

EONON E46A13

Eonon Android 13 Car Stereo (Model E46A13) - User Manual

For BMW 3 Series 1998-2006 (E46)

1. PRODUCT OVERVIEW

The Eonon E46A13 is an advanced Android 13 car stereo designed specifically for BMW E46 3 Series models from 1998 to 2006. This head unit features a 9-inch IPS touchscreen display, offering a clear and responsive interface for navigation, media playback, and vehicle information. It integrates seamlessly with your car's existing systems, providing modern connectivity and entertainment options while retaining essential OEM functionalities.



Figure 1.1: Eonon Android 13 Car Stereo E46A13 main unit with Android 13 interface.

Key features include wireless and wired Apple CarPlay and Android Auto support, a powerful Rockchip processor for efficient performance, and a built-in amplifier for enhanced audio quality. The unit also supports various connections such as Bluetooth, Wi-Fi, USB, and inputs for backup cameras and OBD scanners.

2. SETUP AND INSTALLATION

2.1 Applicable Models

This head unit is compatible with BMW E46 3 Series models manufactured between 1998 and 2006, including the BMW M3 from 2000-2006. No additional frame or cable modifications are typically required for installation, as it is designed for plug-and-play integration.

Applicable Models: 1998-2006 BMW 3 Series E46 2000-2006 BMW M3



Please confirm the car radio's **power cable connector** in center console. There are 3 types of connectors:

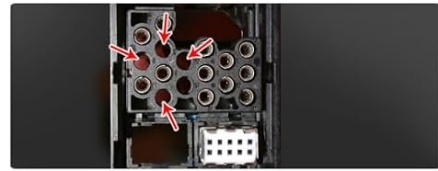
①



17 or 40 pin connector.
The unit can be installed directly.



②



17 pin connector and 4 pins
indicated by red arrow are empty.
Not suitable for installation.



③

Blue & white connector. You need to check the connector in the trunk.



a. If the connector in the trunk is 17 or 40 pin
like picture ①, Eonon [A0590](#) extension harness
(not included) is required to install the unit.



b. If the connector is 17 pin and 4 pins are empty like picture ②, it's
not suitable for installation.



You can find the the power cable connector in
the trunk at these positions.

Figure 2.1: Visual guide for applicable BMW E46 models and their original radio configurations.

2.2 Power Cable Connector Verification

Before installation, verify the type of power cable connector in your car's center console. There are three main types:

- **17-pin or 40-pin connector (without empty pins):** The E46A13 unit can be installed directly.
- **17-pin connector with 4 empty pins:** This configuration is *not* suitable for direct installation.
- **Blue & white connector in the trunk:** If your car's connector in the trunk is a 17-pin or 40-pin type, an Eonon A0590 extension harness is required for installation. If this trunk connector is a 17-pin with 4 empty pins, it is also not

suitable.

EONON A13/X6 SERIES - CURATED & REAL

**Samsung/Micron
DDR Memory-
Industrial-Grade
Stability**

ARM Cortex-A53@2.0GHz
AnTuTu 146,565
+25% Faster vs UIS8581A Octa-Core
4K-AI Engine | NPU 1TOPS

SiliconGo eMMC Storage
Fast performance with low power
consumption.

**4-LAYER AUTOMOTIVE PCB,
BUILT TO SURVIVE TOUGH ROADS**

Figure 2.2: Illustration of compatible and incompatible power cable connectors for installation.

