//ADDED SOFTWARE SHOWN IN RED FOR DATA LOGGING

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```c
void batteryCapacity (void) {
if (Mode == "BC"){
    setCurrent = reading*100; //set current is equal to input value in Amps
    setReading = setCurrent; //show the set current reading being used
    setControlCurrent = setCurrent * setCurrentCalibrationFactor;
    controlVoltage = setControlCurrent;

    lcd.setCursor(0,3);
    lcd.print (timer.getTime()); //start clock and print clock time

    Seconds = timer.getTotalSeconds(); //get totals seconds

    LoadCurrent = ActualCurrent; //if timer still running use present Actual Current reading
    if (timer.status() == 2){ //if timer is halted then use last Actual Current reading before timer stopped
        LoadCurrent = BatteryCurrent;
    }

    BatteryLife = (LoadCurrent*1000)*(Seconds/3600); //calculate battery capacity in mAh
    BatteryLife = round(BatteryLife);
    if(BatteryLife >= BatteryLifePrevious){ //only update LCD (mAh) if BatteryLife has increased
        if (BatteryLife < 10) {
            //add a 3 leading zero to display if reading less than 10
            lcd.print("000");
        }
        if (BatteryLife >= 10 && BatteryLife <100){
            //add a 2 leading zero to display
            lcd.print("00");
        }
        if (BatteryLife >= 100 && BatteryLife <1000){
            //add a 1 leading zero to display
            lcd.print("0");
        }
    }
    lcd.print(BatteryLife,0);
    lcd.setCursor(13,3);
    lcd.print("mAh");
    BatteryLifePrevious = BatteryLife; //update displayed battery capacity on LCD
}
}

if (Mode == "BC" && ActualVoltage <= BatteryCutoffVolts){ //stops clock if battery reached cutoff level and switch load off
    BatteryCurrent = ActualCurrent;
    dac.setVoltage(0,false); //reset DAC to zero for no output current set at switch on
    toggle = false; //Load is toggled OFF
    lcd.setCursor(8,0);
    lcd.print("OFF"); //indicate that LOAD is off at start up
    timer.stop();
}

if (Mode == "BC" && Load == 1){ //Routine used for data logging in Battery Capacity Mode
    if (Seconds != SecondsLog){ //only send serial data if time has changed
        SecondsLog = Seconds;
        Serial.print (SecondsLog);
        Serial.print (",");
        Serial.println (ActualVoltage);
    }
}
```