

# THE BRAT

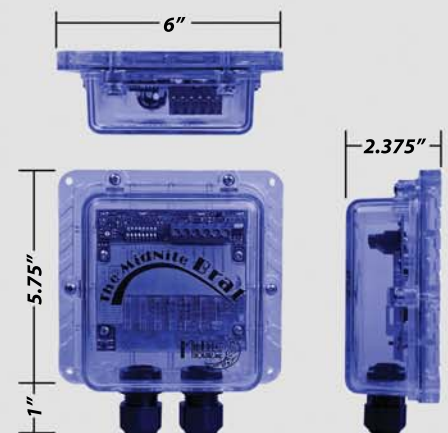
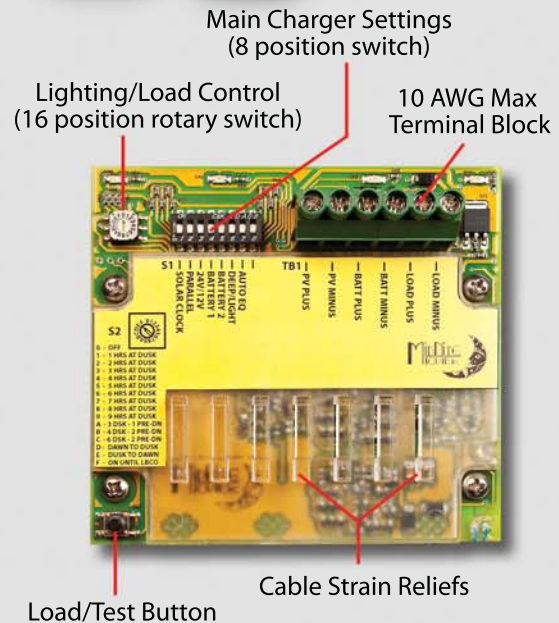
## MIDNITE CHARGE CONTROLLER

***The Brat, a PWM battery charger and load controller that doesn't skimp on features!***

The Brat is the most versatile charge controller in its class. Ideal for RVs, marine applications and renewable energy systems such as lighting and water pumping.

### PRODUCT FEATURES

- Selectable charging modes
  - 20A charger with 10A load control
  - 30A charger without load control
- Bulk, Absorb, Float, and Equalize (user adjustable)
- 0 to 100% PWM, no relays, no fans, no external heat-sink
- Clear UV stabilized polycarbonate housing; rain and bug proof
- 12V/24V Flooded, GEL, AGM battery supported
- Reverse polarity protected
- Short Circuit Protection
- Auto resetting over temperature protection
- 8 position switch for main charger settings
- 16 position rotary switch for lighting controller
- Four LEDs for Bulk, Float, Load On and Low Battery
- Patterned blinking LEDs provide feedback about fault conditions
- Highly customizable lighting controller (dusk-dawn, hourly, day, night, etc.)
- Load/Test Button
  - 10 second test of the load circuit
  - Requests a manual EQ
  - Resets LED fault notification
- Field repairable printed circuit board (by a qualified technician)
- Built in Arlington, WA USA



**Dimensional View**



# THE BRAT

## MIDNITE CHARGE CONTROLLER



### PRODUCT SPECIFICATIONS

Input Voltage	Up to 60VDC
Nominal Battery Voltage	12 or 24V - Selectable
Maximum Charger Current	30A as charger only, reduced to 20A if the load controller is used
Charging Regulation	Bulk, Absorb, Float as well as Equalization
Equalization Charging	Automatic, 15/30V, two hours every 30 days or no EQ
Battery Temp Compensation	Automatic - ambient temperature detected through built-in sensor
Status Display	Four LEDs for Bulk, Float, Load On and Low Battery/Low-Voltage-Disconnect
Load Circuit Rating	10A max
Main Charger Settings (8 position switch)	<ul style="list-style-type: none"> <li>• Supports four battery profiles: GEL, AGM and two Flooded profiles</li> <li>• Selectable 12 or 24V</li> <li>• Selectable 11 or 11.7V Low Voltage Disconnect (doubles on a 24V system)</li> <li>• Low-EMI Mode for sensitive loads</li> <li>• Load Control/Charge Control selection switch</li> <li>• Auto-Equalize ON/OFF Control</li> <li>• Solar Clock Mode: User selectable mode in which lighting run-time automatically adjusts for seasonal daylight. Example: A two hour setting in summer will automatically extend in the winter</li> </ul>
Lighting/Load Control (16 position rotary switch) <i>All modes subject to low voltage disconnect (LVD)</i>	<ul style="list-style-type: none"> <li>• Nine Modes for lighting starting at dusk (1-9 hours), selectable in one hour increments</li> <li>• Three modes for combination early-night and early-morning lighting. <ul style="list-style-type: none"> <li>o Lights ON for 3 hours after dusk, OFF then ON again for 1 hour before dawn</li> <li>o Lights ON for 4 hours after dusk, OFF then ON again for 2 hours before dawn</li> <li>o Lights ON for 6 hours after dusk, OFF then ON again for 2 hours before dawn</li> </ul> </li> <li>• Dawn-To-Dusk Mode (Load ON only during daylight hours)</li> <li>• Dusk-To-Dawn Mode (Load ON only at night)</li> <li>• 24 Hour Mode (Load ON always) except for LVD event</li> </ul>
Operating Temperature	-40C to 60C (Controller will auto derate as temperature rises above 25C)
Environmental Rating	Outdoor - weather proof, type 3R/IP55
Weight	1 Lb.
Dimensions	6.75"L x 6"W x 2.375"D
Shipping Dimensions	7"L x 7"W x 3"D
Shipping Weight	2 Lbs.
Warranty	2 Year

