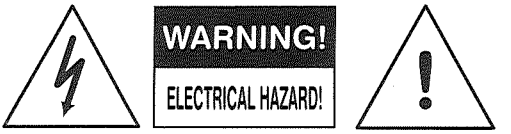
Enhance the Look & Performance of Your Car Audio System

Owner's Manual

Beginning

This manual provides you with detailed information on the functioning, installation and operation of this power capacitor. To void injury or damage to your audio system, please read this manual thoroughly before you start to install this capacitor.



This power capacitor stores an extremely large amount of electricity and may explode, cause serious injury, or in the worst case, even death if incorrectly or improperly used, mishandled, abused, or improperly connected.

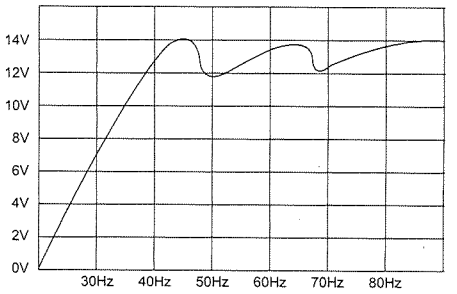
Please refer to the instruction manual for the correct procedures for making connections, charging and discharging the capacitor.

At no time should the capacitor be exposed to voltages higher than specified, or its terminals shorted directly.

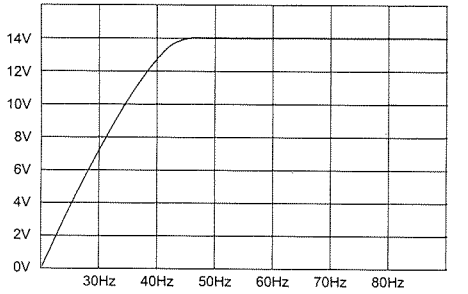
Features

This power capacitor is an energy storage device. It is designed to supplement the amplifier's power supply during high current demands.

Bass performance at 50Hz and 70Hz without the capacitor



Bass performance at 50Hz and 70Hz with the capacitor



Features

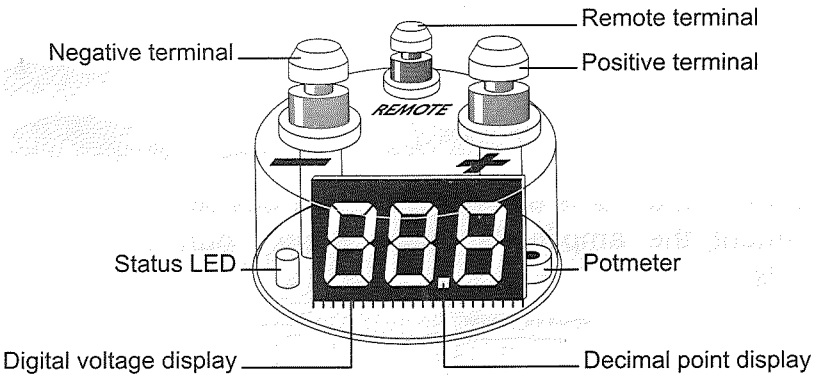
An example of such a demand is when the music you are playing hits a low bass transient. The overall bass response of your audio system will be enhanced by using this power capacitor which is an outstanding addition to your car audio system. In reality the car's battery is not designed to deliver the high current in high power car audio installations.

It is another feature of this power capacitor to filter car AC voltage induced by the amplifier's power supply. This can cause audible interference in the sound system.

Display Function

The digital voltage display is the most significant feature for monitoring the status of your car power supply.

1. Digital Voltage Display with remote control (remote control type)

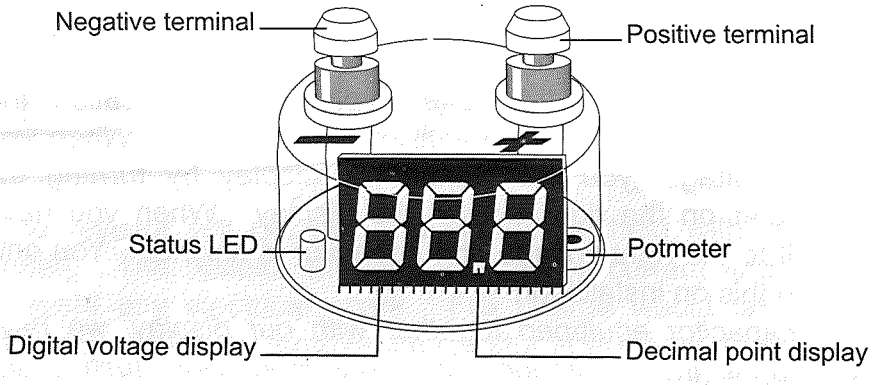


- The digital Voltage Display will turn on when the remote post is supplied with power by the audio system. The status of LED will light up when the voltage of the capacitor reaches 5~10 volt.

