

The official MidNite Solar Classic watch

Feb 7, 2010

We realize that MidNite has been promising the Classic for years now. We would like to bring you up to speed on the progress.

Thirty six 2nd generation beta units are under construction to be shipped early March.

Twelve additional samples are slated for engineering evaluation and ETL testing. All voltages, 150, 200 and 250VDC configurations are included in these beta units.



We sent boB to Ryan's (Half crazy) in Maine to work on the novel MPPT tracking code. As some of you know, MidNite Solar is located just north of Seattle WA. We haven't figured out how to make the sun work here in the winter, so off to Maine boB went. Ryan has three 1000W identical arrays so boB was able to compare the Classic to competitor's products as well as series and parallel tests on all three voltages of Classics. We did not bring the "Kangaroo Special" Classic to Maine as Ryan does not have a 120VDC battery bank.

The tracking software boB is completing switches between four different algorithms depending on conditions. In addition there are two more user selectable tracking methods available. Ryan relayed that boB is making happy noises, so we assume that means things are working as planned. boB just says "the competition is going to be pissed"



Ryan is a professional installer in Maine and has been testing two Classic beta units for a year now.

One Classic is connected to solar and one to wind.

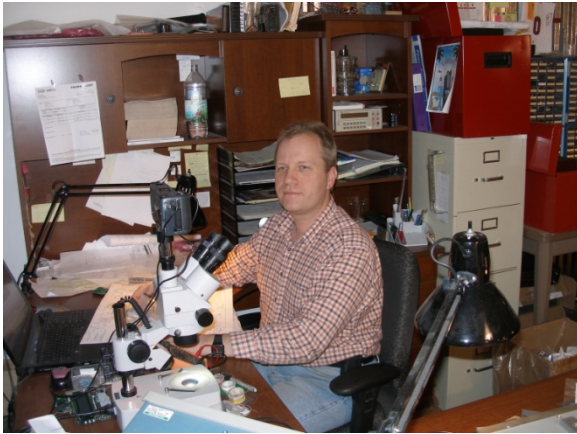
Ryan's three identical arrays have helped in comparing the Classic to a couple of competitor's controllers. Guess who is winning! boB's new tracking is fantastic.

Ryan's 800 watt wind turbine has been seen putting out as much as 2700 watts with the Classic. Pretty amazing.

Ryan will be an apps engineer for MidNite in the future.



Andrew is our guru EE (electrical engineer) Ethernet / communications engineer. Andrew is responsible for the implementation of the ModBus commands and internet interface. Andrew also has numerous other projects that will come to light in the future. As a teaser, Andrew is working on Power line carrier, PC and Mac interface and online system design projects.



Norm is another talented EE that is involved in some of the analog aspects of the Classic. Current measurement, fet drive and the graphics LCD display are his present areas of concentration. Norm is also the engineer on two upcoming projects yet to be announced. Let it be said that when Norm is done with an assignment, you can bank on the fact that it has been done right. Norm has notebooks, data and breadboards to back up all of his design efforts. He probably even documents how to properly tie his shoes.

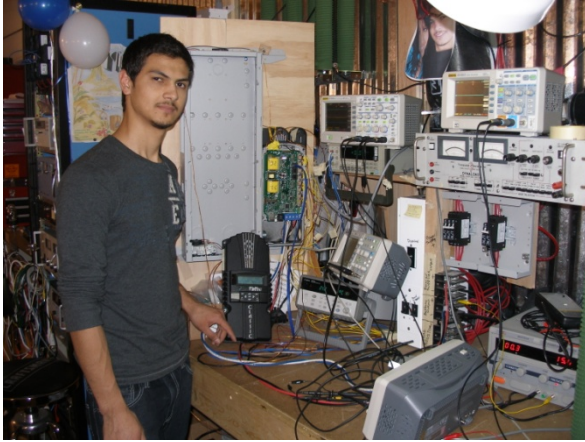


Herb is our MidNite Clipper EE. The Clipper is a companion to the Classic for wind applications. Herb is also creating the Wizard driven set up routine that you will experience upon first hooking up the Classic. The set up is nothing like anyone has seen before on a piece of renewable energy electronics. Parts of the set up were so complicated to create (and really cool) we don't think it will ever be copied. Herb is also a PE who just happens to write some pretty mean code.



Doug is one of our mechanical engineers. Doug is responsible for most of the circuit board layouts on the Classic. We have one more revision to do in order to be ready for production.

Doug worked with us a decade ago at Trace Engineering so has lots of experience at this stuff. Doug



is also resurrecting the stories that appeared on most of the Trace circuit boards.

Mario is our young engineering tech responsible for thermal testing and uncovering designed in defects and short comings. (Mario gets to blow things up) All power electronics designs go through the blow up phase. Thank goodness we are now past that. Mario is taking electronics engineering courses at Edmonds CC.

Mario is also the designer of our upcoming lightning arrestors.



Tyler is a recent addition to our engineering staff. Tyler is building the beta units as well as doing circuit board layout on other yet to be announced projects. The beta units are still a bit tricky to build so it is best left to technicians.

In his off time, Tyler puts on awesome laser light shows at rock concerts throughout the country.



Walter is our power inductor specialist. We have four different inductors for the four different Classics. We have optimized the power inductors for power output vs. idle power. The process of optimizing these critical parts requires in house capability for now.

