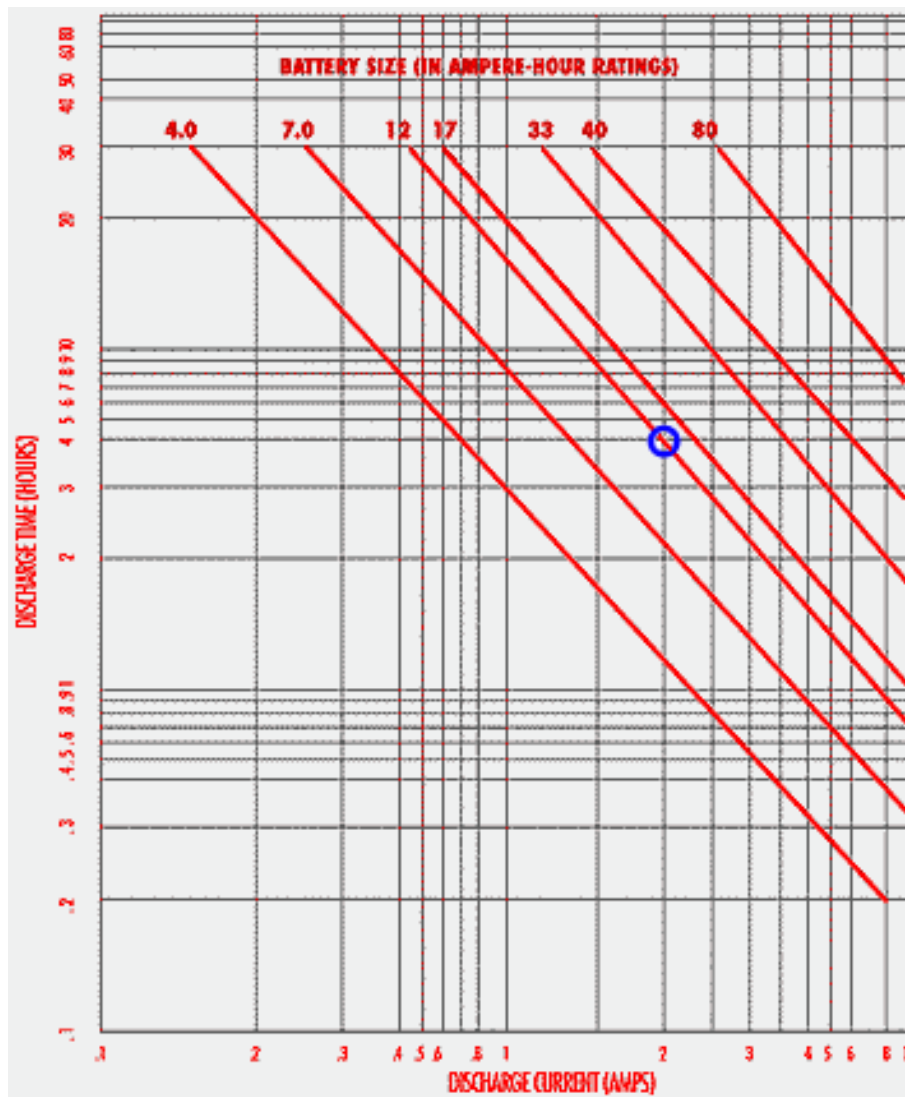




How to Choose the Correct Battery Size for Your Application

Figuring out the size of a battery necessary to support the load discharge current for a specific amount of time can be tricky. Batteries are rated at maximum efficiency over a 20 hour discharge period. Therefore, a 20 AMP-Hour battery will provide 1 AMP over a 20 hour period. However, calculating the discharge time for other discharge currents is not as easy as division or multiplication. A 20 AMP-Hour battery that supplies 1 AMP for 20 hours will not provide 2 AMPs for 10 hours, but rather, 1.8 AMPs for 10 hours, which is equivalent to 18 AMP-Hour. Thus, we provide a chart to facilitate calculations to determine the correct battery size for chosen discharge currents and discharge times.

DISCHARGE TIME AS A FUNCTION OF DISCHARGE CURRENT



EXAMPLE:

Requirement: you need 4 hours of backup for a 2 amp load. Using the chart, simply find the intersection of the 2 AMP vertical line and the 4 hour horizontal line. Then, find the closest diagonal line that is above this intersection. Follow that diagonal line up to determine the minimum battery size that is required. In this case, a 12 AH battery (see blue circle) is indicated.