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> AINAVI 12.3 inch Qualcomm 665 Android Car Stereo User Manual

AINAVI F10 F11 NBT

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For BMW 5 Series F10 F11 (2013-2016) NBT Upgrade Radio Auto

1. INTRODUCTION

This manual provides comprehensive instructions for the installation, operation, and maintenance of your AINAVI 12.3 inch Qualcomm 665 Android Car Stereo. This advanced head unit is designed specifically for BMW 5 Series F10 F11 models from 2013-2016 with NBT system, offering a seamless upgrade to your vehicle's infotainment system.

Featuring an Android 11 operating system, Qualcomm Snapdragon 665 processor, 4GB RAM, 64GB ROM, and a 1920x720 touch screen, this unit integrates modern connectivity and entertainment options while retaining original BMW functionalities.

2. SAFETY INFORMATION

Please read all safety instructions carefully before installation and operation. Failure to follow these instructions may result in injury, damage to the unit, or damage to your vehicle.

- **Professional Installation Recommended:** Due to the complexity of vehicle electrical systems, professional installation is highly recommended.
- **Disconnect Battery:** Always disconnect the vehicle's negative battery terminal before beginning any installation work to prevent electrical shorts and damage.
- **Wiring:** Ensure all wiring connections are secure and properly insulated to prevent short circuits. Do not modify the wiring harness unless explicitly instructed.
- **Driving Safety:** Do not operate the unit's advanced features (e.g., video playback, complex navigation input) while driving. Distracted driving can lead to accidents.
- **Temperature:** Avoid exposing the unit to extreme temperatures or direct sunlight for prolonged periods.
- **Cleaning:** Use a soft, dry cloth for cleaning the screen and unit. Do not use abrasive cleaners or solvents.

3. PRODUCT FEATURES

Your AINAVI car stereo is equipped with a range of advanced features designed to enhance your driving experience:

- **High Performance Processor:** Powered by Qualcomm Snapdragon 665, ARM Kryo 260, up to 2.0 GHz, 14 NM Technology Process Node, 64-bit, octa-core Processor, with built-in Adreno 610 GPU.
- **Operating System:** Android 11 with 4GB RAM and 64GB ROM (eMMC + LPDDR4X).
- **Display:** 12.3 inch IPS touch screen with 1920 x 720 resolution and 178° full-viewing angle.
- **Connectivity:** Built-in 4G LTE module, Dual Band WiFi (2.4Ghz & 5Ghz), and Bluetooth 5.0.
- **Smartphone Integration:** Built-in wireless and wired Apple CarPlay, and wireless and wired Android Auto. Supports voice commands like "Hey Siri" or "Hey Google".
- **Navigation:** Built-in GPS navigation with support for online and offline maps.
- **Original System Integration:** Retains original BMW features including iDrive controller, steering wheel controls, factory TPMS, backup camera, parking radar sensors, factory 360 cameras, factory radio, DAB+ radio, and OEM microphone.
- **Multimedia:** Supports 2K video playback and various audio formats.



Figure 3.1: Key features of the AINAVI Android Car Stereo, including Android 11, Qualcomm processor, 4G connectivity, Apple CarPlay,

Support Original BMW System



Retains the iDrive system



Retains Amplifier System



Support Original Car Information Display



Support Original Backup Camera



Support Steering Wheel Control Function



Retains Original CD Player



Retains Original Radio



Support Bluetooth

Figure 3.2: The system's ability to support and integrate with original BMW features such as iDrive, amplifier, backup camera, steering wheel controls, CD player, radio, and Bluetooth.

4. SETUP AND INSTALLATION

This section outlines the components included and general steps for installation. For detailed, step-by-step instructions, please refer to the dedicated "Installation Instruction" manual provided in the package.

4.1 Included Components

Verify that all the following components are present in your package:

- 1x 12.3" Android Head Unit
- 1x ISO Wiring Harness
- 1x GPS Antenna
- 1x 4G LTE Antenna

- 1x 4G LTE SIM Slot & USB Cable
- 1x User Manual & Installation Instruction



Figure 4.1: All components included with the AINAVI 12.3 inch Android Car Stereo.

4.2 Pre-Installation Checks

- Confirm your BMW 5 Series F10 F11 (2013-2016) has the NBT System LVDS Plug (6 pins).
- Ensure the vehicle's battery is disconnected before starting.
- Gather necessary tools (e.g., trim removal tools, screwdrivers).

4.3 General Installation Steps (Refer to separate manual for details)

1. Carefully remove the original car stereo and trim panels.
2. Connect the ISO wiring harness to the vehicle's existing wiring.
3. Connect the GPS antenna and 4G LTE antenna, routing them for optimal signal reception.
4. Connect the 4G LTE SIM Slot & USB Cable.
5. Mount the new 12.3" Android Head Unit securely in the dashboard.

