

Z-CB100F

Owner's Manual

Before operating the unit, please read this manual thoroughly and retain it for future reference.

The Z-CB100F Super Capacitor Bank

Increase your Power Capacity with the new Zapco 100 Farad Super Capacitor Bank. 6 supercapacitors of 600 Farad each (connected in series) made it possible to create this 100 Farad (100,000,000 Microfarad) supercapacitor. With an internal resistance that is infinitely lower than a conventional electrolytic capacitor, they guarantee a very fast transient response, greatly improving the sound quality. Voltage and current indicators allow you to have the operating parameters of 3 or more amplifiers under control.

Before you start your installation

ZAPCO highly recommends that a fuse or circuit breaker be placed within 18" of the battery. Although you will add a fuse or fuse block near the product it is still a possibility that a pinched power wire between the component fuse and the battery could result in a short, or even a fire. The protection device should be placed where it can be accessed easily and all wiring should be routed safely and correctly according to the following guidelines:

- Do not run wiring close to hot or spinning objects.
- Always use wire grommets when routing wire through any metal panels.
- Make sure that the potential for pinched wiring is avoided by routing all wires away from moving objects.

Mounting your Z-CB100F Capacitor

Mounting your Z-CB100F capacitor is easy. Just keep in mind a few guidelines:

- The capacitor can be mounted in any direction, on wood, metal, or carpet
- The metal chassis of the capacitor can be grounded or left isolated
- The capacitor requires adequate ventilation. Position the capacitor with sufficient surrounding area
- Keep the capacitor out of the engine compartment or other locations that may cause excessive heat or moisture
- Do not mount the capacitor to a subwoofer box or other place that may have excessive vibration

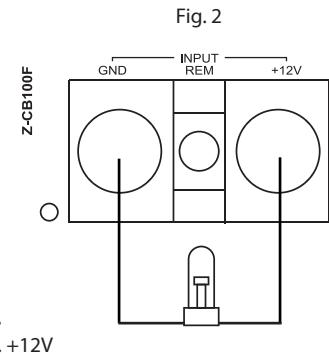
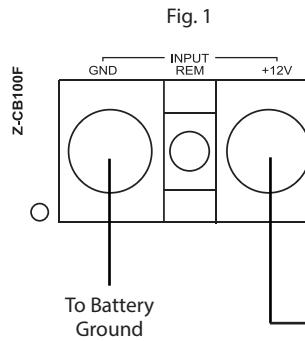
Planning your power connections

The power end plate of the Zapco Z-CB100F carries the main 12-volt power input, the turn-on wire, and the main Ground connections.

- The +12V input must be connected the vehicle battery's positive (+) terminal, and a main system fuse should be placed close to the battery.
- The GND input is the main ground or negative connection. This must be connected to the vehicle battery's negative (-) terminal.
- The small terminal between the main power and ground is the +12 turn-on input and can be connected to the head unit turn-on output wire. If none is available it can be connected to an accessory (ACC) terminal.

First use - Charging the Capacitor

The capacitor must be charged before the first use. Connect the GND of the capacitor to the vehicle battery's negative (-) terminal, then connect the +12V of the capacitor to the vehicle battery's positive (+) terminal with the supplied charging bulb in series (Fig. 1), to prevent possible damage to the capacitor. When the voltage is between 10 to 12, you can disconnect the bulb. To discharge the capacitor, connect the GND to the +12V of the capacitor with the supplied charging bulb (Fig. 2). As it goes off, the capacitor is discharged and can be disconnected.



Note: The bulb has no polarity so it does not matter which side is connected to the capacitor or the battery. The bulb can get extremely hot and should not be touched or handled until it has cooled.

Wire Size

It's often surprising how many people will obsess about signal wire but routinely provide the amplifier with only a fraction of the current it needs to do its job. The most common wire gauge used in car audio is 10-gauge, and the most common location for amplifiers is in the trunk.

Wire Sizing Chart

	Length of Run							
	4 ft	7 ft	10 ft	13 ft	16 ft	19 ft	22 ft	28 ft
0-20 amps	14	12	12	10	10	8	8	8
20-35 amps	12	10	8	8	6	6	6	4
35-50 amps	10	8	8	6	6	4	4	4
50-60 amps	8	8	6	4	4	4	4	2
65-85 amps	6	6	4	4	2	2	2	0
85-105amps	6	6	4	2	2	2	2	0
105-125 amps	4	4	4	2	2	0	0	0
125-150 amps	2	2	2	2	0	0	0	0

