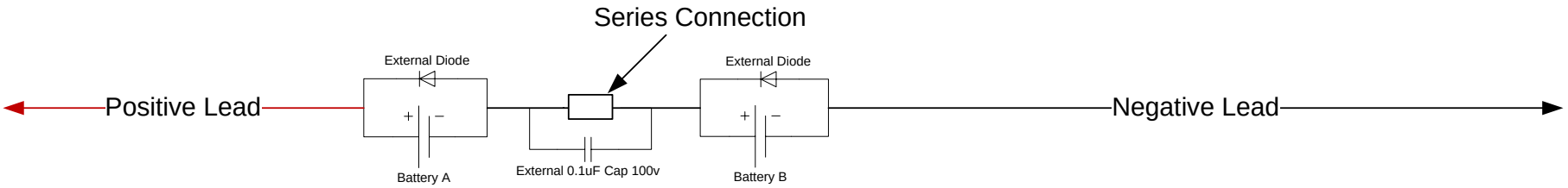
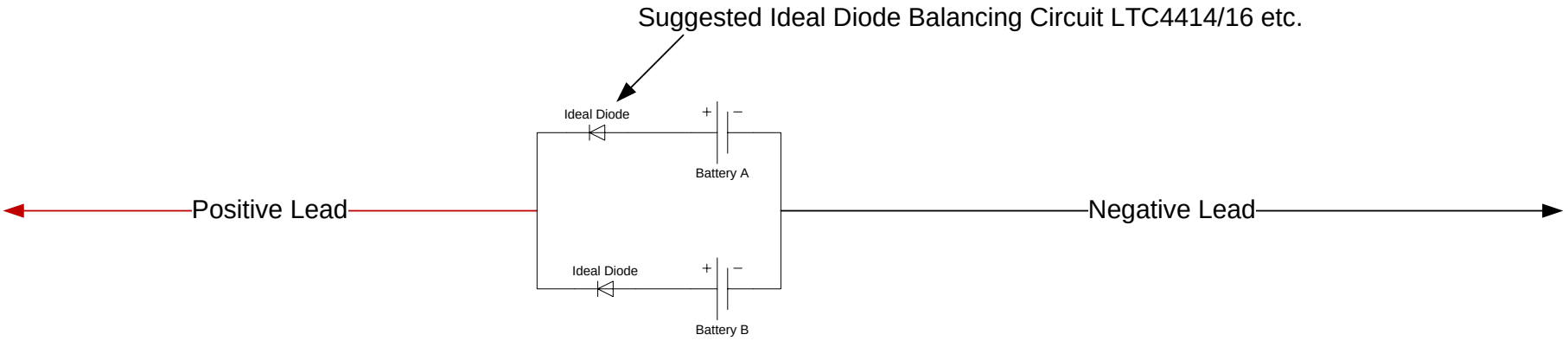
## Suggested Series Connection Schematic