2.3 AC Control Panel Relocation

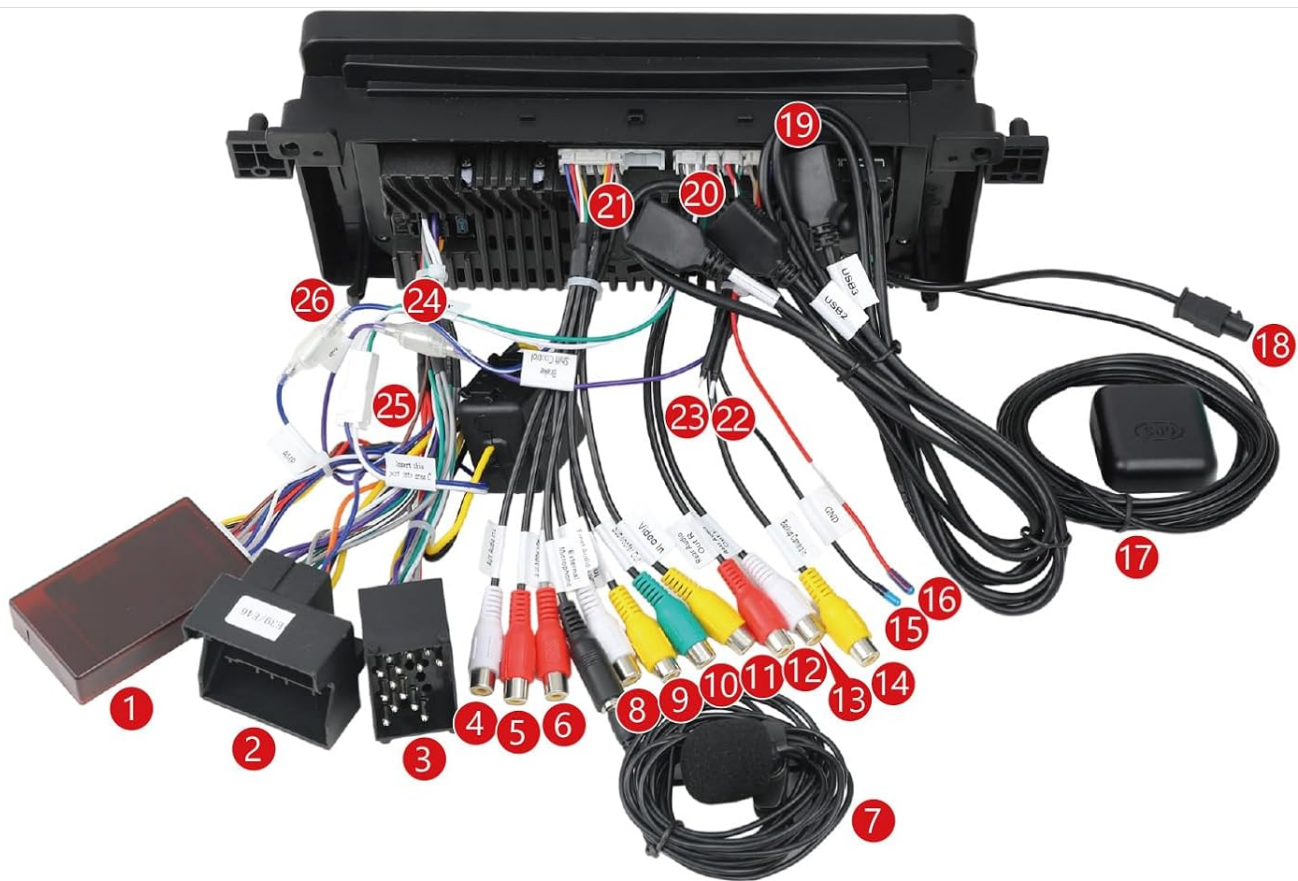
If your car's air conditioning control panel is located in the center console where the new stereo will be installed, it must be removed and relocated to the position below the E46A13 car stereo. This is a standard procedure for E46 installations to accommodate the larger display unit.



Figure 2.3: Diagram showing the required relocation of the AC control panel for proper stereo fitment.

2.4 Wiring Diagram and Accessories

Refer to the following diagram for proper wiring connections. Ensure all cables are securely connected before powering on the unit.



- | | | |
|------------------------|----------------------------|--------------------------|
| 1. CAN Bus Decoder | 10. Subwoofer Output | 19. USB Port |
| 2. 40 Pin Power Cable | 11. Front Camera Input | 20. USB Port |
| 3. 17 Pin Power Cable | 12. Audio Output RR | 21. USB Port for CarPlay |
| 4. Audio Output FL | 13. Audio Output RL | 22. WiFi Antenna |
| 5. Audio Output FR | 14. Backup Camera Input | 23. Bluetooth Antenna |
| 6. AUX Audio In R | 15. GND Wire | 24. Brake Shift Control |
| 7. External Microphone | 16. +12V for Backup Camera | 25. RX/TX Input |
| 8. AUX Audio In L | 17. GPS Antenna | 26. AMP Control Wire |
| 9. Video Input | 18. Radio Antenna Input | |

Figure 2.4: Detailed wiring diagram for the Eonon E46A13 head unit, showing all input and output connections.

The package includes the following components:

- E46A13 Car Stereo
- Power cord
- GPS antenna
- USB adapter cable (x2)
- Audio/video adapter cable (x2)
- Reverse video input cable
- 15A fuse
- External Microphone
- CANBUS decoder
- User Manual
- Double-sided adhesive sticker

- Radio antenna adapter



Figure 2.5: Overview of all accessories included with the Eonon E46A13 car stereo.

