

The VST Charger 500 allows you three choices when charging the Apple intelligent batteries. In either one or both positions (simultaneously) you may:

- a) Charge the battery;
- b) Condition/Charge the battery; or
- c) Recalibrate/Condition/Charge the battery.

Charging

Charging is the fastest method of getting a topped off battery, and uses the previous calibration value stored in the battery's EMM. Just insert one or two batteries into the charger, they will be fully charged in the shortest possible time.

Conditioning

Conditioning takes slightly longer than just charging, and is required occasionally to eliminate the memory effect. Conditioning simply discharges the battery to the End of Discharge (EOD) voltage recommended by Apple, then fully charges the battery. The most efficient way to condition a battery is to remove the empty or nearly empty battery from the PowerBook, and insert it into the Charger 500. Then, just press the condition button. The battery will be fully discharged to EOD, then fully charged. If a battery is inserted and the button is pressed, the red LED will turn on, and the yellow charge LED will go off. The charger will enter the discharge mode only if the battery is less than 25% charged. This design guideline is set to encourage batteries to be nearly exhausted before conditioning them, thus avoiding the waste of a full cycle of the battery's useful life. The user may override this setting if the battery to be conditioned has more than 25% capacity by pressing the switch continuously for about three seconds. Note: the recalibration cycle, described below, includes a conditioning cycle.

Recalibration

Recalibration is recommended once every 25-30 cycles or once per month and includes a conditioning cycle. Recalibration takes longer to perform than just charging or conditioning alone since the battery must be fully charged, then depleted (during capacity measurement), then fully charged again. To recalibrate/condition/charge a battery, wait until the battery is fully charged and in the pulse-maintenance mode (all four green LEDs on and yellow LED flashing) then press and hold the button for three seconds — the red LED will stay on, indicating recalibration has started. Do not disturb the battery/charger during this period. The recalibration cycle for one battery takes about 4.5 hrs, for two batteries, about 8.0 hours. Recalibrating the battery once a month ensures the battery will learn its actual capacity which changes over time. In typical batteries, recalibration increases as much as 8 - 15% the available run time from each battery.