PEMP PP-9213A

PEMP 10.25" Linux Head Unit Instruction Manual

Model: PP-9213A

For BMW 3 Series F30 F20 NBT CIC (2013-2015 328i, 320i)

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of your PEMP 10.25" Linux Head Unit. This unit is designed to enhance your driving experience by integrating modern features like wireless and wired CarPlay and Android Auto, while retaining original vehicle functionalities.

Image 1.1: The PEMP 10.25" Linux Head Unit showcasing Apple CarPlay with navigation and music playback.

2. KEY FEATURES

- **OEM Bluetooth Support:** Seamless integration with your vehicle's original Bluetooth for calls, ensuring high-quality audio and no echo during CarPlay and Android Auto usage.

- **HD Display:** Features a 1920x720 resolution capacitive touch screen for clear visuals and responsive interaction.
- **CarPlay & Android Auto:** Supports both wireless and wired connections for Apple CarPlay and Android Auto, eliminating the need for additional adapters.
- **OEM Information Retention:** Displays factory monitor information and allows switching between the original OEM interface and the new CarPlay/Android Auto interface by long-pressing the Menu button.
- **Steering Wheel Control:** Maintains compatibility with original steering wheel button functions.
- **Quick Boot & Reverse Camera:** Linux system ensures fast boot-up times and quick display of reverse camera video (within 2 seconds).
- **Camera Support:** Compatible with both OEM and aftermarket cameras (720P or less) for clear reversing images.
- **USB Media Playback:** Supports playing music and video files via USB.

3. PACKAGE CONTENTS

Verify that all items are present in your package:

- 1 x PEMP 10.25" Linux Head Unit
- 1 x ISO Wiring Harness
- 1 x USB Cable
- 1 x Audio Cable
- 1 x Installation Manual (this document)

Size

146mm

287mm

Accessories

1 × ISO Wiring Harness

1 × USB Cable

1 × Installation Manual

1 × Audio Cable

Image 3.1: Overview of the head unit dimensions and included accessories.

4. SETUP AND INSTALLATION

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

4.1. Compatibility Check

This unit is compatible with BMW 3 Series F30 F20 models with NBT or CIC systems, typically from 2013 to 2015 (e.g., 328i, 320i). Verify your vehicle's OEM display interface type (4-pin CIC, 6-pin CIC, 6-pin NBT, or 6-pin EVO) to ensure proper LVDS connection.

Why can't get

OEM car info and Sound?
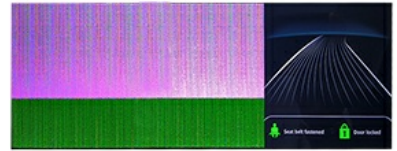
Please press the FM/AM button to confirm whether the OEM radio has sound?

A: If the OEM radio has sound, you need to set the resolution, the setting path is: Setup>Car Settings> Original Car's Screen Resolution> Select the item

B: If there is no sound from the OEM radio, you will need to reconnect the socket on the back of the OEM radio, Refer to the picture on the right.
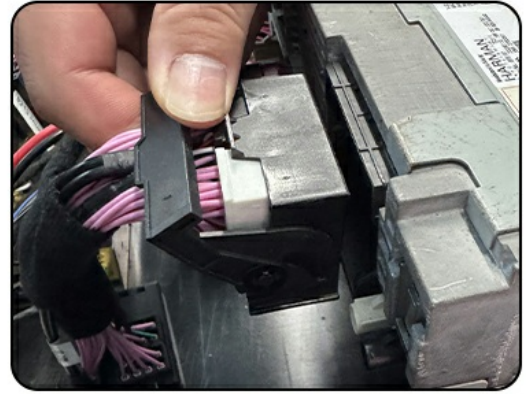

Image 4.1: Guide to checking the LVDS connection socket on the back of the OEM display.