3. OPERATING INSTRUCTIONS

3.1 System Features

The E46A13 operates on the latest Android 13 system, powered by a Rockchip processor. This configuration ensures superior performance and energy efficiency for all functions.



Figure 3.1: Internal architecture highlighting the Rockchip processor and memory for optimal performance.

3.2 CarPlay & Android Auto

Enjoy seamless integration with your smartphone using wireless or wired Apple CarPlay and Android Auto. This allows for hands-free control of navigation, music, calls, and messages via voice commands ("Hey Siri" or "Hey Google").



Figure 3.2: Demonstrating voice command functionality with Apple CarPlay and Android Auto.

3.3 Display and Audio

The 9-inch IPS display offers a 1280x720 resolution with a 178° viewing angle, ensuring clear visibility even in bright conditions. The built-in amplifier provides 4x45W output, and a 36-band equalizer allows for precise audio customization.



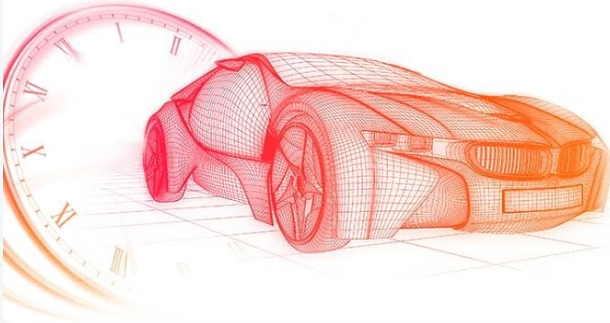
Figure 3.3: Visual representation of the display's high resolution, wide viewing angles, and 1080P video playback support.

3.4 Connectivity

The unit supports Bluetooth 5.0 for music streaming and hands-free calling, Wi-Fi 6 for internet access and online updates, and features multiple USB ports for flash drives and other peripherals. It also includes an FM/AM radio tuner.

1s Boot time

Say goodbye to waiting times and enjoy swift access to your car radio.



Bluetooth 5.0



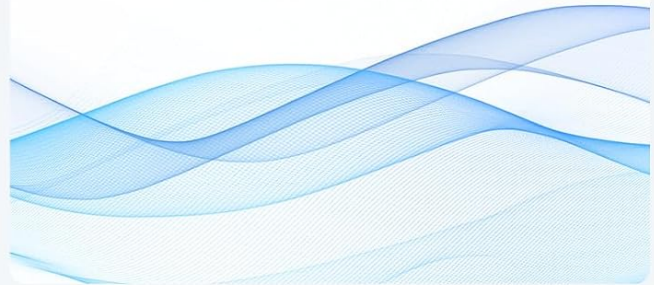
Bluetooth
music



Hands-free
calling



Sync
contacts



FM/AM Radio

Listen to music, news, traffic information and more at any time.



Enhanced Entertainment

Share the videos of the car radio to the headrest monitor via a USB to RCA video output adapter converter (not included).



Figure 3.4: Overview of key operational features including fast boot time, Bluetooth 5.0, FM/AM radio, and enhanced entertainment options.

Screen Mirroring

Mirror your phone onto the car stereo display.
Easy to watch your favorite videos.



Figure 3.5: Illustration of screen mirroring, allowing phone content to be displayed on the car stereo.



Figure 3.6: Technical details of the Wi-Fi 6 & Bluetooth 5.4 module, ST 4x45W amplifier, and Silicon Labs Si4755 radio module.

3.5 Retaining OEM Features

The E46A13 is equipped with CANBUS, allowing it to support most original vehicle functions. This includes steering wheel controls, reverse signal detection, and the ability to read raw computer data from your BMW.

