

Auxiliary Battery Supply for Handyboards

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Initially, we learned that the battery supply on the Handy Board was insufficient to complete the tasks. The DC converter that we use charges the robots at 12V and a maximum of 750mA. From testing, we noticed that the actual voltage was roughly 15V and didn't push anything near 750mA.

So we decided to add a separate power supply. We took two 9V batteries and connected them in series. We then connected two of these pairs in parallel. We measured the voltage produced by the configuration to be 15.7V, well within an appreciable range of the DC converter.

We purchase four power-jack (size M) and wire caps (from Radio Shack) that fit in the DC converter input on the Handy Board. We soldered the terminals of the 9V battery configuration to the connectors and plugged them into the Handy Board. The implemented unit (Figure 1) assimilates the AC adapter by providing 18 volts and at least 500 mA.

We noticed that the batteries continuously charged the Handy Board during operation. We tested its charge capabilities for up to 5 hours, at which point the stored charge on the standard Handy Board battery took over. This setup (Figure 1) successfully removed any power problems that we might otherwise have faced.

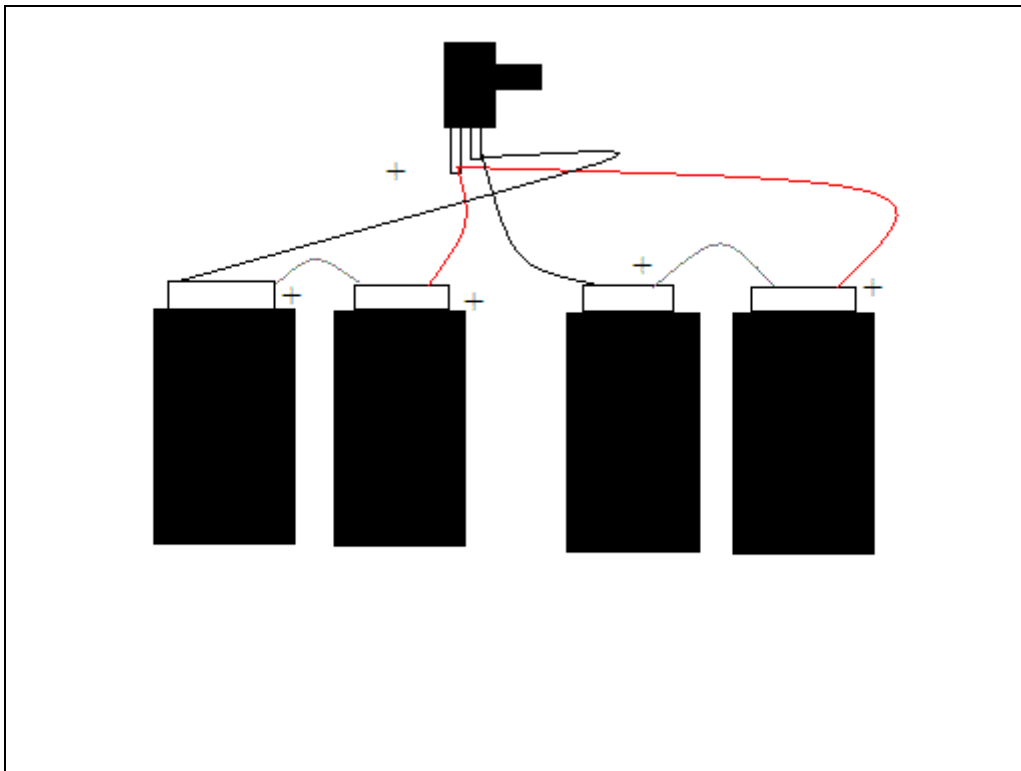


Figure 1. Auxiliary Battery Supply for HandyBoard