4.2. Wiring Connections

Follow the wiring diagram carefully for correct connections. Pay special attention to the optical fiber cable and AUX input.
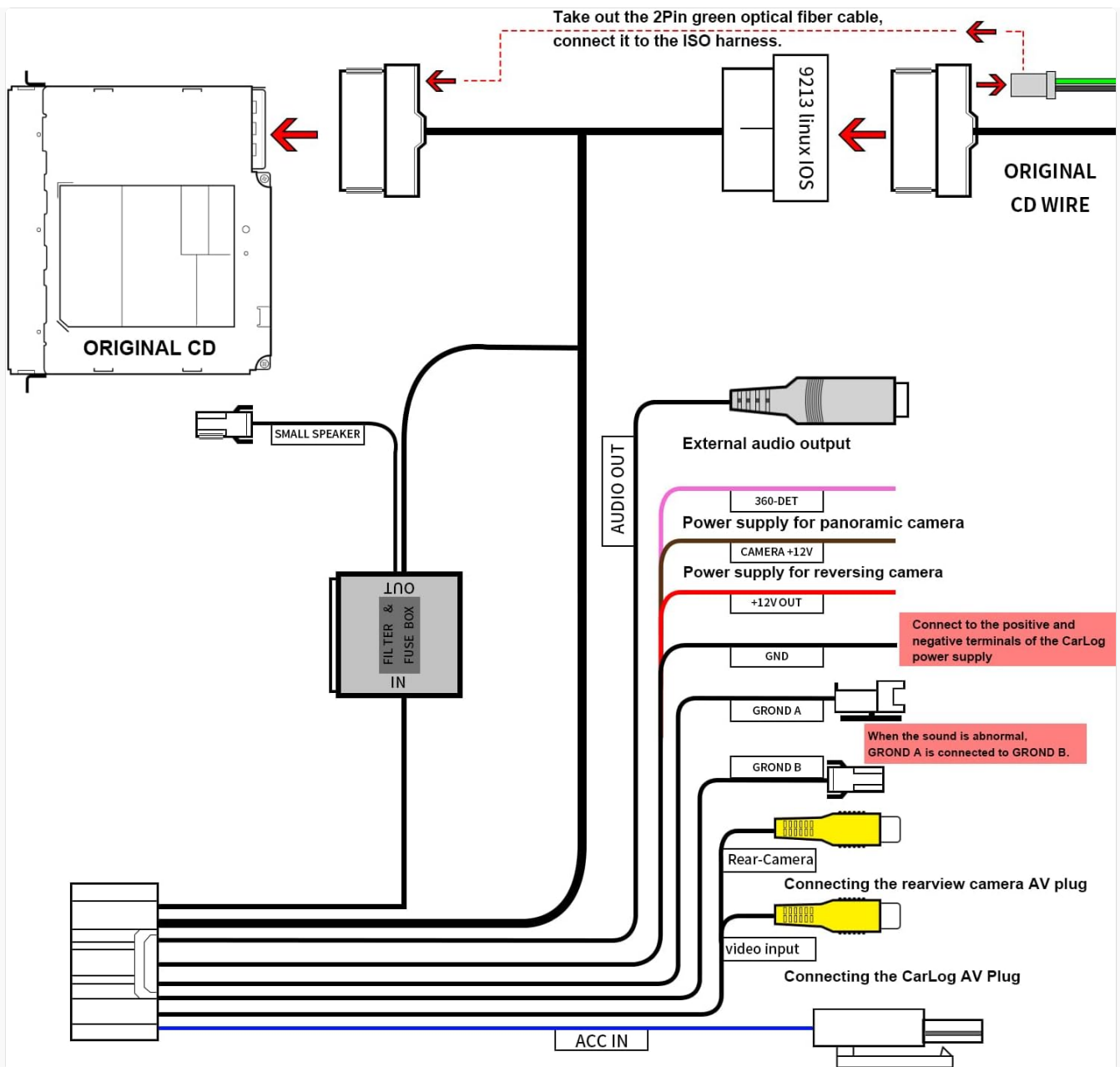
Image 4.2: Comprehensive wiring diagram for the head unit installation.