Display Function

- When the capacitor is fully charged, then you would see the DC voltage of your car electronic system.
- If you turn off your audio system, the remote terminal of the capacitor will no longer receive the power from the head unit, such as radio, CD play & DVD play, and your digital display capacitor will automatically stop operation. If you turn on the audio system again, your digital display capacitor will automatically start operation again.

2. Digital Voltage Display without remote control (automatic type)



- The status of LED will light up when the voltage of the capacitor reaches 5~10 volt.
- When the capacitor is fully charged, then you would see the DC voltage of your car electronic system.
- If you turn on or off your audio system, your digital display capacitor will automatically start or stop operation. It may delay for a few seconds.
- The display would turn off automatically to standby mode when the music is calm or smooth for a certain time. And the display would start operation again when the music is chop and change.
- No remote wire is required.

Display Function

Alarm Function

It can cause severe damage to the audio system and be harmful to the user if you accidentally reverse the polarity ("+" and "-"). Therefore, an alarm function is designed so that you would be reminded for the mistakes of reverse connection.

However, the connection must be carefully checked before the connection is going to be done.

Voltage Adjustment

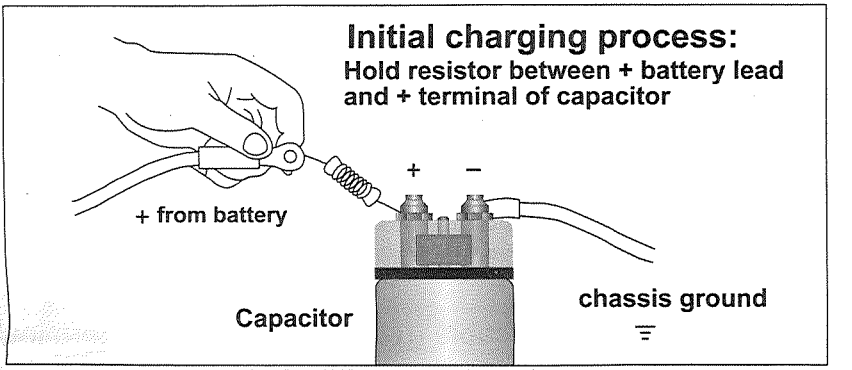
When the capacitor is connected, you have to adjust the display to the right voltage. To do this, take a voltmeter and measure the voltage on the "-" and "+" terminal of the capacitor. When you know the voltage, you can adjust the display by turning the potentiometer on the right side of the display. When you have adjusted it to the right voltage, the capacitor is finished. You only have to do this on installation.

For our capacitor equipped together with our display, we have normally done the calibration during our production, testing and calibration.

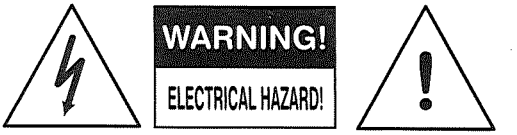
This adjustment would be applicable for someone who buys the bulk capacitor and the display separately.

Initial Charge

A supplied resistor is always recommended to use it for initial charge for safety and lifetime of the capacitor. And a voltmeter is required to be used to verify if the capacitor is fully charged in the case that the digital voltage display is not equipped.



The resistor will get hot and should be held with pliers for safety. The resistor will limit the charge current and help to prevent any electrical spark. Full charge would take a few minutes. You may remove the resistor after about 4 minutes or when the charge reaches about 6 volts. And attach the positive power cable directly to the capacitor's "+" terminal to finish charging the capacitor up to a stable 12-14 volt.
Be very careful not to short any cables or the capacitor terminals.



Do not touch/handle "-" negative and "+" positive terminals of the capactior simultaneously by your hand at any time. Otherwise, it shall cause the serious injury or even the worst.

Installation

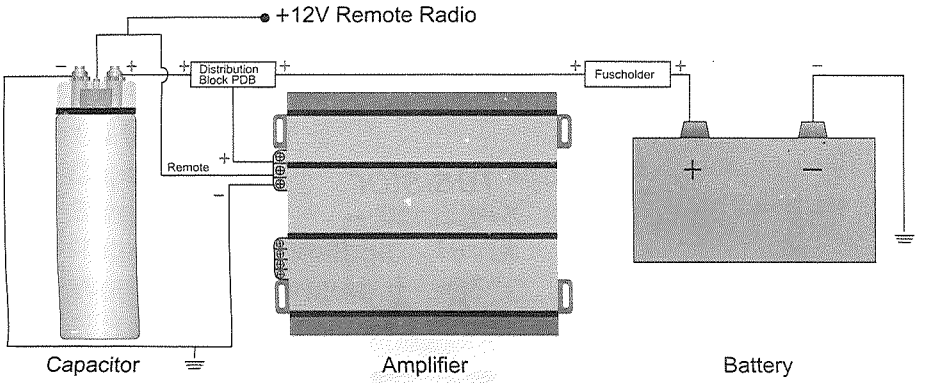
For maximum performance, your power capacitor(s) should be installed as close to your amplifier(s) as possible. The ideal location is one that allows for short wiring runs while keeping the capacitor(s) isolated from the heat sources, such as the amplifier(s).

