



Powering the GoGo board

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General Information

The GoGo board can be powered by either an AC adapter or AA batteries. **NEVER leave batteries in the board when using an AC adapter! The batteries would be destroyed over a few hours and could lead to a fire hazard.**

Powering the GoGo with an AC wall adapter

There are generally two parameters you should know when powering an electrical device: voltage and current.

- **Voltage.** The GoGo board is designed to be powered at 9 volts. However, you can actually supply it with any voltage between 6-30 volts. The GoGo board's output port will always output 5V.
- **Current.** It is recommended to supply the board with at least 600 mA (milli-amperes). The more current you have means the more juice you have to power the components you use. The board itself consumes around 50 mA max but the big power consumers are the devices you connect through the output ports. A single motor normally consumes 100-250 mA. Therefore, if you plan to connect all six output ports to motors, then you may need to supply the board with at least 1,550 mA [$50 + (250 \times 6)$]. If you don't supply enough current, the motors will suck away all the current from the board, which usually causes the board to halt or reset. Sensors, on the other hand, usually do not consume so much power. So, if you plan to use only sensors, supplying the GoGo board with as little as 100 mA would work just fine.

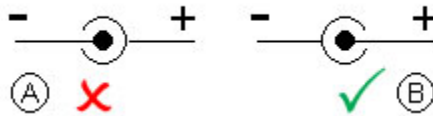


Getting the right power adapter for the GoGo board

There are four things that you have to keep in mind when shopping for a GoGo board power adapter.

1. **Output Voltage.** As mentioned in the previous section, It is recommended to use a **9V** adapter, but anything between 6-15 volts will work.
2. **Current.** Using **600-1000 mA** is recommended. The trade-off here is simple: the higher the current the higher the price of the adapter.
3. **Barrel (Connector) size.** The GoGo board uses the standard **2.1 mm** input jack.
4. **Polarity.** There are two possible polarities as shown in the figure below. You need the inner connector to be positive (B).

Note: Many power adapters have a switch that allows to to specify the polarity that you want.



Powering the GoGo board with batteries



Sometimes it is convenient to power the GoGo board with batteries, especially when using it in the autonomous mode. Rechargeable batteries are recommended.