

## Three-Stage Charger\*

Following is the charging recommendation and charging profile using 3 stage\* chargers for US Battery deep cycle products.

\*Equalization and float charge modes are not considered to be one of the stages in a charging profile.

1. Bulk Charge	Maximum current (10% of C/20 Ah in amps) to 2.40 $\pm$ 0.05 volts per cell (e.g. 7.20 volts $\pm$ 0.15 volts per 6 volt battery)
2. Absorption Charge	Constant voltage (2.40 $\pm$ 0.05 vpc) to 3% of C/20 Ah in amps
3. Finish Charge	Constant current at 3% of C/20 Ah to 2.55 $\pm$ 0.05 volts per cell then terminate charge by dV/dt (e.g. 7.65 volts $\pm$ 0.15 volts per 6 volt battery)
• (Optional Float Charge)	Constant voltage of 2.17 vpc (e.g. 6.51 volts per 6 volt battery) for unlimited time
• Equalization Charge	Constant voltage (2.55 $\pm$ 0.05 vpc) extended for 1-3 hours after normal charge cycle (repeat every 30 days)

Notes: Charge time from full discharge is 8-12 hours.

Absorption charge time is determined by the battery but will usually be ~3 hours at 2.40 volts per cell.

Finish charge time is typically 2-4 hours.

Float time is unlimited at 2.17 volts per cell.

Specific gravity at full charge is 1.265 – 1.275

### US Battery Recommended Charge Profile 3-Stage (Constant Current/Constant Voltage/Constant Current)