- **Optical Fiber Cable:** Carefully transfer the 2-pin green optical fiber cable from the original vehicle's ISO plug to the new Linux harness. This is crucial for sound and OEM information.

- **AUX Input:** For models where the AUX directly enters the audio amplifier, you must plug the provided audio cable into the AUX IN connector in the armrest box to enable sound from the Linux system.
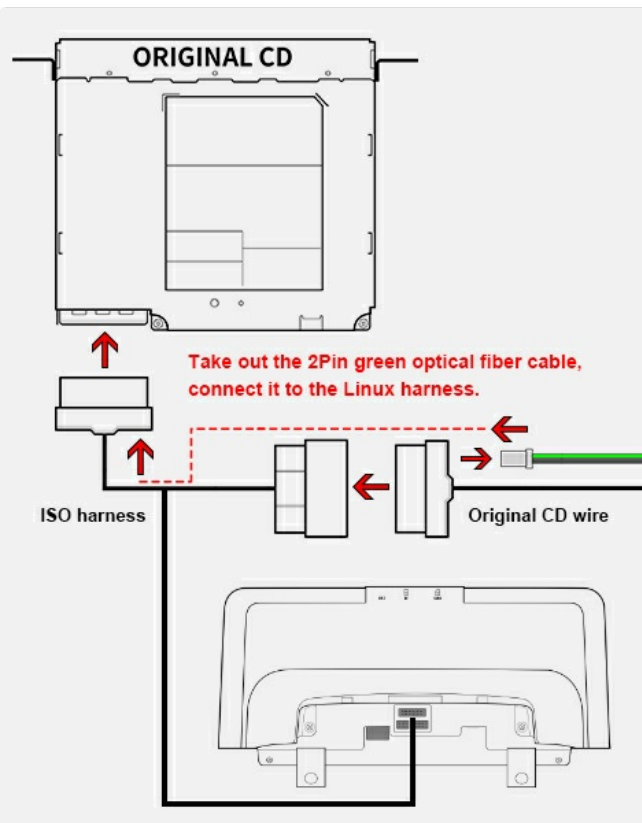
Image 4.3: Steps for transferring the optical fiber cable.

The AUX of some models directly enters the audio amplifier, you must plug the audio cable (with accessories in the package) into the AUX interface in the armrest box to get the Linux sound.
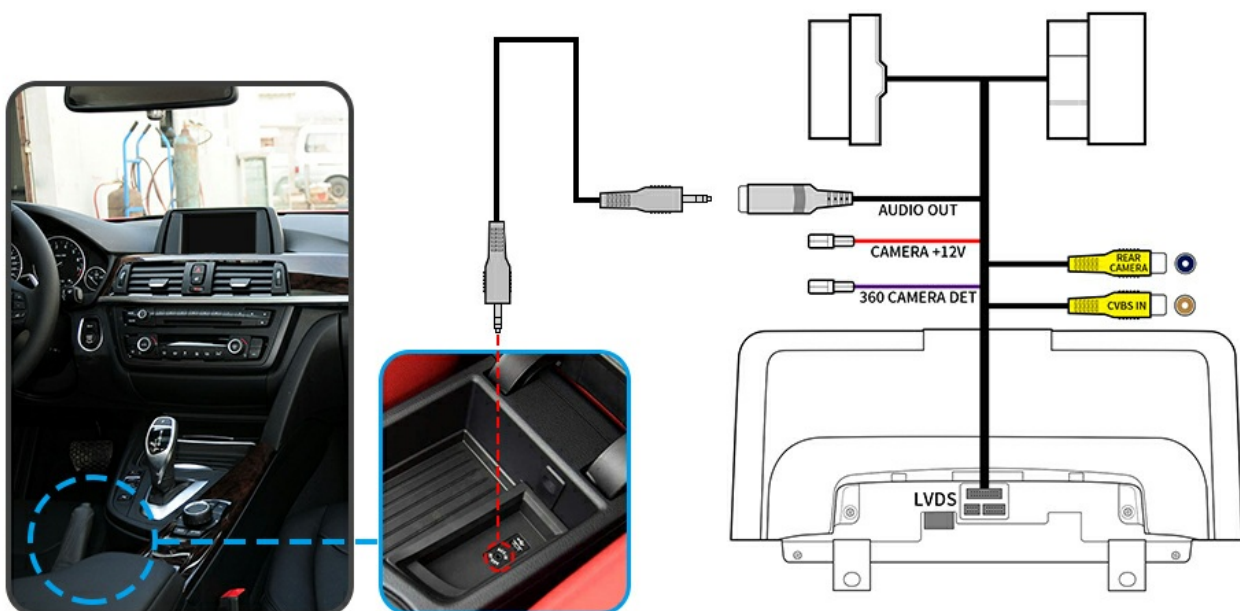

