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Uckazy Linux NBT System

Uckazy 12.3-inch Car Radio User Manual

For BMW 2 Series F45 (2012-2015 NBT System)

1. PRODUCT OVERVIEW AND COMPATIBILITY

This manual provides instructions for the Uckazy 12.3-inch Car Radio, designed specifically for BMW 2 Series F45 models manufactured between 2012 and 2015, equipped with the original NBT system. It features an ultra-narrow 12.3-inch HD (1920x720) IN-CELL screen with full lamination technology for enhanced display clarity and reduced reflection.

The device operates on a dual system, allowing a one-click switch between the Linux system and the original car system. It retains all original car functions, including radio, amplifier, steering wheel controls, iDrive controller, speed display, fuel level, oil pressure, safety warnings, and original reverse camera functionality. No software modifications are made to the vehicle's control unit.

1.1. Compatibility Check

Before installation, ensure your vehicle has the NBT system. The device is compatible with BMW 2 Series F45 models from 2012-2015. If you are uncertain about your car's system, please consult a professional or the manufacturer.



Figure 1.1: Compatible Models & Year. Verify your car's system is NBT (6pin LVDS Port) and not EVO.

2. WHAT'S IN THE BOX

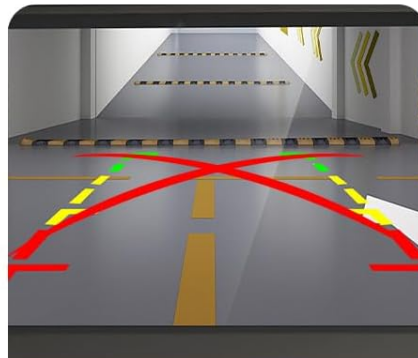
Carefully unpack the box and ensure all items are present:

- Ultra narrow 12.3-inch in-cell display screen
- Plug and play power cable
- USB/AUX/RCA Cable
- Frame
- Installation tools and touch pen

Support Original OEM System



Support Steering Wheel Control



Compatible OEM Reversing camera parking radar



Support iDrive control



Sound From the Original Car Stereo



Keep the Original CD



Keep the Original Car System

Figure 2.1: Package Contents and Screen Dimensions. The image displays the 12.3-inch screen with its dimensions (12.7 inches wide, 4.9 inches high) and the included USB cable, AUX cable, power cable, installation tools, and touch pen.

3. SETUP AND INSTALLATION

Professional installation is recommended. Ensure the vehicle's power is off before beginning installation.

3.1. Wiring Definition and Linking

Refer to the provided wiring diagram to correctly link the car machine system according to the wire definitions. Carefully review and accurately connect all wires.

- **A:** 360-DET
- **B:** ACC-OUT
- **C:** Rear-Camera-PWR
- **D:** GND



Figure 3.1: Wiring Diagram and Fiber Optic Connection. This diagram illustrates the wire definitions and how to connect the fiber optic cable from the original car CD unit to the Linux system harness.

3.2. Fiber Optic Cable Transfer

If your original car system uses fiber optic cables for audio, you must transfer them to the new system's harness to ensure sound functionality.

1. Locate the 2P fiber optic harness from the original car CD unit.
2. Unplug the fiber optic cables from the original harness.
3. Insert these fiber optic cables into the designated slots on the Linux system harness.

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Video 3.1: How to transfer fiber optic cables. This video demonstrates the process of transferring fiber optic cables from the original car harness to the new system's harness to ensure proper audio output.

3.3. Power Cable Connection

Connect the new power cable to the original car's power cable. Ensure a secure connection to the correct interface.

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Video 3.2: Product Overview for Linux System 12.3 inch Screen. This video provides a general overview of the product and its features, including the power cable connection.

3.4. AUX Input Setup

To ensure proper audio output from the new system, the car's original AUX input must be enabled and configured.

1. Plug in the stock AUX cable (located in the manual gear position or passenger side storage box).
2. Go to the system settings and turn off the AUX auto-switching setting.
3. In the new system's settings, navigate to **Setup > Car Settings > Auto Switch to AUX** and select either "Harman Head Unit" or "Alpine Head Unit" based on your car's audio system.

- For manual AUX setting, go to the original car system's main menu, select "Multimedia," then "External devices." Long press the number key "8" until you hear a tone, then press "8" every time before entering the new system to get CarPlay sound.



Figure 3.2: AUX Setting Methods. This image details both automatic and manual methods for configuring the AUX input for audio output.

3.5. Wired CarPlay/Android Auto Connection

For wired CarPlay or Android Auto functionality, use USB1 for data link. USB2 is for read storage link only.



Figure 3.3: Wired CarPlay/Android Auto Connection. Use USB IN 1 for CarPlay/Android Auto. If sound is distorted, connect with AB.

