



AMERICAN BATTERY CORPORATION



We Sell Batteries – Knowledge and Service Are Free

Charging Service

To maximize performance and life, batteries should be recharged fully after each discharge period; fully charged is 2.1 volts per cell (VPC) AND specific gravity (SG) readings of at least 1.265 when measured with hydrometer. If BOTH of these readings are not achieved, the battery requires more charging.

Refer to the following chart for initial charge control settings:

<u>Voltage Setting</u>	<u>System Voltage</u>				
	<u>6V</u>	<u>12V</u>	<u>24V</u>	<u>36V</u>	<u>48V</u>
Absorption/Bulk	7.3	14.5	29.0	43.6	58.1
Equalize	7.7	15.5	31.0	46.4	61.9
Float	6.8	13.5	27.0	40.5	54.0

The suggested settings above assume two things:

- A depth of discharge (DOD) / low voltage disconnect (LVD) setting of no more 50% of battery bank capacity (2.00 volts per cell; open circuit voltage)
- The total input amperage from the charging source is at least 10 amps per 100 Ah (c/20) of battery bank

Suggested timer setting for the absorption phase is 2 hours per parallel string. Suggest no more than 2 parallel strings (per inverter) within the battery bank

DOD / LVD settings beyond 50% and / or charge input amperage of less than 10% battery bank capacity, may / will result in result in necessary changes to the above stated absorption phase settings

These are suggested settings and are not “set in stone”; the off grid world is nebulous and ever changing. Regular monitoring of the batteries (especially specific gravity; via a hydrometer) is necessary during the first 2 -4 weeks after installation, to ensure system is calibrated to properly charge the battery bank.

In the first 2-4 weeks after installation, spot check specific gravity readings every few days after system has gone to “float”. Specific gravity readings that fail to attain at least 1.265 may / will result in modification of charge control settings. Please contact supplier for information.

Repeat this process during the month after a change in seasons (spring / summer / fall / winter).

Suggest equalization charge of battery bank every 30 days for batteries that are subjected to DOD of 50% or less and more often for DOD beyond 50%.

The suggested equalization charge is 2 hours and should be done using a generator. Confirm successful equalization charge with use of hydrometer, after equalization charge terminates. Specific gravity readings of at least 1.265 or higher are required for a successful equalization phase.

Watering Service

The need / frequency to water the battery bank will vary due to several factors:

- DOD beyond 50% will require more frequent watering
- Warmer climates will require more frequent watering
- Older / aged battery banks will require more frequent watering

Initially, inspect fluid levels in cells after 2 weeks in service. If change in fluid level is minimal or unchanged, extend inspection to a monthly cycle. Proper fluid is ¼” below vent well, which drops down into cell from the underside of the cover.

Inspect and add distilled water only after battery bank is fully charged; confirm with hydrometer (at least 1.265) before inspection or adding.

Preventative Maintenance

- Keep terminals and battery covers clean of corrosion
- Make sure cable connections are tight and free of corrosion

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