Image 4.4: Connecting the audio cable to the AUX IN port.

4.3. Setting OEM Resolution

After installation, it is essential to set the correct OEM screen resolution for proper display. If the display appears distorted, adjust the resolution in the settings.

Your browser does not support the video tag.

Video 4.1: This video demonstrates how to correctly set the OEM resolution on your new head unit. It shows navigating through the settings menu to find 'Car Settings' and 'Original Car's Screen Resolution' to select the appropriate resolution for your vehicle's original display.

To set the resolution:

1. Go to **Setup**.
2. Select **Car Settings**.
3. Choose **Original Car's Screen Resolution**.
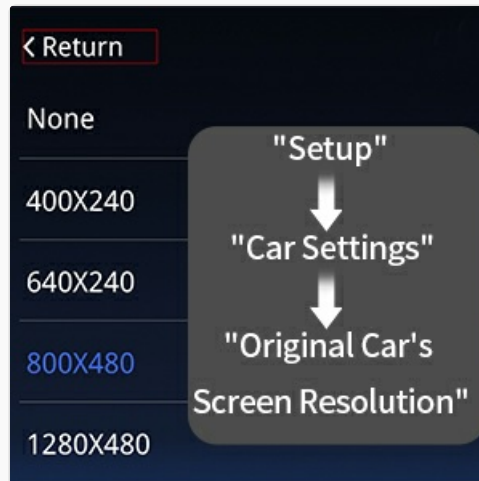4. Select the resolution that matches your original car's display (e.g., 800x480 or 1280x480).

Image 4.5: Menu path for adjusting screen resolution.

5. OPERATING INSTRUCTIONS

5.1. Switching Interfaces

You can easily switch between the new Linux system interface (CarPlay/Android Auto) and your original BMW OEM interface. Long-press the Menu button on your iDrive controller to toggle between the two systems.

You can switch between OEM info and the new system.

Image 5.1: Switching between OEM info and the new system.

5.2. CarPlay and Android Auto

The head unit supports both wireless and wired connections for CarPlay and Android Auto. For wired connections, ensure you use USB IN 1.

Image 5.2: Built-in CarPlay and Android Auto support.

Image 5.3: USB input for wired CarPlay/Android Auto.

5.3. Camera Functionality

The unit supports both your vehicle's original camera and aftermarket cameras (CVBS or 720P AHD format). You can select the camera type in the settings.

Image 5.4: Support for OEM and aftermarket front and rear view cameras.

To select camera type:

1. Go to **Setup**.
2. Select **Car Settings**.
3. Choose **Reversing Settings**.
4. Select **Camera Type** and choose between 'Original Camera' or 'Aftermarket Camera'.

Image 5.5: Menu path for camera settings.

