



The Modular Battery Control Center, (**MOBAC**), is the next generation of Battery Control Centers. This is a microprocessor based control system, it includes many features and functions not found in previous products. These features will provide more functions for the coach owner, more reliability, and easier installation and maintenance

The unit is rated at 200 amps continuous and 1000 amps for thirty seconds. This makes it suitable for use in both gas and diesel powered coaches.

### **Battery Disconnects**

The Modular BCC includes two latching battery disconnects that are operated with Intellitec's MONOPLEX™ system. This reduces the number and gauge of the wire used to connect to the disconnect panel. Since the wires are only carrying signal current, they can be light gauge wires, with little limitation on their length. In addition, with this scheme, additional switch panels can be connected without complicated wiring. The electronics provides a single pulse to the disconnect coils, regardless of how long the switch is held, to prevent sustained current to the coils that might over-heat and damage them.

### **Automatic Reconnect**

The disconnects will automatically reconnect when the ignition is turned on to provide power to all the loads.

### **Switch Panel Options**

There are a number of choices for switch panels available for use with the Modular BCC. The simplest is an adapter harness that connects between the two signal wires and two, SPDT, center off, switches. This allows for installations that require the use of switches that match the others at a given location.

The next level of switch panel is a four button unit with LED, back-lit buttons to indicate that the disconnects are engaged.

The highest level of panels is a unit that includes the four on/off buttons and a two and a half digit voltage display that can read out the voltage of either battery.

### **Disconnect Indication**

There are two outputs for panel-mounted LED's that will display the actual on/off "state" of the disconnects. These outputs are "data streams" of battery voltage as sensed at each battery. These outputs can be used to light LED's or decoded to display the digital voltage at the remote switch panel.

### **Isolator Function**

The unit includes a latching isolator relay that is used to charge both batteries if either is being charged and also to provide an "Auxiliary Start" function. Latching the isolator eliminates the over-heating and "singing" associated with pulse width modulation as has been used in the past. When the system senses either battery being charged, the isolator will connect them together so they both are being charged. The isolator will hold in for a minimum of 15 seconds to let the system charge the batteries before opening again. When the Auxiliary Start is activated, the isolator will engage for 15 seconds to allow time to start the engine.

### **Low Voltage Disconnect**

The unit includes a Low Voltage Disconnect feature for both batteries to minimize damage from a total discharge. When the system senses a voltage below 10.0 volts for the coach battery or 12.0 for the chassis battery, for a period of two minutes, the panel-mounted LED will blink to indicate the impending shut down. If the condition remains unchanged for four minutes, the system will disconnect the battery. The LED indicator will continue to blink to indicate a low voltage shut down. To "clear" the blink, the disconnect can be turned on or off. The chassis battery will not shut down if the ignition is turned on.

When a low voltage shut down occurs, the system records the event. This data can be retrieved on a switch panel with the digital voltage display, by pressing and holding the "use" button and the display button simultaneous.

### Mechanics

The unit is housed in a molded plastic enclosure suitable for mounting in an under-the-hood environment. The housing includes mountings for a fuse/distribution module on its top. This additional module can derive its power from any of the four sources, chassis or auxiliary battery, or disconnected chassis or auxiliary battery.

### Connections

The four high current connections are made using 5/16" studs for a simple and secure installation.

There is a four pin connector to connect to the remote switch panels, common, a single, switch signal wire, and two wires for the indicator LEDs. There is a three pin connector to bring in ignition, auxiliary start switch, and system ground.

### Diagnostics

There are three diagnostic LEDs, red, green, and amber. The red LED will light if there is a valid signal on the switch wire from the remote panel. The red LED will illuminate when a button is depressed. It will blink rapidly if there is a short to ground on the switch wire. The yellow LED will illuminate when the ignition is turned on and the green LED will illuminate when the isolator relay is closed.

## SPECIFICATIONS

|                               |              |   |
|-------------------------------|--------------|---|
| Part number                   | 00-01008-000 | MOBAC                                     |
|                               | 00-01008-xxx | Custom Fuse Distribution Panel (Optional) |
|                               | 00-01021-xxx | Remote Switch Panels (Optional)           |
|                               | 64-00276-x00 | Cover plate, x denotes color (Optional)   |
| Nominal Vehicle Voltage       |              | 12 VDC                                    |
| Maximum Voltage               |              | 18 VDC                                    |
| Maximum Carry Current         |              | 200 Amps                                  |
| Short Term Carry Current      |              | 1000 Amps (max of 1 minute)               |
| Low Voltage Coach Shut-down   |              | 10.0 volts                                |
| Low Voltage Chassis Shut-down |              | 12.0 volts                                |
| Environmental Temperature     |              | -20 to +85 C                              |

### Typical Connection