6. Reconnect the vehicle battery and test the unit's functionality before reassembling all trim panels.

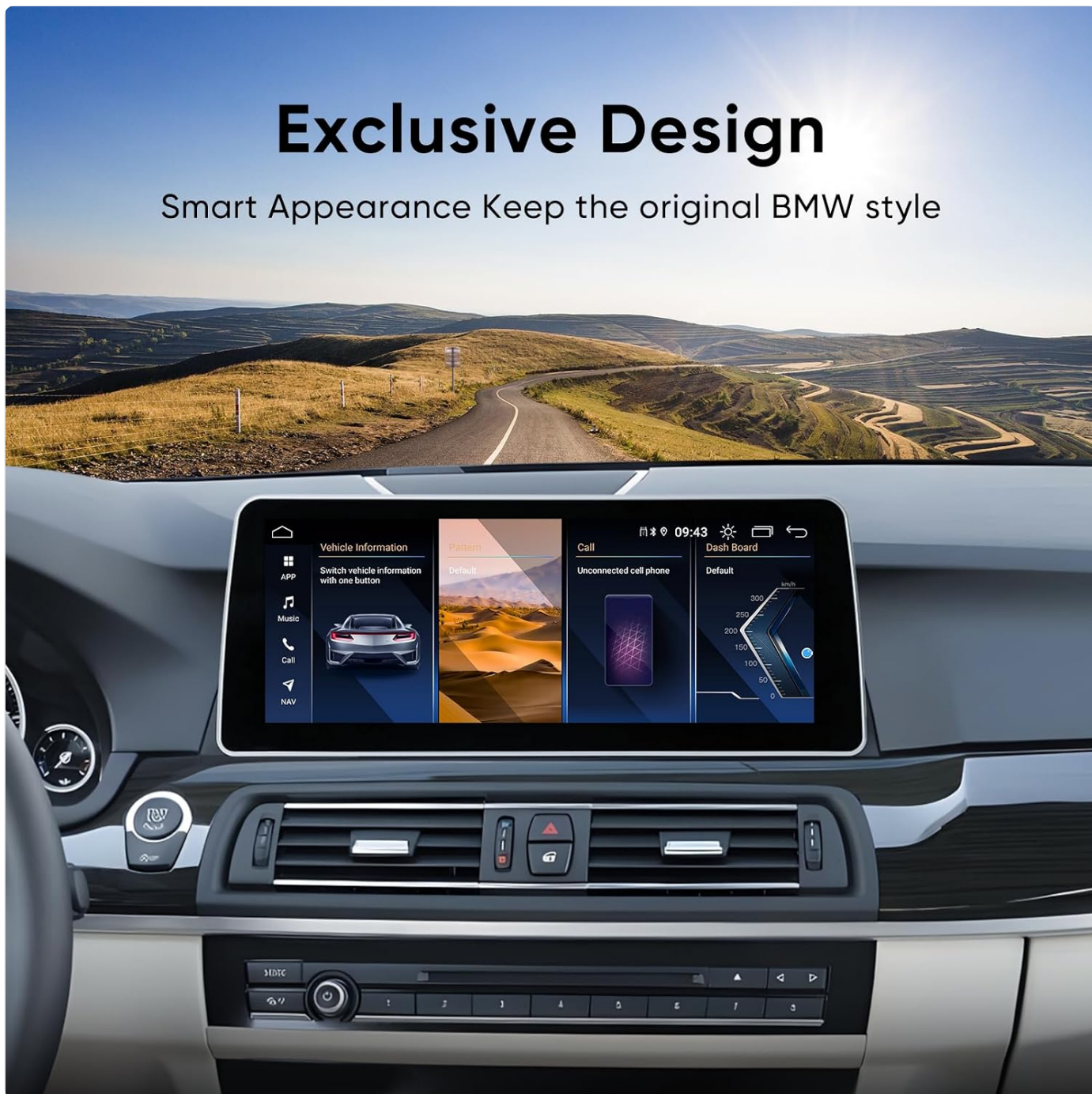


Figure 4.2: The AINAVI head unit seamlessly integrated into a BMW F10/F11 dashboard.

5. OPERATING INSTRUCTIONS

This section covers the basic operation of your new Android car stereo.

5.1 Basic Interface Navigation

The 12.3-inch touch screen provides intuitive control. Swipe left/right to navigate between home screens, tap icons to open applications, and use the top bar for quick settings and notifications.



Figure 5.1: The main user interface of the AINAVI Android Car Stereo.

5.2 Wireless CarPlay & Android Auto

Connect your iPhone or Android smartphone wirelessly for seamless integration of navigation, calls, messages, and music. Ensure Bluetooth and Wi-Fi are enabled on your phone.

- **Pairing:** Go to the Bluetooth settings on the head unit and pair with your smartphone.
- **Activation:** Once paired, the system will prompt you to activate CarPlay or Android Auto. Follow the on-screen instructions.
- **Voice Control:** Use "Hey Siri" or "Hey Google" to activate voice commands directly through the head unit.



Figure 5.2: Wireless Apple CarPlay and Android Auto interfaces.

