

OPERATION AND SPECIFICATIONS

The TriMetric Battery System Monitor...

The information you need for better battery care, energy conservation, and system maintenance! Measures battery volts, amps and amp hours.

"BATTERY PERCENT

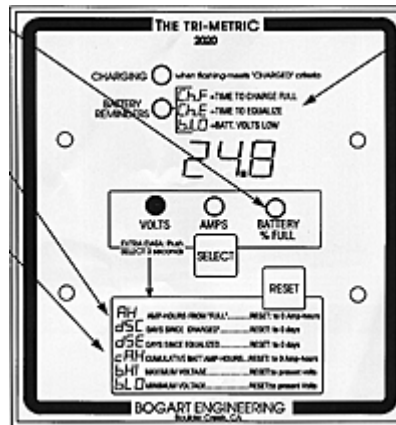
FULL" display shows how full the battery is by the most accurate method: measuring amp hours expressed as a percentage of a full battery.

AMP HOURS FROM

FULL shows how much energy has been taken out of a full battery.

EASY TO UNDERSTAND FRONT PANEL AND

CONTROLS All display and RESET functions are explained on panel. The six less used functions are easy to access, yet easy to ignore if not needed



NEW "BATTERY REMINDERS"

Make good battery care

easier: shows when recharging should occur, or battery voltage gets too low. It's important to periodically fully charge lead acid batteries to keep them in good condition. Program the desired maximum number of days (1-60) between full chargings. Then, if the batteries exceed that time without being fully charged the BATTERY REMINDERS lamp will occasionally blink, and the display will flash "Ch. F", (as shown on the label) every 5 seconds to explain the reminder. Similarly, program in desired number of days (1-250) between battery equalizations and the TriMetric will remind you when to equalize. (When equalization is accomplished you'll need to reset the "days since equalized" data so it will remind you again the next time). Program in the desired value of "lowest battery voltage" and the lamp will flash when battery voltage falls below that voltage. You can disable any or all of these.

MAIN DATA FUNCTIONS

Push SELECT to cycle through these:

Battery Volts: Reads 8.0~35.0 volts accurate to ± 0.08 volt including "digit resolution" accuracy. An optional adapter extends this to 70 volts for 32 or 48V systems and delivers lightning protection too. Please see accessory section for additional information.

Battery Amps: Measures amps into and out of battery, accurate to $\pm 1\% \pm 1$ least significant digit. Or the meter may be set up to measure only incoming amps from

solar array or other energy source, or only load amps if desired. Resolution and maximum amps depends on choice of shunt. With the 100A/100mV shunt: measures 0.01 to 250 amps. With 500A/50mV shunt: measures from 0.1 to 1000 amps. Shunt type is programmable, so amps always display correctly. Speed of response one second time constant.

Battery Percent Full: This number is based on net-amp hour reading divided by the user programmable value of battery capacity. This is more reliable than other methods which do not use amp hours to compute battery energy content (for example less expensive monitors which rely only on battery voltage to estimate energy content). There is a (user programmable) choice of two ways to display this result: (1) an exact, literal reading from 0-100% in increments of 1%, or (2) a more "honest" display which shows in steps of 5%, and displays "FUL" when above 92%, and "LO" when below 27%. Although the meter amp hour measurement accuracy is $\pm 1\%$, this option is intended to reflect the fact that the system accuracy in determining how much energy content in an actual battery system, (assuming the batteries are recharged fully at least every week) is more honestly stated as $\pm 5\%$. The assumed BATTERY CAPACITY, upon which this display is based, can be programmed from 10-2550 amp hours, in increments of 10 amp hours.

Display Off:

The display may be turned off (for lowest current draw of 16 ma.)