Battery and input power share the same ground

Can two power supplies share a common ground?
Combining the 2 gives an "equal/common" ground reference for both circuits too so one isn't floating with respect to the other.. Voltage is a field,it does not flow,it propagates. If the two power supplies share a common ground,or can be made to,then it is no problem.

Do I need a common ground between battery packs?
Anyway,yes,you need a common ground between the battery packs,though preferably the Arduino and the power side of the motor driver have independent wires to the battery packs,and only meet there. @ChrisStratton It's actually a motor controller my bad,it's this one: Sparkfun TB6612FNG.

How does a battery work?
In a battery the current does not flow back exactly to where it came from but to the separate other pole. The poles are not separate, they are joined by the electrolyte. There is no electrolyte between the positive of one battery and the negative of a completely different battery.

What is the difference between a voltage and a ground?
A voltage is a "difference between two points". One of those points can be called "Ground" even if it's in a flying plane. Like the chassis of a car is hooked to the (usually) negative terminal of the battery: the ground connection is common to ALL electronic circuits.

Does a power supply need a common ground?
But if the power supply uses a power socket ground, the need for common ground is completely mysterious to me. For circuit 1, why does it matter if some current is lost along the way? For circuit 2, why does it matter if its ground has to sink a little more than the + side of the power supply provides? Hi

How do you connect a power supply to a ground?
What you need to do it join the grounds but in such a way as to keep the ground current flowing from one power supply to its load separate from the current flowing from another power supply to its load. The simplest way is to wire each power supply to its respective load separately, then join the grounds, and only the grounds, at a single point.

Both power supplies share the same ground as my 82 volt battery. I assume then I can use my 82 volt battery ground wire to connect both of my power supplies 12 volt and 8 volt. My 8 volt power supply will power LED ...

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lights (2-4 amps) and also an 2s (about 8 amps) electronic speed controller for an RC fan placed inside the motor for ...

So when your power supply is a battery, it makes perfect sense to connect the (-) side of the battery to your system"s ground pin. Notice that this isn"t just a voltage reference ...

I need to power my arduino and 2 DC motors requiring 6V each, I want to power the DC motors with a 6V battery through the vM pin on an h-bridge and use a 9V battery to power the Arduino itself. On my breadboard I have a dedicated power line and ground line on each side, is it okay to share the ground between both batteries and consequently ...

This application note explores the crucial role of grounding in battery management systems (BMS). It starts with fundamental BMS concepts relevant to various applications, then discusses key design considerations. The document also discusses the function of isolators in battery-powered systems. Finally, it emphasizes the importance of proper ...

Keep your wires from your relays to the inputs reasonably short, and consider using pull-down resistors on your inputs to swamp any induced noise. If you have to run the ...

So when your power supply is a battery, it makes perfect sense to connect the (-) side of the battery to your system"s ground pin. Notice that this isn"t just a voltage reference though; it is also the supply return. In practical terms, what this means that the wire you use to connect (-) to the board"s ground should be at the same size as the ...

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If the two power supplies share a common ground, or can be made to, then it is no problem. However, the return wire must be sized for the sum of the 8 V and 12 V currents. What are the 8 V and 12 V currents, power ...

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So when there is power supply connected to the power input that is higher than 6.6V+0.6V (where 0.6V is the diode D1 voltage drop), then the USB supply line is cutoff (because the mosfet turns off) and the power is provided from the power plug. Connecting or disconnecting the USB supply in this case will not make a difference, so you can have both power supplies ...

Battery and input power share the same ground

Do not connect the chassis ground terminal to anything except the vehicle chassis if mounted permanently. Never connect direct to the battery. Only the DC power input terminals should be connected to the battery. Plug the small items into the inverter direct without worry. Only shock hazard will be if the power cord to the appliance is damaged ...

At the same time, the Battery Charger Section converts the external AC input power from the utility to DC power to charge the DC Battery Source. In case the utility fails, the load is transferred to the inverter. In case shore power / onboard AC power is not available, the Inverter can be used to provide AC power. as per Code, the Transfer relay is required to switch both the line and ...

As it goes through the ground wire, how does it know to go back to the battery and not the ground on the Arduino chip? Basically, every point on a conductor has the same potential (voltage), just like communicating vessels. It ...

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The simplest way is to wire each power supply to its respective load separately, then join the grounds, and only the grounds, at a single point. This is called a star connection, because if there are several grounds all joined together it looks like a star. I suggest you "prototype" the thing to see what happens.

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