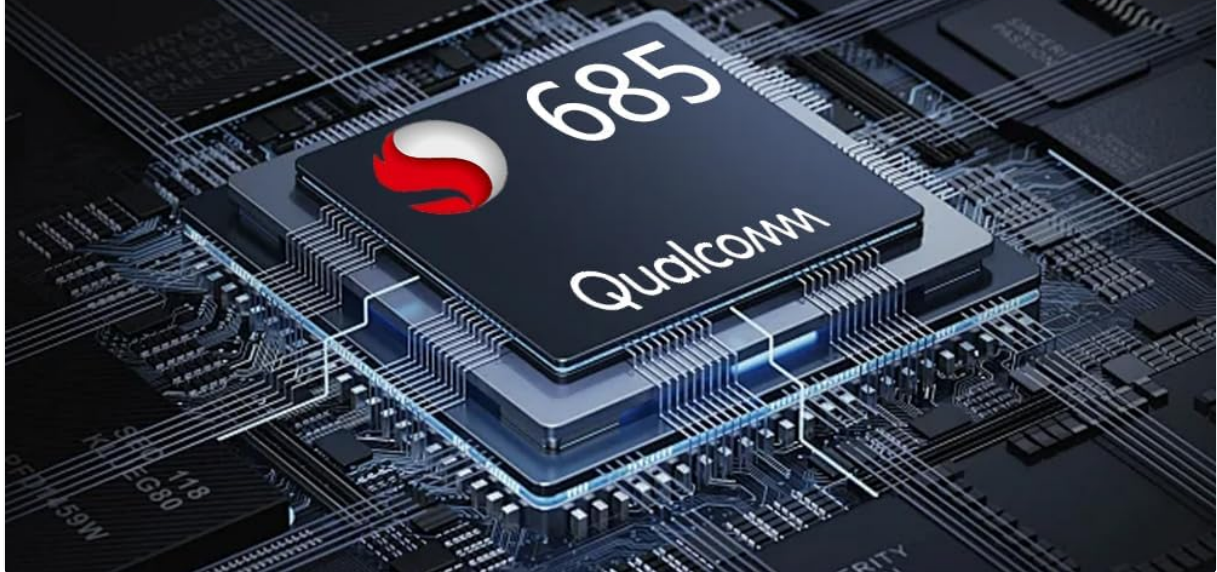


Figure 1: The aonnav Android 13 Car Radio unit.

**Android 13**

**New Android**

**5.0 BT Connect**

**Wireless Carplay**

**More APP Downloads**

## 2. SETUP & INSTALLATION

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This section provides a step-by-step guide for installing your new aonav Android 13 Car Radio. It is recommended to watch the full installation video before beginning.

Video 1: Detailed step-by-step guide for installing the aonav Android 13 Car Radio in Mercedes Benz ML W166 GL X166 models.

### 2.1. Disassembly of Original Components

1. **Remove Trim Panel:** Use simple pry tools to remove the trim panel around the original radio.
2. **Remove Air Conditioning Panel:** Carefully pry out the air conditioning panel below the radio. Connections on the back can remain attached.
3. **Remove Original Radio:** Pull down the metal latches holding the radio in place, then slide the radio out. Disconnect the connection on the bottom right-hand corner to fully remove it.
4. **Remove AC Vents:** Locate two screws underneath the AC vents. Undo these screws and use pry tools to pop out the AC vents.
5. **Disconnect AC Vent Connections:** On the back of the original AC vents, disconnect the connections on each side.
6. **Remove Original Screen:** Remove the retaining screws on each side of the original screen. Pull out the screen.
7. **Handle LVDS Connection:** Locate the orange and black connection (not used) and the blue LVDS connection (to be reused). Keep the blue LVDS connection handy.
8. **Disconnect Main Harness:** Place a towel on the center console to protect surfaces. Remove the main harness from the back of the original radio. Use a pry tool if needed.
9. **Transfer Fiber Optic Cord:** Carefully remove the orange fiber optic cord from the original harness. This cord is crucial for sound and must be transferred to the new harness.

### 2.2. Connecting the New Android Unit

9. **Connect New Harness:** Plug the female end of the new Android harness into the male end of the harness that came out of the original Mercedes radio. Secure it firmly.
10. **Connect to Original Radio:** Plug the male end of the new Android harness into the back of the original Mercedes radio. Secure it with the latch mechanism.
11. **Insert Fiber Optic Cord:** Transfer the fiber optic cord from the original harness into the same corner slot in the new harness. This is essential for audio output.
12. **Run Wires to New Screen:** Begin running the wires up and position them to be plugged into the back of the new screen.
13. **Connect LVDS:** Plug the black LVDS cable from the new unit into the blue LVDS connection that came out of the original screen.
14. **Test Basic Functions:** Before final installation, plug in the new screen and test basic functions like the original radio interface, sound (AM/FM, auxiliary, Android music), command knob, and rearview camera. Refer to the troubleshooting section if issues arise.

### 2.3. Reassembly

15. **Install Screen Bracket:** Install the Android screen bracket into the dash using the two screws.
16. **Prepare Antennas:** Prepare the GPS antenna and 4G antenna (if using) to be run through. Most users may not need these, but decide based on your usage.

