Screenshot 2

To configure the Classic's Aux ports:

- Push the Main Menu button
- Scroll left or right to highlight "AUX" and push the Enter button.

Scroll left or right to highlight the relay you wish to change. Push the right soft key labeled "SETUP". Scroll up or down to change the function of the relay. Select the right soft key to set the parameters of the function. When finished push the ENTER button to save the changes.

Main Aux Screen shows both Aux1 and Aux2 functions

Off -	Places output to Low state (0 Volts)
Auto -	Selects the assigned function to the Aux output or input
On -	Sets output for Low state (12 Volts or Relay On)

Table 5

The Following is a list of the Aux 1 and 2 functions with brief descriptions of their function.

Aux 1

Vent Fan Lo

This mode will turn Aux 1 off above the voltage set point you program. It allows you to run a vent fan for a battery bank based on battery voltage. There is a voltage set point that you set and Aux 1 will turn off when the battery reaches that set point. The voltage has to fall 2 tenths of a volt below the set point for 30 seconds before Aux 1 will turn back on.

Vent Fan High

This mode will turn Aux 1 on above the voltage set point you program. It allows you to run a vent fan for a battery bank based on battery voltage. There is a voltage set point that you set and Aux 1 will turn on when the battery reaches that set point. The voltage has to fall 2 tenths of a volt below the set point for 30 seconds before Aux 1 will turn off.

Float Low
This mode will turn Aux 1 off whenever the Classic is in Float. Aux 1 will stay off until the Classic falls 3 tenths of a volt below the float voltage set point.

Float High
This mode will turn Aux 1 on whenever the Classic is in Float. Aux 1 will stay on until the Classic falls 3 tenths of a volt below the float voltage set point.

Clipper Control
This mode was intended to control the MidNite Clipper. It will send out a PWM signal whenever the controller is unloading the turbine because the battery is full or close to it. There are no adjustment in this mode the Classic is preprogrammed with the best parameters to control turbine RPM.

Day Light
This mode will turn Aux 1 on at sunrise and turn it off at sunset based on the PV input voltage.

Nite Light
This mode will turn Aux 1 on at sunset and turn it off at sunrise based on the pv input voltage.

Toggle Test
This mode will cycle Aux 1 for 1 second off and 1 second on repeatedly. This mode is mostly for testing purposes.

Pv V on Low
This Mode will turn Aux 1 off above a user set voltage based on the input voltage to the Classic (V High) and turn Aux 1 on when it hits a low voltage set point (V Low). It also allows you to set a delay time in seconds the Classic will wait before turning Aux 1 off after reaching the V High set point. It also allows you to set a hold time in seconds the Classic will wait before turning Aux 1 on after reaching the V Low set point. This mode can be useful for controlling a failsafe stopping system for Hydro or Wind.

Pv V on High
This Mode will turn Aux 1 on above a user set voltage based on the input voltage to the Classic (V High) and turn Aux 1 off when it hits a low voltage set point (V Low). It also allows you to set a delay time in seconds the Classic will wait before turning Aux 1 on after reaching the V High set point. It also allows you to set a hold time in seconds the Classic will wait before turning Aux 1 off after reaching the V Low set point. This mode can be useful for controlling a failsafe stopping system for Hydro or Wind.

Opportunity Lo
This mode will turn Aux 1 off when the Classic gets within a certain range of the voltage set points for each charging stage (V High) and turn Aux 1 on when it gets to a low set point (V Low). These set points are user adjustable and will allow the Absorb, Float and EQ timers to continue to run. You will adjust these set points to negative numbers and the numbers are an offset from the voltage set point. For example

a -.2 would turn Aux 1 off 2 tenths of a volt below your set points. This mode will allow you maximum diversion while maintaining your 3 stage charging. It also allows you to set a delay time in seconds the Classic will wait before turning Aux 1 off after reaching the V High set point. It also allows you to set a hold time in seconds the Classic will wait before turning Aux 1 on after reaching the V Low set point.

Opportunity Hi

This mode will turn Aux 1 on when the Classic gets within a certain range of the voltage set points for each charging stage (V High) and turn Aux 1 off when it gets to a low set point (V Low). These set points are user adjustable and will allow the Absorb, Float and EQ timers to continue to run. You will adjust these set points to negative numbers and the numbers are an offset from the voltage set point. For example a -.2 would turn Aux 1 on 2 tenths of a volt below your set points. This mode will allow you maximum diversion while maintaining your 3 stage charging. It also allows you to set a delay time in seconds the Classic will wait before turning Aux 1 on after reaching the V High set point. It also allows you to set a hold time in seconds the Classic will wait before turning Aux 1 off after reaching the V Low set point.