Walter creates all of our Pre-wired power panels when not winding inductors.

We have some extra space here so here are the preliminary specs on the Classic.

Specs are considered preliminary until ETL verifies temperatures limits and such.

150V unit should be 80 amps output 200V unit should be 65 amps output

250V unit should be 55 amps output. 250V Kangaroo Special will charge a 120VDC battery bank



Eric joined MidNite a year ago and is now in charge of purchasing. We worked with Eric at Trace Engineering a decade ago. His skills in engineering give him special insight into the engineering aspect of components and assembly. Most buyers do not have this benefit. Eric is also involved with creating the manufacturing area and processes for the Classic.



Rob is our web designer who is creating the animated version of the Classic menu system. This animation will be available on our website just prior to production release of the Classic. Rob will also be involved with creating video clips of the Classic. These video clips are intended to showcase the features of the Classic. In addition they will familiarize the user to the point that picking up the manual may not be the first thing on your mind.



Robin is the mechanical designer of the Classic and most other MidNite Solar products.

These days Robin spends a fair amount of time working with the electrical engineers to make sure things are going ahead as planned.

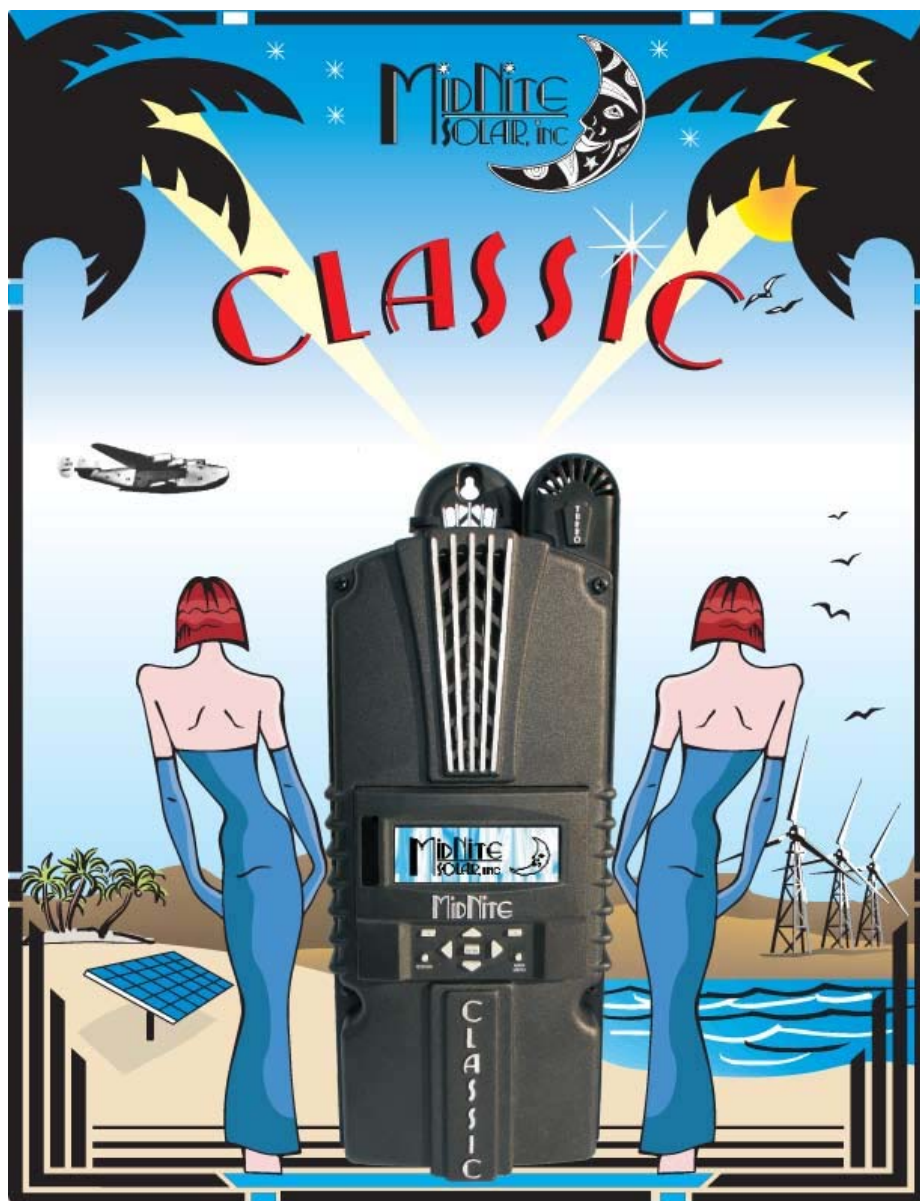
This task is similar to herding cats.

There is an old saying..... At some point you have to shoot the engineer and put the product into production.

Hmmm, that is a 50 caliber on a restored B17!

May 2010 is the planned trigger date.

One interesting and controversial feature of the Classic is that it talks. We spent a whopping \$200 for Millie, the voice of the classic. Naturally Millie then needed a physical body, so here she is. You can hear a 5 minute talk about features of the Classic by clicking on the MP3 file next to this write up.



The Midnite Classic is a Solar, Wind and Hydro MPPT controller. boB is the primary engineer on the Classic. boB designed the OutBack MX60 quite a few years ago. The Classic is his next masterpiece four years in the making.

Things won't be the same after the Classic.