17. **Prepare New Air Vent Panel:** On the back of the new air vent panel, locate the clock connection. Plug in the clock connector included in your Android wiring harness.
18. **Install New Air Vent Panel:** Install the new air vent panel, running connections through appropriate holes. Torque the screws for the lower air vent panel.
19. **Run USBs to Glove Box (Optional):** To run USB inputs into the glove box, remove the cover with a pry tool and undo screws to remove the panel. Remove screws from the glove box. Drill a hole on the edge of the glove box to run the two USB heads through for access. For 4G and GPS antennas, you can run them up through the top of the glove box without drilling, using adhesive stickers to secure them.
20. **Reinstall Glove Box:** Once complete, reinstall the glove box. The 4G and GPS antennas will not be visible, but USBs will be accessible.
21. **Reinstall Radio:** Push down wires behind the radio as far as possible. Reinstall the connector on the corner of the radio and push the radio back into position. This may require some force and wire management. Retorque the radio retaining screws.
22. **Snap Air Vents:** Snap the air vents back into position.
23. **Reconnect Screen:** Reconnect all connectors on the back of the screen.
24. **Reinstall Trim:** Reinstall the trim piece around the edge of the radio.



Figure 3: Comparison of the dashboard before and after installing the aonav Android 13 Car Radio.

# Compatible Original CANBUS Protocol

The OEM Vehicle Function Can Be Retained For Use

1

Keep original car system



2

Retain OEM Factory  
CD/DVD Player



3

Retain OEM Factory  
Steering Wheel Control



4

Retain OEM Horn  
Speaker Sound Output



5

Compatible OEM  
Reversing Camera



6

Compatible OEM  
iDrive Rotation Button



Figure 4: Diagram showing retention of original vehicle functions through CANBUS protocol.

## 3. OPERATING INSTRUCTIONS

Your aonnav Android 13 Car Radio offers a dual system experience, allowing you to switch between the original car system and the new Android interface. The intuitive touch screen provides access to a wide range of features.

Video 2: Overview of the Android 13 Car Radio interface, demonstrating navigation, music playback, and system settings.

### 3.1. Dual System Switching

The unit maintains your original car's system while providing a new Android interface. You can switch between the original system and the Android system at will, ensuring all original functionalities like the CD host and audio system are preserved.

# Dual System Free Switching

Compatible with the original car system.

original car system + Android system , dual system can be switched at will



Figure 5: Dual system switching between original car system and Android system.

## 3.2. Wireless CarPlay & Android Auto

Connect your smartphone wirelessly via Bluetooth or charging cable to access Apple CarPlay or Android Auto. This allows for voice control (SIRI), navigation, screen sharing, music, and other app functionalities directly on the 12.3-inch touchscreen.

# Wireless / Wired CarPlay & Android Auto

Display your iOS/Android apps on the screen talk to get driving directions. Make a call or play your road-trip playlist on the way.



Figure 6: Wireless CarPlay and Android Auto interface.

### 3.3. GPS Navigation

The unit supports both online and offline navigation applications such as Igo Map and Waze Map, with 2D/3D map display. It utilizes GPS, Beidou, and GLONASS satellite positioning for accurate guidance. The GPS dual zone function allows you to enjoy music or radio while navigating.

### 3.4. Connectivity

- **Wi-Fi:** Built-in Wi-Fi module supports connecting a 4G SIM card or using a hotspot from your phone for online maps and internet access.
- **Bluetooth 5.1:** Provides a stable connection for hands-free calls, phone book download, and music streaming.

## 4. MAINTENANCE

- **Screen Cleaning:** Use a soft, lint-free cloth to clean the touchscreen. Avoid abrasive cleaners or solvents that could damage the display.
- **Software Updates:** Periodically check for system updates through the device settings to ensure optimal performance and access to the latest features.
- **Cable Management:** Ensure all cables are securely connected and neatly tucked away to prevent interference or damage.

## 5. TROUBLESHOOTING

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- **No Sound:** Ensure the orange fiber optic cord is correctly transferred and plugged into the new harness. Check all audio connections.
- **Screen Not Powering On:** Verify all power connections are secure. Check vehicle's fuse box for any blown fuses.
- **CarPlay/Android Auto Issues:** Ensure your smartphone's Bluetooth and Wi-Fi are enabled and correctly paired. Try restarting both the car radio and your phone.
- **GPS Signal Loss:** Check the GPS antenna connection. Ensure the antenna is placed in a location with a clear view of the sky.
- **Touchscreen Unresponsive:** Try restarting the unit. If the issue persists, contact customer support.

## 6. PRODUCT SPECIFICATIONS

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Feature	Specification
Operating System	Android 13
RAM	8GB
ROM	128GB
CPU	Qualcomm Snapdragon 685
Display Size	12.3 Inches
Resolution	1920*720 IPS HD Capacitive Touch Screen
Viewing Angle	178° Full-Viewing Angle
Connectivity	Built-in Wi-Fi, Bluetooth 5.1, 4G SIM card support
Navigation	GPS, Beidou, GLONASS (Online/Offline Maps)
Special Features	Wireless Apple CarPlay, Android Auto, DSP, 4K Video Support
Audio Output Mode	AUX/MP3/WMA/WAV/APE/FLAC
Mounting Type	Dashboard Mount
Item Weight	8.14 pounds
Package Dimensions	16.5 x 11 x 9 inches
Included Components	Power Adapter + Framework

## 7. WARRANTY & SUPPORT

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The aonav Android 13 Car Radio comes with a one-year warranty, 30-day money-back guarantee, 12-month replacement policy, and lifetime technical support.

### 7.1. Customer Support

For any questions regarding installation or use, please contact aonav technical support. We aim to reply within 24 hours to assist you.

- **Email:** [autostereo@163.com](mailto:autostereo@163.com)

- **Phone:** 786-242-5400 (for orders with aonav for lifetime support)