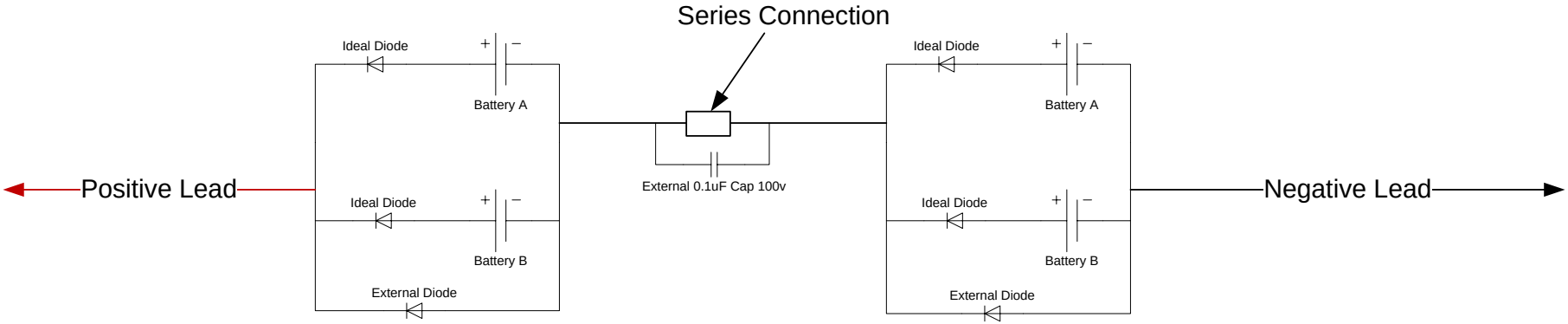

External Diodes help with reliability and robustness of the MOSFET elements during turn on/off. External Capacitor is only required if the series connection can be disconnected during high current operation (i.e. series connection made with breaker, fuse, etc.) External capacitor should be 2x expected maximum voltage of the series stack.

## Suggested Parallel Connection Schematic



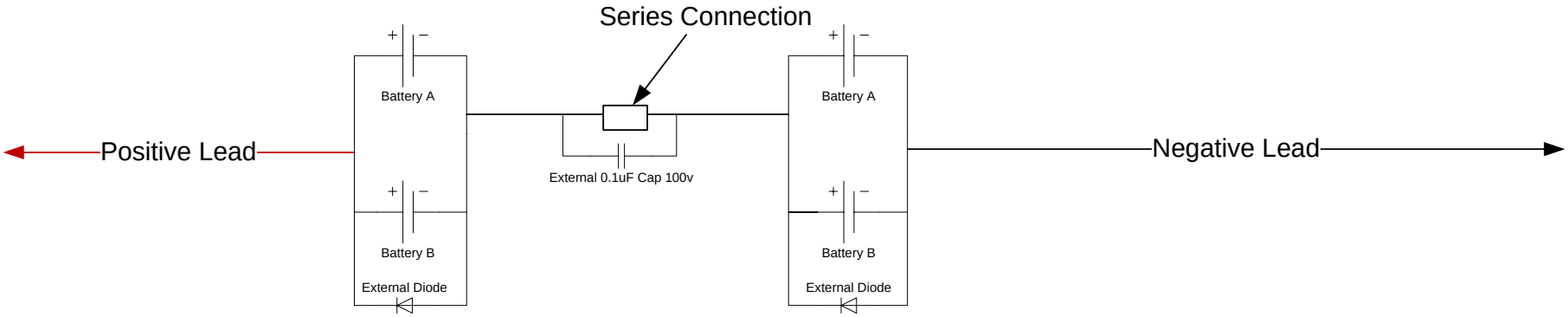

The addition of the Ideal Diode balancing circuit will assure two batteries are discharged equally and prevent a higher voltage battery from charging a lower state of charge battery. Back to back MOSFETs are desired to prevent leakage through the body diode.

## Suggested Parallel and Series Connection Schematic




Batteries placed in parallel then series mode offers a more robust and reliable mode of operation. Ideal Diode controllers assure batteries in parallel sections balance during discharge and higher state of charge batteries do not charge batteries is a lower state of charge. External Diodes help with reliability and robustness of the MOSFET elements during turn on/off. External Capacitor is only required if the series connection can be disconnected during high current operation (i.e. series connection made with breaker, fuse, etc.)

## Alternate Parallel and Series Connection Schematic




Batteries placed in parallel then series mode offers a more robust and reliable mode of operation. The lack of Ideal diode controllers will allow higher state of charge batteries connected in parallel to lower state of charge batteries to charge. External Diodes help with reliability and robustness of the MOSFET elements during turn on/off. External Capacitor is only required if the series connection can be disconnected during high current operation (i.e. series connection made with breaker, fuse, etc.)

For further information on ULTRALIFE brand products and services please visit:
http://www.ultralifecorporation.com/

For further information on ideal diode controllers please visit
http://www.linear.com/