

Battery Monitor

Club Project Candidate

OARC Club Project Candidate



Battery Monitor

- Battery management tool
- Simultaneously displays
 - Source Voltage
 - Load Current
 - Load Power
 - Accumulated Ah or Wh
 - Session time
 - % battery capacity left
- Saves session current peaks and voltage minimums
- Unique Features
 - Utilities Menu selects user options using two push button switches
 - Auto ranges low current & power measurement down to 1mA, 1mAh, 1mWh
 - Hibernate mode – saves readings to EEPROM - 2uA supply current when off
 - Low supply current 2mA typical without backlight
 - Display Backlight – four levels off, low, med, high consumes up to 2.5mA
 - % battery capacity remaining tied to user definable battery char. table



Battery Monitor



SMD Kit

- All parts included, PCB, IC's, passives, display, switches, leads, case
- Some assembly instructions
- PICAXE software
- 64 SMD components most are 0805, a couple 0604.
- This should not be your first attempt at SMD assembly
- The display is fragile and can be damaged if mishandled
- There will be no repair and limited hardware debug assistance

Cost

- Approximately 50 to 60 dollars

Group Sessions

- 1) Distribute kits, begin voltage regulator assembly
- 2) Test voltage regulator begin remaining assembly
- 3) Complete remaining assembly except for leads & PowerPoles
- 4) Load software and test assembly with temporary leads. Then final assembly into case with leads mount connectors
- 5) Info on customizing software for different batteries, battery care primer, connector and lead resistance. Continue test & final assembly + some hardware debug as necessary