

Planet Audio PC10F

Planet Audio PC10F Car Capacitor User Manual

Model: PC10F

INTRODUCTION

A capacitor is a passive two-terminal electrical component that consumes but does not produce energy. In a car sound system, a capacitor is used primarily for power reserve. It stores energy and releases it very quickly to the amplifier(s).

The main reason a capacitor is recommended is to provide a stable power supply to your amplifier. Music is dynamic, with rapid transitions from soft voices to powerful bass notes. These moments demand a constant and steady amount of power for the amplifier to function efficiently and power the speakers. A capacitor ensures consistent and stabilized power delivery, resulting in a better-sounding system.

Important: The remote output of the head unit must be connected to the remote turn-on of the capacitor for it to function correctly.

SPECIFICATIONS

Key Features:

- 3-Digit Bright Blue Digital LED Voltage Display with Blue Illuminated Window
- Warning tones for: Reverse polarity connection, Over-voltage limit (above 17VDC), and Low battery voltage (below 10VDC)
- Voltage measurement accurate to +/- 0.1VDC
- Capacitance: 10,000,000 microfarads (10 Farad)
- Working Voltage: 16VDC
- Surge Voltage: 24VDC
- ESR (Equivalent Series Resistance): 0.015 Ohm @ 120Hz/25°C
- Capacitance Tolerance: +/- 10%

Physical and Electrical Characteristics:

Characteristic	Value
Brand	Planet Audio
Model Number	PC10F

Capacitance	10 Farad
Working Voltage	16 Volts DC
Maximum Voltage	24 Volts DC (Surge)
Capacitance Tolerance	+/- 10%
ESR	0.015 Ohm @ 120Hz/25°C
Product Dimensions (L x W x H)	9-5/16" x 7-7/16" x 2-11/16" (approx. 23.65cm x 18.89cm x 6.83cm)
Item Weight	3 pounds (approx. 1.36 kg)
Material	Plastic
Mounting Type	Panel Mount