4. OPERATING INSTRUCTIONS

4.1. Dual System Switching

The device supports one-click switching between the Linux system and the original car system. This allows you to retain all original car functionalities while benefiting from the new system's features.

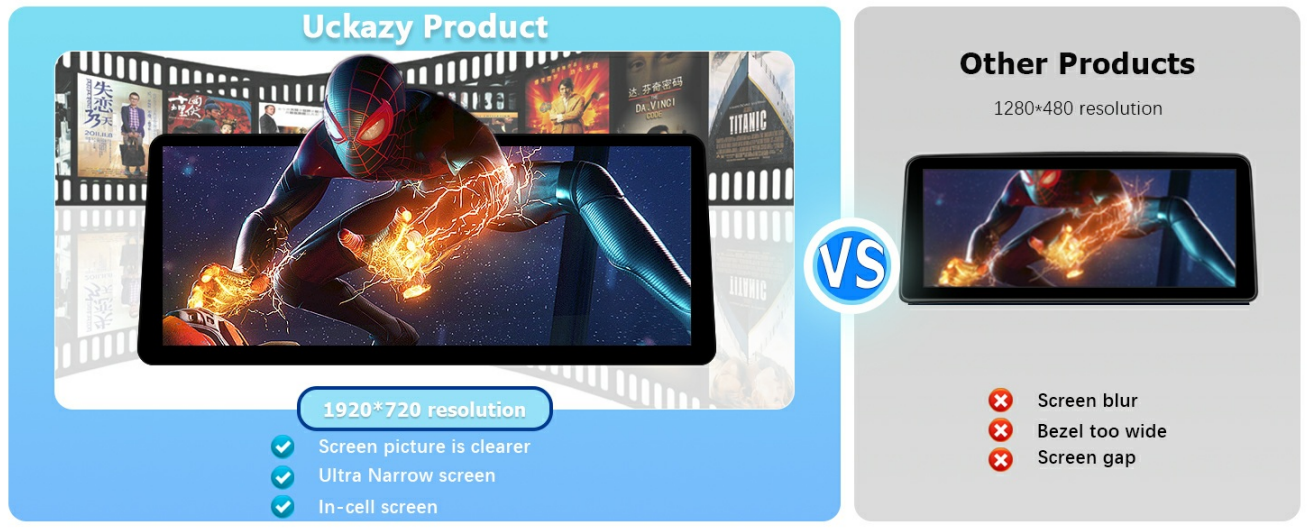
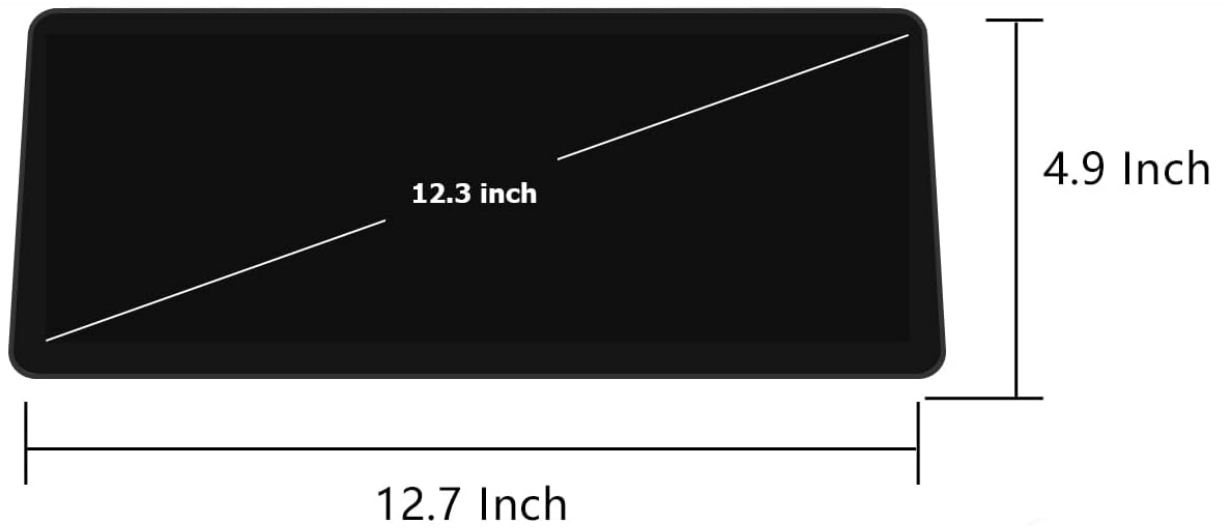


Figure 4.1: One-Click Switching Between Dual Systems. This image demonstrates how to switch between the original car system and the new Linux system.