6. MAINTENANCE

To ensure the longevity and optimal performance of your PEMP Head Unit, follow these maintenance guidelines:

- **Cleaning:** Use a soft, dry cloth to clean the screen and unit. Avoid abrasive cleaners or solvents that could damage the surface.
- **Temperature:** Do not expose the unit to extreme temperatures or direct sunlight for prolonged periods.
- **Software Updates:** Periodically check for firmware updates from PEMP to ensure you have the latest features and bug fixes.

7. TROUBLESHOOTING

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

7.1. No OEM Car Info or Sound

If you are not getting OEM car information or sound, check the following:

- **OEM Radio Sound:** Press the FM/AM button on your original car radio to confirm if it has sound.
- **Resolution Setting:** If the OEM radio has sound, ensure the correct resolution is set in the unit's settings (refer to Section 4.3).
- **Fiber Optic Cable:** If there is no sound from the OEM radio, you may need to reconnect the 2-pin green optical fiber cable on the back of the OEM radio to the new harness (refer to Section 4.2).
- **AUX Connection:** Ensure the audio cable is correctly plugged into the armrest box AUX IN connector (refer to Section 4.2).

Image 7.1: Common issues causing loss of OEM car info and sound.

7.2. Distorted or Incorrect Display

If the display is distorted or not showing correctly, verify that the OEM screen resolution is set properly in the unit's settings (refer to Section 4.3).

7.3. General Issues

For any other issues, please contact PEMP customer support. They respond to messages within 24 hours and have a professional after-sales team to assist you.

8. SPECIFICATIONS

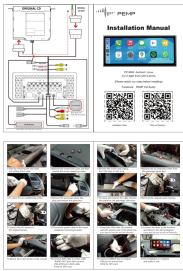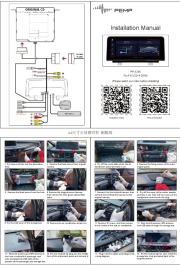| Feature	Specification
Brand	PEMP
Model Number	PP-9213A
Operating System	Linux
Screen Size	10.25 Inches
Display Resolution	1920x720
Touch Screen Type	Capacitive
Connectivity Technology	Bluetooth
Special Features	Android Auto, Bluetooth, CarPlay, Touchscreen
Product Dimensions	12.2 x 2 x 5.1 inches
Item Weight	5.28 pounds (2.4 Kilograms)

9. WARRANTY AND SUPPORT

Related Documents - PP-9213A

PEMP User Manual: Navigating Your Device Interface and Settings
Comprehensive user manual for PEMP devices, detailing interface navigation, setup options, connection methods for Carplay, Android Auto, Airplay, and Bluetooth, along with audio and display settings.

PEMP PP-5603 Car Infotainment System Installation Guide for BMW i3 NBT EVO
Comprehensive installation manual for the PEMP PP-5603 Android/Linux car infotainment system, compatible with BMW i3 NBT EVO (2013-2019) models. Includes step-by-step instructions and system connection details.

PEMP PP-537885388 Installation Manual for BMW F10
Detailed installation manual for the PEMP PP-537885388 car multimedia system, compatible with BMW F10 models (2010-2012 & 2013-2017). Includes wiring diagrams and step-by-step visual guides.

[PEMP PP-5245 Installation Manual for BMW F15 (2014-2016)](#)
Step-by-step installation guide for the PEMP PP-5245 car navigation system, compatible with BMW F15 models from 2014 to 2016. Includes wiring overview and detailed visual instructions.

[Installation Guide for YH-7113/7613 Android Car System for Mercedes-Benz W212 (2013-2015)](#)
Step-by-step instructions for installing the YH-7113/7613 Android car system in a Mercedes-Benz W212 model from 2013-2015. This guide covers the removal of the original monitor and host, connection of various cables including ISO, LVDS, AMI, and antennas, and securing the new Android device.

[PEMP PP-5810 Installation Manual for BMW E60 (2005-2010)](#)
Detailed installation manual for the PEMP PP-5810 aftermarket car stereo system, designed for BMW E60 models from 2005 to 2010. Includes step-by-step instructions and wiring diagrams.