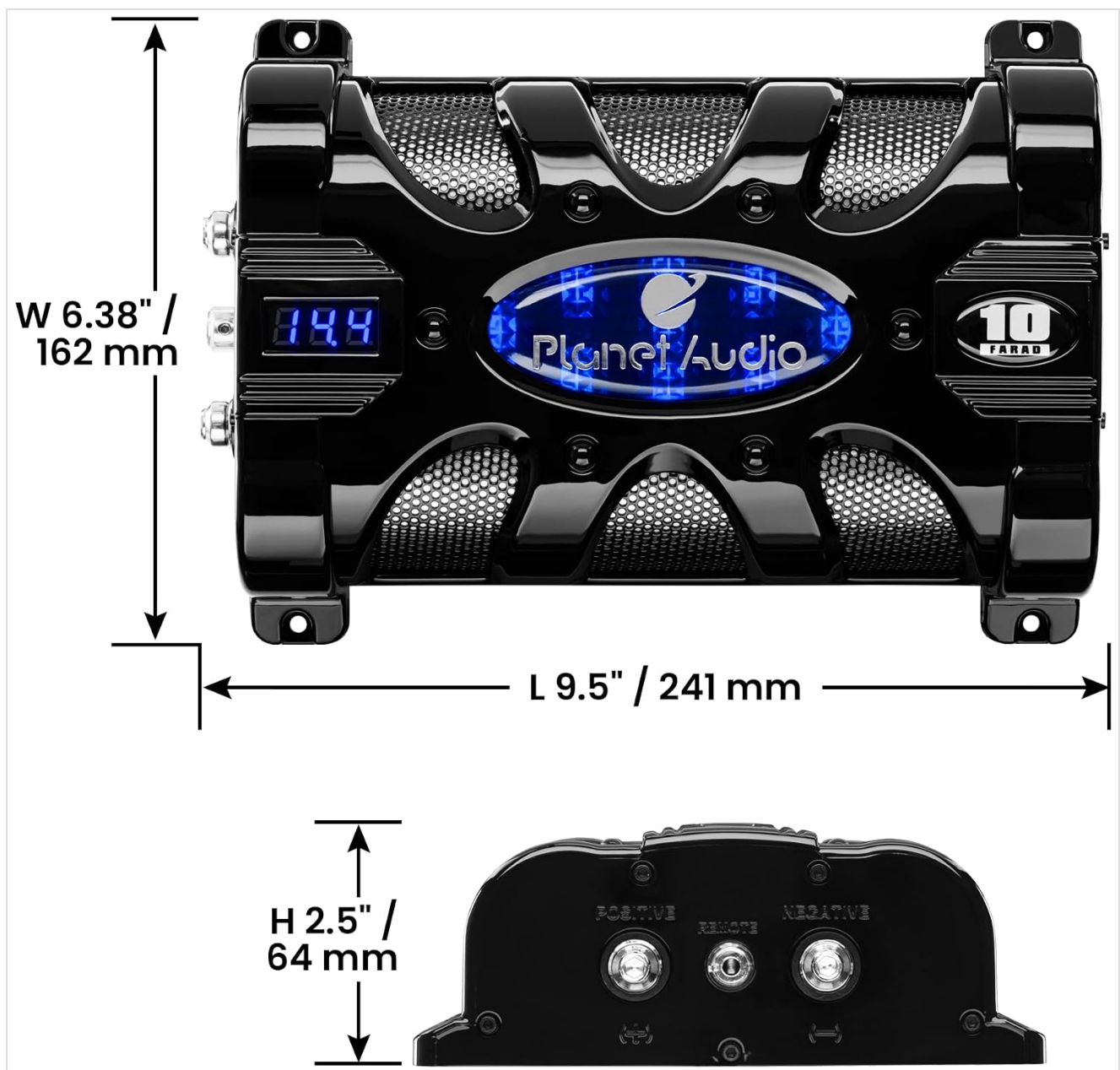


Image: Front and side view of the Planet Audio PC10F capacitor with detailed dimensions in inches and millimeters. The capacitor measures 9.5 inches (241 mm) in length, 6.38 inches (162 mm) in width, and 2.5 inches (64 mm) in height.

Wiring Diagram Overview

Proper wiring is crucial for the safe and effective operation of your Planet Audio PC10F capacitor. Ensure all connections are secure and follow standard car audio wiring practices. The capacitor should be installed as close as possible to the amplifier(s) it will be supporting, typically within 18-24 inches, using appropriate gauge power and ground cables.

Connect the positive (+) terminal of the capacitor to the positive (+) power input of your amplifier. Connect the negative (-) terminal of the capacitor to a solid chassis ground point. The remote turn-on wire from your head unit should be connected to the remote (REM) terminal on the capacitor. This ensures the capacitor powers on and off with your audio system.



Image: The Planet Audio PC10F Car Capacitor, showcasing its black finish, blue LED voltage display, and the positive, remote, and negative terminals on the side. This image represents the unit to be wired into your car audio system.

Charging the Capacitor

Before connecting the capacitor directly to your vehicle's power system, it must be charged. This process equalizes the voltage between the capacitor and your car battery, preventing a sudden current surge that could damage components.

1. Ensure all other connections (ground, remote) are correctly made according to the wiring diagrams.
2. Take the supplied charging resistor (often a small light bulb or a specific resistor) and place it between the positive (+) cable coming from your battery and the positive (+) terminal of the capacitor.

3. The capacitor will begin charging. This process typically takes between 5 to 60 seconds.
4. During charging, the voltage displayed on the capacitor's three-digit LED will rise rapidly at first, then slow down as it approaches the voltage of your vehicle's battery.
5. When the capacitor is fully charged, the displayed voltage will stop rising and match your car battery's voltage. You can verify this with a separate voltmeter if desired.
6. Once fully charged, carefully remove the charging resistor. It will be hot, so exercise caution.
7. Immediately connect the positive (+) cable directly to the positive (+) terminal of the capacitor.

Caution: The charging resistor will become hot during this process. Handle with care.