4.2. Wireless CarPlay and Android Auto

The system supports wireless (and wired) Apple CarPlay and Android Auto. You can access navigation, phone contacts, email, notifications, music, and more through voice commands (Siri or Google Voice Assistant).

1. Ensure the LVDS and power cord are connected on the machine before wireless connection.
2. First, turn on Bluetooth on your phone and the car radio.
3. Find the Bluetooth connection of the screen (e.g., CAR-BT-7B:0) and pair your phone.
4. If prompted, open Siri voice on your iPhone.
5. Once connected, CarPlay or Android Auto will launch, providing access to various functions like navigation, music, and messages.



USB cable



AUX cable



Power cable



Install tools
Touch pen

Figure 4.2: Linux System Interface. This image displays the main screen of the Linux system, highlighting icons for CarPlay, Android Auto, Bluetooth, and other applications.

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Video 4.1: Product Display Operating System. This video demonstrates the operating system interface and various functions, including CarPlay connection.

4.3. Display Settings

Adjust display settings for optimal viewing experience.

- **OEM Resolution:** To set the correct resolution for OEM displays, navigate to **Setup > Car Settings > Original Car's Screen Resolution** and select the appropriate resolution (e.g., 800x480). Incorrect resolution may prevent OEM car information from displaying correctly.
- **Camera Type:** For reversing cameras, go to **Setup > Car Settings > Reversing Settings > Camera Type**

and select "Original" or "Aftermarket" as applicable.

- **Day and Night Mode:** The system features automatic light sensitivity, adjusting day and night modes based on your car's original headlights.



Figure 4.3: OEM Resolution and Camera Settings. This image shows the menu options for setting the original car's screen resolution and configuring the camera type.

For BMW 1/2 Series F45



Figure 4.4: Day and Night Mode. The system automatically adjusts display brightness and theme based on ambient light conditions, synchronized with your car's headlights.

4.4. Audio Settings (DSP)

The built-in DSP (Digital Signal Processor) with 16 EQ segments allows for detailed audio tuning. You can use EQ

presets or customize settings to enhance the overall sound quality and adjust speaker positioning to your preference.

5. FEATURES

- **Ultra Narrow 12.3-inch IN-CELL Screen:** HD 1920x720 resolution with full lamination technology for a clearer, more transparent display and 75% reflection reduction.
- **Wireless & Wired Connectivity:** Supports Apple CarPlay, Android Auto, MirrorLink for iOS and Android phones, Bluetooth, and Wi-Fi.
- **Voice Control:** Use Siri or Google Voice Assistant for hands-free operation of navigation, calls, messages, and music.
- **Integrated DSP:** 16 EQ segments for advanced audio customization.
- **Original Car System Retention:** Maintains original car radio, amplifier, steering wheel controls, iDrive knob, and safety features.

Day And Night Mode

Automatic light sensitivity adjusts the day and night mode according to your car's original headlights



Figure 5.1: CarPlay Features. This image highlights the navigation, music playback, and voice command capabilities within the CarPlay interface.