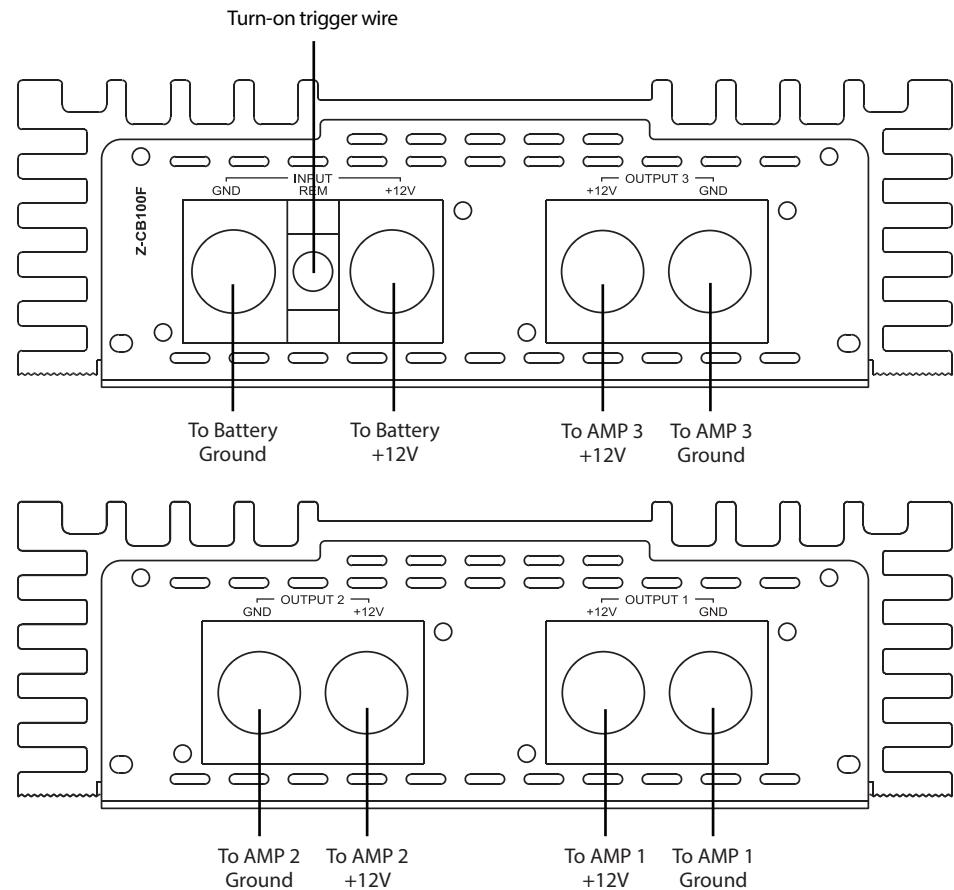
Let's look at a fairly small system. If you use a 50 watt/ch amp (25 amps) for the highs and a 100 watt/ch amp (40 amps) for the woofers, you need at least a 4-gauge and maybe a 2-Gauge wire to provide 65 amps at the trunk. Anything less and your car won't go boom. It'll just go Blap!

Note: It takes lots of current to make lots of power!

Remember! An electrical circuit is just that... a complete circuit. For current to travel, you must complete the circuit from the positive terminal to the negative terminal (which is connected to the vehicle frame). So whatever Gauge wire you use for power (B+) you must also use for ground (B-). Always make your ground as short as possible and secure it to a clean solid surface, preferably the vehicle frame.

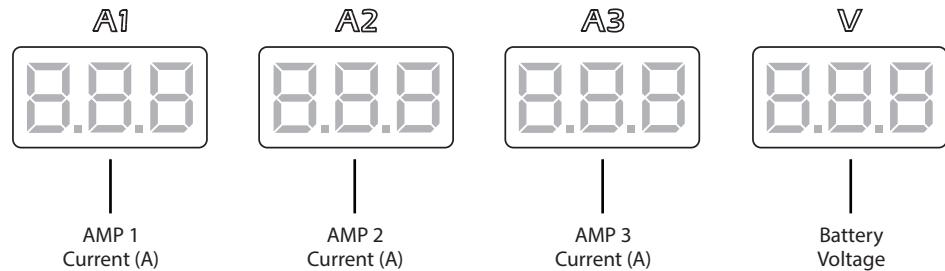
Z-CB100F Side Panels

The Z-CB100F panels have the power connector (for battery) and 3 output connectors to feed three or more amplifiers.



Z-CB100F Control LCD

The Z-CB100F top panel has 4 displays that indicate the current (A) of the amplifiers connected to the capacitor and the battery voltage.



Technical Specifications

Capacity:	100 Farad (100,000,000 Microfarad)
Working Voltage:	12V DC
Peak Voltage:	16V DC
Resistance (E.S.R.):	0.0015 Ohm @ 120Hz/25°C
Dimensions (mm):	190 (W) x 62 (H) x 320 (L)
Weight (kg):	5.1

Continuous exposure to excessive sound pressure levels may cause permanent hearing loss. ZAPCO strongly advises that you use common sense when setting volume levels. Everything written in this manual is for the proper use of the products. Some features or specifications could be modified during production to improve the product performance. The technical specifications and functionalities stated here are current as of the time of publication. General instructions and safety warnings are intended in any case to be always effective for this type of product. The latest manual with any updates is always available at www.zapco.com



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