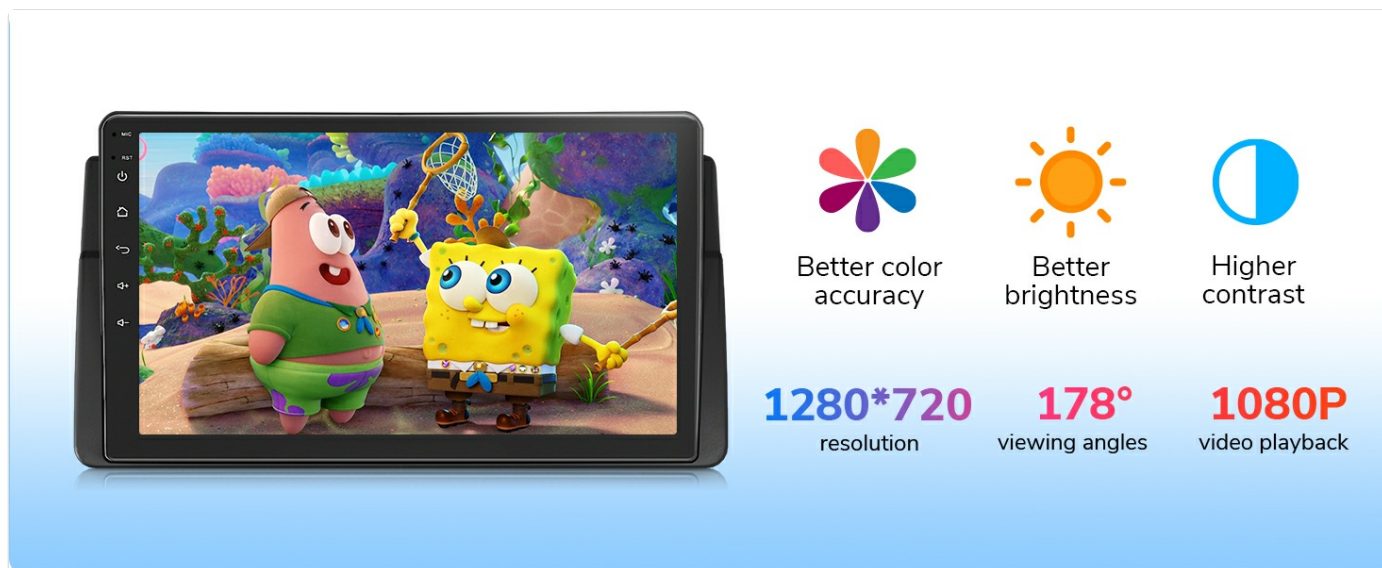


Figure 3.7: Examples of original equipment manufacturer (OEM) features retained by the E46A13 unit.

4. MAINTENANCE AND SOFTWARE UPDATES

Eonon provides convenient online firmware updates (OTA - Over-The-Air) for the E46A13. These updates help fix software issues, enhance security, and improve overall performance. It is recommended to regularly check for and apply available updates to ensure optimal functionality.

Support Software Updates

With OTA updates, you can keep the unit up-to-date by fixing software issues and enhancing security. Just a few taps, and your device is on the path to improvement!

Note: The update is for the software, not an Android system upgrade.

