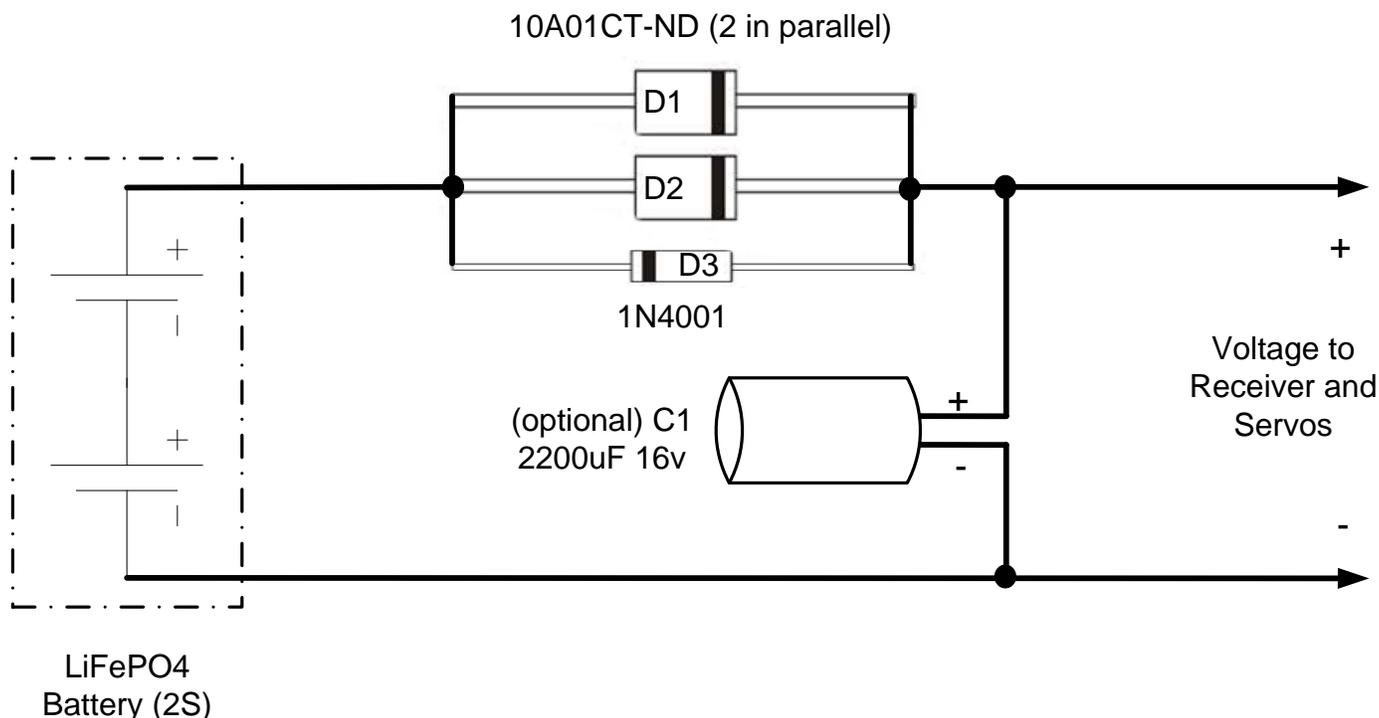


Voltage-Reducing Circuit for LiFePO4 2S Packs Only



NOTES and PARTS:

1. Parts available from Digi-Key (www.digi-key.com)
D1, D2 = 50v 10A rectifier p/n 10A01CT-ND (0.63 each)
D3 = 50v 1A rectifier p/n 1N4001-T (0.32 each)
(optional) C1 = 2200uF 16v p/n UHE1C222MHD (0.99 each)
2. Switches and connectors not shown. Your plane On/Off switch can be either before or after the diode assembly.
3. Pay close attention to the cathode band mark on the diodes. Keep wires to the diodes, as well as the diode leads themselves, as short as reasonably possible. Double-check all soldering connections.
4. Insulate exposed wires around diodes to prevent shorts. Many methods work including wrapping or taping depending on available space in fuselage. In tight quarters you can paint exposed wires with multiple coats of electric-rated liquid plastic. Cheap source is Plasti Dip by Performix (available at Harbor Freight in U.S.) and provides excellent insulation protection without the bulk of tape, etc.
5. The capacitor C1 is not a required component in many installations. Try first without and see if you have any problems in your initial ground tests. The purpose of C1 is to suppress noise that is on the power wires to the receiver and servos. The capacitor can be soldered into your wiring harness directly or plugged into a spare receiver channel (between + and - pins). Pay attention to the polarity markings!
6. **DO NOT FLY YOUR PLANE AFTER THIS MODIFICATION** without first charging your battery and performing at least a full 30 minutes of continuous simulated flying, switching transmitter modes, moving the servos slowly and quickly both as in real flight, and carefully watching all control surfaces for any unusual movement, flutter, or hesitation. During this test also grab your fuse and give it some good firm twists and shakes to simulate bumpy conditions and shakes during landing. Better to find out you have a problem on the ground.

CREDITS

Special thanks to Flo in Munich on RC Groups for his initial description of this voltage reduction solution.

Thanks also to all the RC Groups Sailplane members who offered their insights and helped validate this solution.

REVISION HISTORY

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