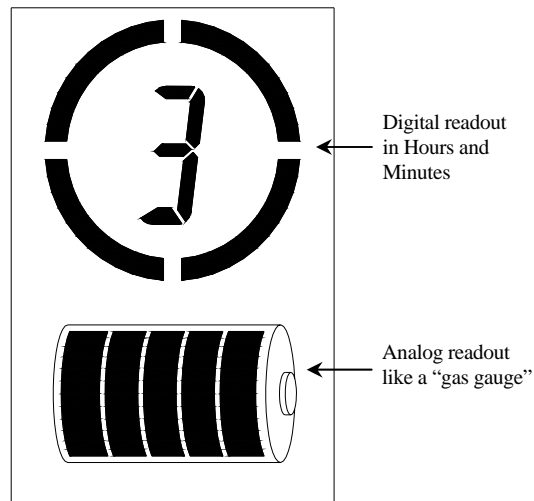


The DIONIC HC features an all NEW “RealTime™” LCD providing on-the-fly remaining run time estimates in 15 minute increments as well as *simultaneously* providing remaining capacity information using the traditional “Fuel Gauge” approach. No special adapters or set up is required. RealTime *automatically calculates the load and displays capacity information and battery status at all times.*

Special electronics protect the lithium ion cells in the DIONIC HC battery from damage and to ensure safe operation. These electronics work in conjunction with the Digital Battery electronics and will give the operator additional indications in the RealTime display of the battery’s status as outlined below.



The RealTime™ LCD provides on-the-fly remaining run time estimates in 15 minute increments as well as providing remaining capacity information using the traditional “gas gauge” approach. In this way, the LCD provides two different methods of determining battery capacity.

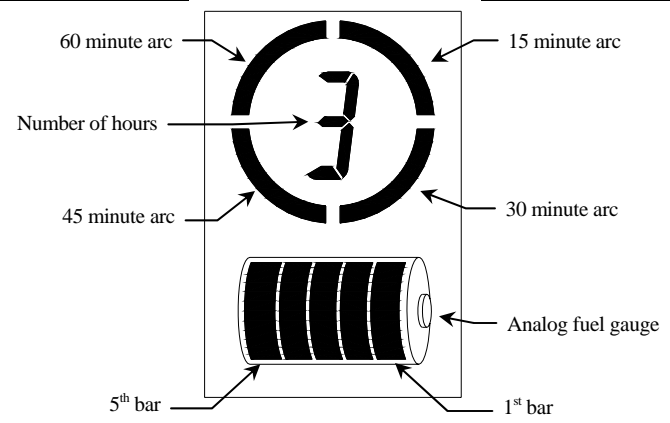
The following is a description of the features of the remaining run time LCD:

1. The remaining run time is calculated using the present available capacity and a measure of the present power load.
2. If no load has been detected, or if the battery is coming off a charger, the default assumed power for remaining runtime calculations is 20 watts.
3. When the battery determines that a load is attached, the default 20 watt load will be abandoned and a new remaining run time will be calculated based on the new load presented to the battery.
4. The battery will “learn” this new load and retain that load information in non-volatile memory.
5. If the battery is removed from a load and placed on a shelf for extended periods, the remaining run time calculation will continue to use the learned load value for up to 30 minutes.
6. After 30 minutes, the remaining run time calculation will again use the default 20 watt load as a criteria.
7. When the battery reached its learned capacity voltage level (12.7 Vdc), the LCD will begin flashing the 15 minute icon until the battery is returned to a charger.
8. If the battery reaches an EOD condition (12.4 Vdc), the LCD’s last fuel gauge segment will be the only remaining icon flashing until the battery is returned to a charger.

9. If the battery voltage drops below the Fuel Gauge cut out circuit voltage (10.0 -10.8 Vdc) the Fuel Gauge will be disabled and the LCD will go blank until the battery is returned to a charger.

I. Analog Fuel Gauge

LCD Segments	% Capacity
1 st Bar, 2 nd Bar, 3 rd Bar, 4 th Bar, 5 th Bar	100
2 nd Bar, 3 rd Bar, 4 th Bar, 5 th Bar	80
3 rd Bar, 4 th Bar, 5 th Bar	60
4 th Bar, 5 th Bar	40
5 th Bar	20
5 th Bar flashing	EOD (12.4 Vdc)



II. Remaining Run Time Gauge

LCD Segments	Remaining Run Time
"3" & 4 arcs	4 Hours or greater
"3" & 4 arcs	3 Hours 45 minutes to 3 Hours 59 minutes
"3" & 3 arcs	3 Hours 30 minutes to 3 Hours 44 minutes
"3" & 2 arcs	3 Hours 15 minutes to 3 Hours 29 minutes
"3" & 1 arc	3 hours to 3 Hours 14 minutes
"2" & 4 arcs	2 Hours 45 minutes to 2 Hours 59 minutes
"2" & 3 arcs	2 Hours 30 minutes to 2 Hours 44 minutes
"2" & 2 arcs	2 Hours 15 minutes to 2 Hours 29 minutes
"2" & 1 arc	2 Hours to 2 Hours 14 minutes
"1" & 4 arcs	1 hour 45 minutes to 1 Hour 59 minutes
"1" & 3 arcs	1 Hour 30 minutes to 1 Hour 44 minutes
"1" & 2 arcs	1 Hour 15 minutes to 1 Hour 29 minutes
"1" & 1 arc	1 Hour to 1 Hour 14 mintues
4 arcs	45 minutes to 59 minutes
3 arcs	30 minutes to 44 minutes
2 arcs	15 minutes to 29 minutes
1 arc	14 minutes or less
1 flashing arc	Learned Capacity Level Reached (12.7 Vdc)