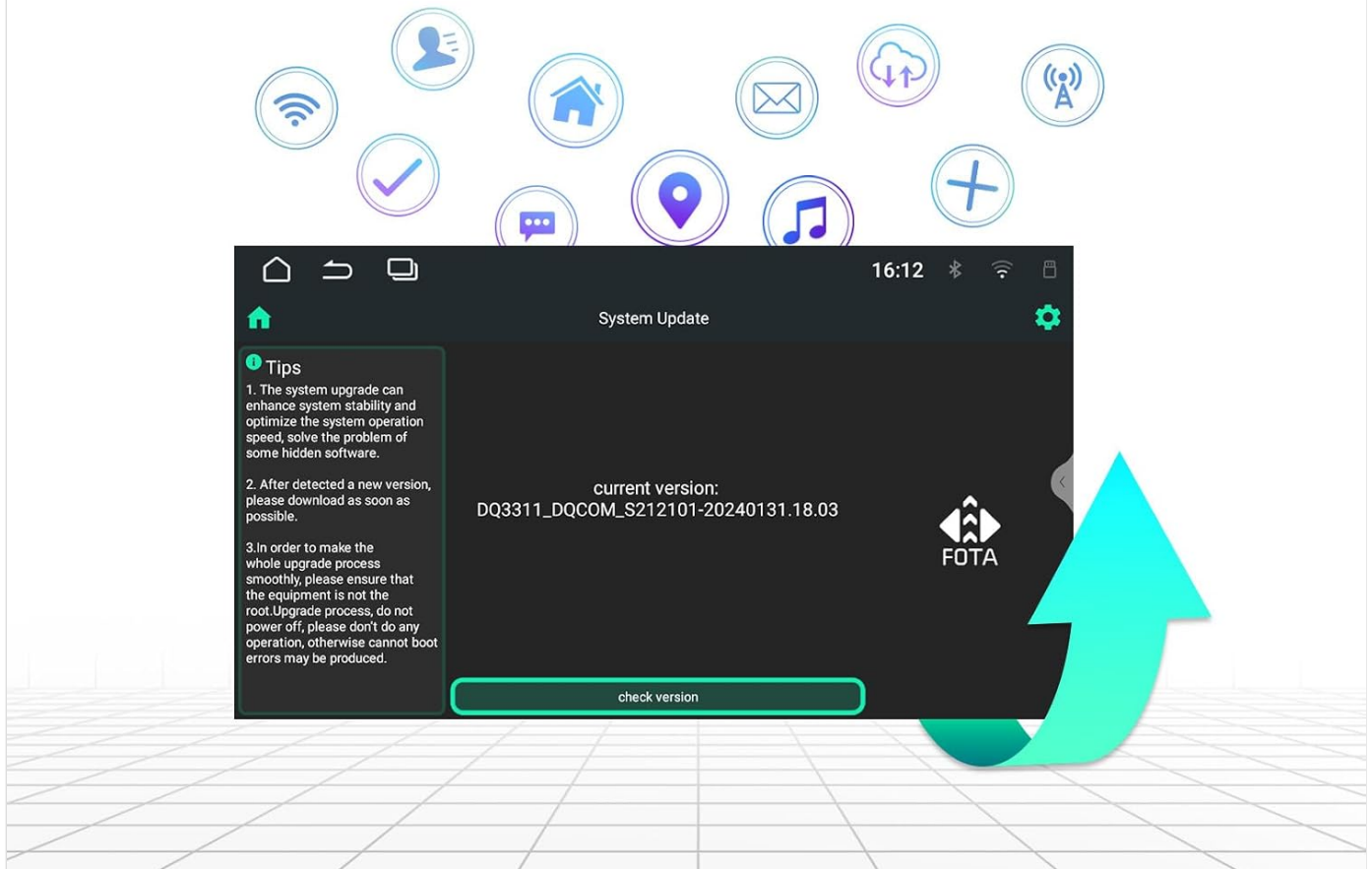


Figure 4.1: Screenshot of the system update interface, showing the option for FOTA (Firmware Over-The-Air) updates.

Note: These updates are for the software and firmware of the unit, not for upgrading the core Android system version.

5. TROUBLESHOOTING

- **No Power / Unit Not Turning On:**

Verify the power cable connector type. If your car has a 17-pin connector with 4 empty pins, the unit is not suitable for direct installation. Ensure all connections are secure according to the wiring diagram (Figure 2.4).

- **No Sound or Intermittent Sound:**

Check all audio output cable connections. Ensure the amplifier (if external) is powered and connected correctly. If the issue persists, check for available firmware updates as some updates address audio quality issues.

- **Backup Camera Not Displaying:**

Ensure the backup camera input cable is correctly connected. Verify that the camera itself is powered and functional. Note that some older 640x480 resolution cameras may not be supported; the unit typically supports 720P/1080P input. Check camera settings within the unit's menu.

- **Steering Wheel Controls Not Working:**

Confirm that the CANBUS decoder is correctly installed and connected. Access the steering wheel control settings in the unit's menu to program or recalibrate the buttons.

• **GPS Signal Issues:**

Ensure the GPS antenna is properly connected and placed in a location with a clear view of the sky (e.g., on the dashboard, away from metal obstructions).

• **Wi-Fi/Bluetooth Connectivity Problems:**

Check that the Wi-Fi and Bluetooth antennas are securely connected. Restart the unit and your connected device. Ensure no other devices are causing interference.

6. SPECIFICATIONS

Feature	Detail
Model Number	E46A13
Operating System	Android 13 (API level 33)
Processor	Rockchip (8-core)
Display Size	9 inches (23 cm visible diagonal)
Display Type	IPS Touchscreen
Resolution	1280 x 720 HD
Viewing Angle	178°
Amplifier Output	4 x 45W
Equalizer	36-band
Connectivity	Bluetooth 5.0, Wi-Fi 6, USB (x3)
Radio Tuner	AM/FM (18 channels)
CarPlay/Android Auto	Wireless/Wired Support
Dimensions (Product)	8.98"L x 3.94"W x 5.32"H (22.8 x 10.0 x 13.5 cm)
Item Weight	3.59 pounds (1.63 kg)
Compatible Devices	Smartphone

7. WARRANTY AND SUPPORT

Eonon products are designed for reliability and performance. For specific warranty terms and conditions, please refer to the warranty information provided with your purchase or visit the official Eonon website. Keep your purchase receipt as proof of purchase for any warranty claims.

For technical assistance, troubleshooting not covered in this manual, or customer service inquiries, please contact Eonon customer support through their official channels. Online firmware updates are available to ensure your unit remains up-to-date.

For additional resources and support, you may visit the [EONON Store on Amazon](#).

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question