INCLUDED IN THE BOX



Image: The Planet Audio PC10F Car Capacitor as it appears when unboxed. This image highlights the compact design and the terminals for connection, which are essential for the charging and installation process.

OPERATION

Once properly installed and charged, the Planet Audio PC10F capacitor operates automatically with your car's audio system. Its primary function is to act as a power reservoir, providing instantaneous current to your amplifier during peak demands, such as deep bass notes. This prevents voltage drops in your vehicle's electrical system, which can

lead to dimming headlights and reduced amplifier performance.

The integrated 3-digit bright blue LED voltage meter continuously displays the system voltage, allowing you to monitor the electrical stability. The blue illuminated window adds to the aesthetic appeal while providing functional feedback.



Image: The Planet Audio PC10F capacitor illuminated with blue light, positioned within a car's interior, emphasizing its role in enhancing bass output. The LED voltage display is visible, indicating active operation.

MAINTENANCE

The Planet Audio PC10F capacitor is designed for reliable, long-term performance with minimal maintenance. To ensure optimal operation and longevity:

- **Keep Connections Secure:** Periodically check all wiring connections (positive, negative, remote) to ensure they are tight and free from corrosion. Loose connections can lead to poor performance or system instability.
- **Cleanliness:** Keep the capacitor clean and free of dust or debris. Use a soft, dry cloth for cleaning. Avoid using harsh chemicals or abrasive cleaners.
- **Environmental Conditions:** Ensure the capacitor is installed in a location that is not exposed to excessive moisture, extreme temperatures, or direct physical impact.

TROUBLESHOOTING

The PC10F capacitor includes built-in warning tones to alert you to potential issues. Understanding these tones can help in diagnosing problems:

- **Reverse Polarity Connection Warning:** If the capacitor emits a warning tone immediately upon connection, it indicates that the positive and negative terminals have been connected incorrectly. Immediately disconnect power and correct the wiring. Incorrect polarity can cause severe damage.
- **Over-Voltage Limit (above 17VDC) Warning:** A warning tone indicating over-voltage means the system voltage has exceeded 17VDC. This could be due to a faulty alternator or voltage regulator in your vehicle. Investigate your vehicle's charging system to prevent damage to the capacitor and other electronics.
- **Low Battery Voltage (below 10VDC) Warning:** If the capacitor beeps due to low battery voltage, it signifies that your vehicle's battery voltage has dropped below 10VDC. This can happen if the engine is off and the audio system is drawing too much power, or if the battery itself is weak. Consider starting your engine or checking your battery's health.

If the capacitor does not power on or display voltage after proper installation and charging, double-check the remote wire connection from your head unit. The capacitor will not function if the remote wire is not connected or receiving a signal.

WARRANTY AND SUPPORT

Warranty Information:

Planet Audio provides a **1 Year Platinum Online Dealer Warranty** for this product, provided the purchase is made through Amazon.com. Professional installation of this product is strongly encouraged to ensure proper and safe functionality and to maintain warranty validity. It is recommended to register your product online after purchase.

1 Year Platinum Online Dealer Warranty*

We provide a powerful 1 Year Platinum Online Dealer Warranty so long as the purchase is made through Amazon.com. We strongly encourage professional installation of this product to ensure proper and safe functionality.



* Register online after purchase

- 10 Farads with 3 Digit Super Bright Blue Digital LED Voltage Display
- Audible Warning Tone for Reverse Polarity, Voltage Overload and Low Battery Voltage
- Voltage Measurement Accurate to ± 0.1 VDC
- Capacitance: 10,000,000 μ F
- MAX Voltage: 16 VDC
- Rated Voltage: 12 VDC

Image: A graphic detailing the 1 Year Platinum Online Dealer Warranty for Planet Audio products, emphasizing the need for purchase through Amazon.com and encouraging professional installation. Key specifications are also listed.

Customer Support:

For further assistance, technical support, or warranty claims, please visit the official Planet Audio store or contact their customer service. You can find more information and contact details on their official website or through the Amazon brand store page:

[Visit the Planet Audio Store on Amazon](#)

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This manual is for informational purposes only. Always consult a professional for installation if you are unsure.

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