Low bat disc

This mode will turn Aux 1 off when it reaches a set point based on battery voltage (V High) and turn it on at another set point based on battery voltage (V Low). It also allows you to set a delay time in seconds the Classic will wait before turning Aux 1 off after reaching the V High set point. It also allows you to set a hold time in seconds the Classic will wait before turning Aux 1 on after reaching the V Low set point. This can be used with a NC relay when the battery gets to the set point the Classic will send 12vdc to the relay holding it open and disconnecting the load.

Diversion

This mode will turn Aux 1 on when it reaches a set point based on battery voltage (V High) and turn it off at another set point based on battery voltage (V Low). It also allows you to set a delay time in seconds the Classic will wait before turning Aux 1 on after reaching the V High set point. It also allows you to set a hold time in seconds the Classic will wait before turning Aux 1 off after reaching the V Low set point.

Aux 2

Float Low

This mode will turn Aux 2 off whenever the Classic is in Float. Aux 2 will stay off until the Classic falls 3 tenths of a volt below the float voltage set point.

Float High

This mode will turn Aux 2 on whenever the Classic is in Float. Aux 2 will stay on until the Classic falls 3 tenths of a volt below the float voltage set point.

Day Light

This mode will turn on Aux 2 at sunrise and turn it off at sunset based on the PV input voltage.

Nite Light

This mode will turn on Aux 2 at sunset and turn it off at sunrise based on the pv input voltage.

Clipper Control

This mode was intended to control the MidNite Clipper. It will send out a PWM signal whenever the controller is unloading the turbine because the battery is full or close to it. There are no adjustment in this mode the Classic is preprogrammed with the best parameters to control turbine RPM.

Pv V on Low

This mode is PWM based and is just reverse logic of Pv V High. It would be comparable to using the NC contacts of the relay used in Pv V High. It can be used that way with a solid state relay with NC contacts for a failsafe load.

Pv V on High

This mode is PWM based and will PWM Aux 2 above a user set voltage (V High) based on the input voltage to the Classic and stop when it hits a low voltage set point (V Low).

Toggle Test

This mode will cycle Aux 2 for 1 second off and 1 second on repeatedly. This mode is mostly for testing purposes.

Opportunity Lo

This mode is PWM based and is just reverse logic of Opportunity Hi. It would be comparable to using the NC contacts of the relay used in Opportunity Hi. It can be used that way with a solid state relay and NC contacts to do diversion above a set voltage.

Opportunity Hi

This mode is PWM based and will PWM Aux 2 when the Classic gets within a certain range of the voltage set points for each charging stage (V High) and stop when it gets to a low set point (V Low). These set points are user adjustable and will allow the Absorb, Float and EQ timers to continue to run. You will adjust these set points to negative numbers and the numbers are an offset from the voltage set point. For example a -.2 would turn Aux 2 on 2 tenths of a volt below your set points. This mode will allow you maximum diversion while maintaining your 3 stage charging.

Diversion Lo

This mode is PWM based and is just reverse logic of Diversion Hi. It would be comparable to using the NC contacts of the relay used in Diversion Hi. It can be used that way with a solid state relay and NC contacts to do diversion above a set voltage.

Diversion Hi

This mode is PWM based and will PWM Aux 2 at a set point based on battery voltage (V High) and stop it at another set point based on battery voltage (V Low).

Aux 1 Function

OUTPUT = Relay or 12V/0V Signal jumper selectable
Aux 1 has the relay so Diversion functions must operate slowly

VENT FAN LOW	Aux1 on below setpoint
VENT FAN HIGH	Aux1 on above setpoint
FLOAT LOW	Aux1 off when in Float
FLOAT HIGH	Aux1 on when in Float
CLIPPER CONTROL	PWM Control for Cipper
DAY LIGHT	Aux1 on at dawn off at dusk
NITE LIGHT	Aux1 on at dusk off at dawn
TOGGLE TEST	Aux1 cycled 1 sec interval
Pv V ON LOW	Aux1 on below Pv in setpoint
Pv V ON HIGH	Aux1 on above Pv in setpoint
OPPORTUNITY LO	Divrt based on chrg state lo
OPPURTUNITY HI	Divrt based on chrg state hi
LOW BAT DISC	Disc load based on bat volt
DIVERSION	Slow Diversion control

Aux 2 Function. Output/Input

OUTPUT = 12V/0V Signal

FLOAT LOW	Aux2 off when in Float
FLOAT HIGH	Aux2 on when in Float
DAY LIGHT	Aux2 on at dawn off at dusk
NITE LIGHT	Aux2 on at dusk off at dawn
CLIPPER CONTROL	PWM Control for Clipper
Pv V ON LOW	PWM sig below Pv in setpoint
Pv V ON HIGH	PWM sig above Pv in setpoint
TOGGLE TEST	Aux2 cycled 1 sec interval
OPPORTUNITY LO	PWM divert rltv chg state lo
OPPORTUNITY HI	PWM divert rltv chg state hi
DIVERSION LO	PWM Divert on Bat voltage lo
DIVERSION HI	PWM Divert on bat voltage hi