5.3 GPS Navigation

The built-in GPS module supports various navigation applications. You can use online maps with an active internet connection (via 4G LTE or Wi-Fi) or download offline maps for navigation without network access.

- **Online Maps:** Requires 4G LTE SIM card or Wi-Fi connection.
- **Offline Maps:** Download maps to the unit's internal storage for use in areas without network coverage.

Bluetooth 5.0

Hands-free calls | Audio Streaming | Voice Control



GPS

Support Android navigation applications



Original Car Information Display

Showing original car info in different colour theme



2K Video Player

Support playing 2K video and compatible with more video format



Figure 5.3: GPS navigation interface.

5.4 4G LTE and Wi-Fi Connectivity

Insert a 4G LTE SIM card into the provided slot for direct internet access. Alternatively, connect to a Wi-Fi hotspot (e.g., from your phone) for internet connectivity.

- **4G LTE:** Insert a compatible SIM card into the 4G LTE SIM Slot & USB Cable.
- **Wi-Fi:** Go to Settings > Network & Internet > Wi-Fi to connect to available networks. Supports 2.4Ghz and 5Ghz bands.

12.3" Capacitive Touch Screen

1920x720 high definition



Integrated 4G Solution

Built-in 4G Module in the Market



Built-in CarPlay and Android Auto

Support Apple CarPlay with wireless connection & Android Auto with wireless connection.



Dual Band WiFi

Support 2.4GHz and 5GHz Wi-Fi band



Figure 5.4: Connectivity options including 4G LTE and Dual Band WiFi.

5.5 Bluetooth 5.0

Connect your phone via Bluetooth for hands-free calls, audio streaming, and phonebook synchronization.

- **Pairing:** Enable Bluetooth on your phone and the head unit. Search for available devices on the head unit and select your phone.
- **Functions:** Make/receive calls, play music from your phone, and access contacts.

6. MAINTENANCE

Proper maintenance ensures the longevity and optimal performance of your car stereo.

- **Screen Cleaning:** Use a soft, lint-free cloth to gently wipe the screen. For stubborn smudges, slightly dampen the cloth with water or a screen-safe cleaner. Avoid harsh chemicals.
- **General Cleaning:** Keep the unit free from dust and debris. Use a soft brush or compressed air to clean vents and ports.

- **Software Updates:** Periodically check for software updates provided by AINAVI to ensure the best performance and access to new features.
- **Avoid Liquids:** Do not spill liquids on the unit. In case of accidental spills, immediately power off the unit and disconnect the battery.

7. TROUBLESHOOTING

If you encounter issues with your unit, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Unit does not power on.	Loose power connection, blown fuse, vehicle battery issue.	Check all wiring connections. Inspect vehicle fuses. Ensure vehicle battery is charged.
No sound from speakers.	Incorrect wiring, volume too low, mute activated, amplifier issue.	Verify speaker wiring. Increase volume. Check if mute is active. Ensure original amplifier is functioning if retained.
GPS signal is weak or inaccurate.	GPS antenna not properly placed, interference, outdated maps.	Ensure GPS antenna has a clear view of the sky. Avoid placing near metal objects. Update maps if necessary.
CarPlay/Android Auto not connecting.	Bluetooth/Wi-Fi off, phone not paired, software glitch.	Ensure Bluetooth and Wi-Fi are enabled on both devices. Repair the phone. Restart both the head unit and phone.
Touch screen unresponsive.	Temporary software issue, screen damage.	Restart the head unit. If issue persists, contact technical support.

If the problem persists after attempting these solutions, please contact AINAVI customer support for further assistance.

8. SPECIFICATIONS

Feature	Detail
Model Compatibility	BMW 5 Series F10 F11 (2013-2016) NBT System
Operating System	Android 11
Processor	Qualcomm Snapdragon 665, Octa-core, up to 2.0 GHz
RAM	4GB (LPDDR4X)
ROM	64GB (eMMC)
Display Size	12.3 Inches
Resolution	1920 x 720
Touch Screen	Capacitive IPS, 178° full-viewing angle
Connectivity	Built-in 4G LTE, Dual Band Wi-Fi (2.4Ghz & 5Ghz), Bluetooth 5.0
Smartphone Integration	Wireless & Wired Apple CarPlay, Wireless & Wired Android Auto
GPS	Built-in GPS Navigation (supports online/offline maps)

Feature	Detail
Audio Output Mode	Stereo
Mounting Type	Dashboard Mount
Parcel Dimensions	32 x 23.88 x 9.4 cm
Weight	861.83 g



Figure 8.1: Product dimensions and included components.

9. WARRANTY AND SUPPORT

AINAVI provides a one-year product warranty for this car stereo. We are committed to ensuring your satisfaction with our product.

For any technical assistance, installation queries, or warranty claims, please do not hesitate to contact our professional technical support team. We aim to reply to all inquiries as soon as possible.

Contact Support: Please reach out via the Amazon email system for prompt assistance.