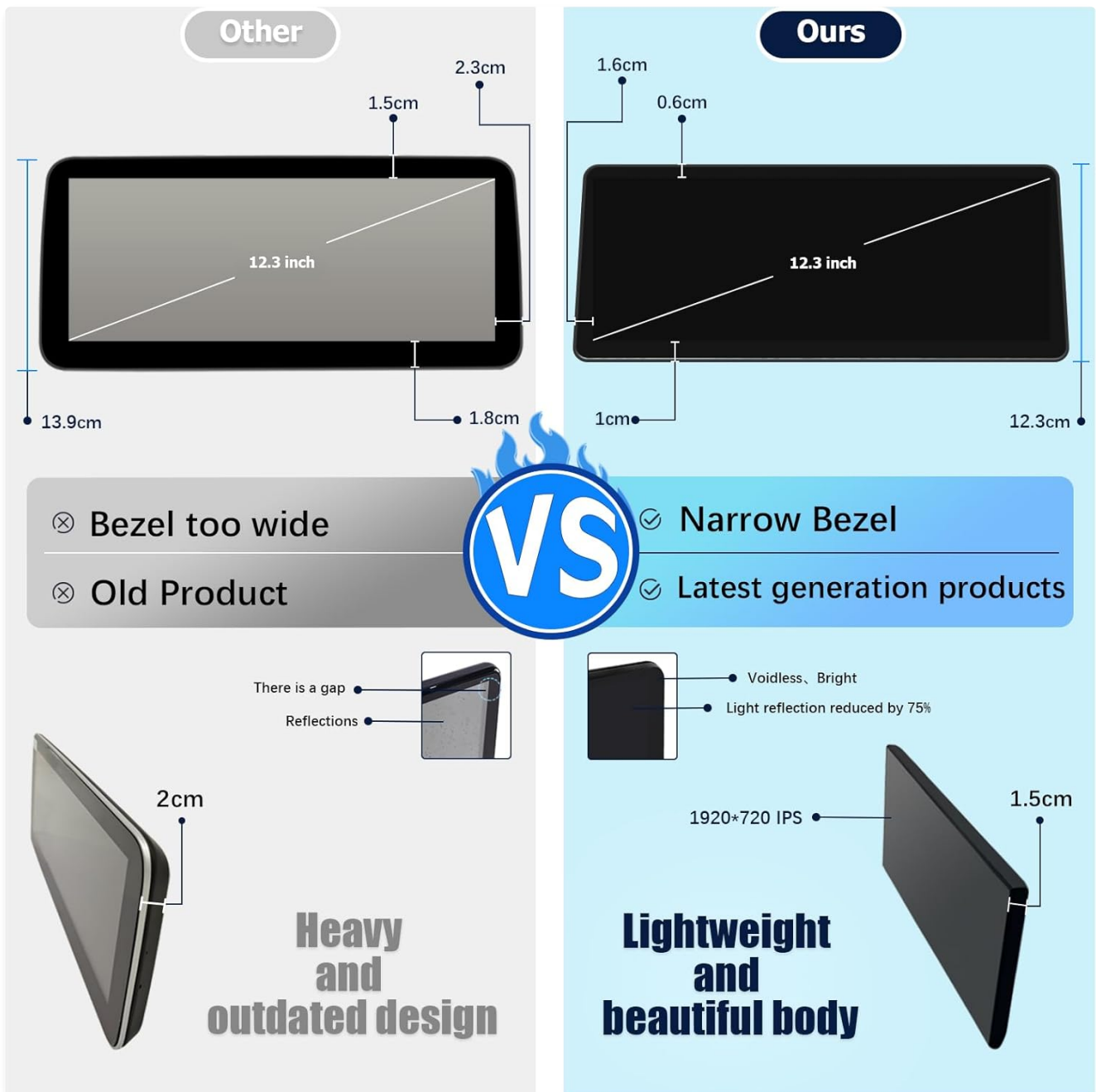


Figure 5.2: Support for Original OEM System. This image illustrates how the new system integrates with and supports existing BMW features like steering wheel controls, reversing camera, and iDrive controller.

6. TROUBLESHOOTING

If you encounter problems such as installation difficulties, sound issues, CarPlay not displaying, or the original car UI not appearing, please contact customer support. Many issues can be resolved with proper guidance.

Common Issues:

- **No Sound:** Ensure the fiber optic cables are correctly transferred and the AUX input is properly configured (see Section 3.2 and 3.4).
- **CarPlay/Android Auto Not Connecting:** Verify Bluetooth pairing and ensure Siri is enabled on iOS devices. Check USB connection for wired mode (use USB1).
- **Original Car UI Not Displaying:** Check OEM resolution settings (see Section 4.3).
- **Screen Blur/Visual Obstruction:** Ensure the correct screen resolution is selected and that the unit is properly installed without physical obstructions. The Uckazy screen is designed for a larger field of view compared to older models.

CarPlay with "Hey, Siri", Can still be used while driving

Free your hands and make your travel safer



Third-party Maps Navigate more options

Support all kinds of mainstream maps, let you travel one step faster



Mobile Music Always listen to what you want

A variety of music, radio software, whatever you listen to



Figure 6.1: Visual Comparison: Uckazy vs. Other Products. This image highlights the improved field of view and reduced visual obstruction offered by the Uckazy screen compared to other products.

7. SPECIFICATIONS

Feature	Specification
Screen Size	12.3 inches
Resolution	1920 x 720 (HD)
Display Technology	IN-CELL, Full Lamination
Operating System	Linux
Connectivity	Wireless/Wired Apple CarPlay, Wireless/Wired Android Auto, MirrorLink, Bluetooth, Wi-Fi
Audio Processing	Built-in DSP with 16 EQ segments

Feature	Specification
Control Method	Touch, Voice (Siri/Google Assistant)
Compatible Devices	Smartphone
Package Dimensions	15.16 x 7.17 x 6.85 inches
Item Weight	3.32 pounds
Manufacturer	Uckazy
Date First Available	January 10, 2025

8. WARRANTY AND SUPPORT

For technical assistance, installation queries, or troubleshooting, please contact Uckazy customer support. Many issues can be resolved quickly with expert guidance.

The product is sold by Uckazy Factory Outlet and fulfilled by Amazon. Please refer to Amazon's return policy for details on returns and replacements.

You can find more information and contact the seller through the [Uckazy Store on Amazon](#).