Wiring

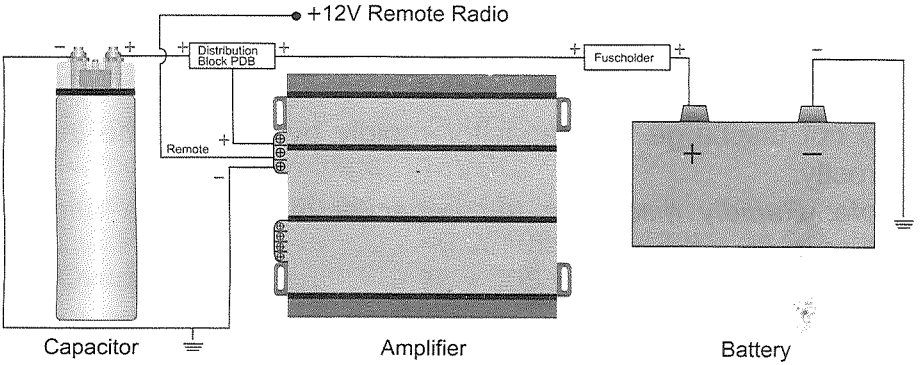
Note: Make sure to disconnect battery ground before wiring or work with the vehicle's electronic system
Make sure to install the capacitor before charging it.

Run a heavy gauge power cable (red) from the positive terminal of the vehicle's battery through an appropriate fuse holder or circuit breaker to the capacitor's positive terminals. The positive power wire should be kept as short as possible. We recommend that a high performance distribution block to create a slice in the wiring. There should be no fuse in the cables between the distribution block and the capacitor or amplifier. But make sure that there is a fuse or circuit breaker should be no more than 30cm from the car battery. And the fuse value should not be higher than the fuse value of your amplifier(s). Run the power cable form the capacitor's positive terminals to the amplifier's power input terminals (B or +12V).
The ground cable (black) for the capacitor should also be kept as short as possible. Connect the ground cable of your capacitor to the same ground terminal you have made for your amplifier on the chassis of your vehicle. Make sure that this ground terminals is placed directly on the bare metal of the chassis, and that place is free from paint, undercoating or any other insulation. The positive and negative cables for your capacitor

should have the same gauge as the amplifier cables.
For the remote control type of digital voltage display, the connection of the capacitor's remote terminal to amplifier's remote terminal with a remote wire must be done.

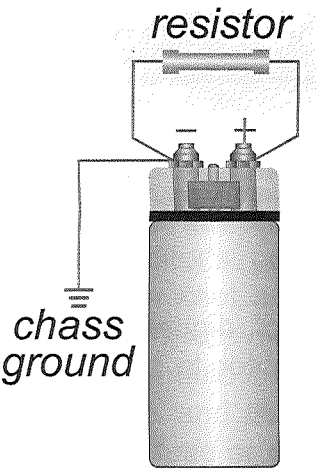


For the automatic type of digital voltage display, the remote connection from the capacitor to amplifier's remote is no longer applicable.



Capacitor Discharging

The current limiting resistor should be used to prevent rapid discharging if it is necessary to discharge the capacitor.
To discharge the capacitor, disconnect the power cable from the positive terminals of the capacitor, still leave the negative terminals connected to ground, and bridge the supplied resistor. Discharging will take several minutes and the resistor will get hot. Use pliers to hold the resistor.



Do not discharge the capacitor rapidly by shorting the terminals directly.
Note: Rapidly discharge the capacitor is dangerous and could damage the capacitor.

Specifications

Specification & design subject to change without notice

- 0.5 farad

Capacitance:	0.5 Farad
Surge Voltage:	20VDC max
Rated Working Voltage:	16VDC
Working temperature:	<95 °C
E.S.R.:	<0.00195Ω, at 120Hz 25°C
Overall Dimension:	76 x 180 mm

- 1.0 farad

Capacitance:	1.0 Farad
Surge Voltage:	20VDC max
Rated Working Voltage:	16VDC
Working temperature:	<95 °C
E.S.R.:	<0.00195Ω, at 120Hz 25 °C
Overall Dimension:	76 x 260 mm

- 1.5 farad

Capacitance:	1.5 Farad
Surge Voltage:	20VDC max
Rated Working Voltage:	16VDC
Working temperature:	<95 °C
E.S.R.:	<0.00195Ω, at 120Hz 25 °C
Overall Dimension:	76 x 260 mm

- 2.0 farad

2.0 farad	
Capacitance:	2.0 Farad
Surge Voltage:	20VDC max
Rated Working Voltage:	16VDC
Working temperature:	<95 °C
E.S.R.:	<0.00195Ω, at 120Hz 25 °C
Overall Dimension:	76 x 305 mm

Your capacitor should include:
1 x digital display power capacitor, 2 x mounting brackets, 1 x owner's manual, 1 x charging/discharging resistor.