SDC-107A Battery Control Center

Connections

External: three studs provide external connection for Chassis Battery, Coach Battery and Coach Switched

Internal: Connections provided on the circuit board are:

1. Disconnect switch (Grey and Violet)
2. Ground (P1)
3. Chassis related circuits (P3)
4. Coach related circuits (P4 and P5)
5. Coach Battery Hot (P6)

Operation

Coach Battery Disconnect

The coach battery disconnect is a magnetically latched relay. When the Violet terminal is at +12vdc and the Grey terminal is ground, the disconnect is engaged (closed). When the Grey terminal is +12vdc and the Violet terminal is grounded, the disconnect is opened. The coil is intermittent duty. Thus, a DPDT momentary switch with center off, conveniently placed in the coach, will control the disconnect. The SDC106 Block Diagram shows the disconnect and control center wiring. P6 through F12 is hot at all times from the coach battery.

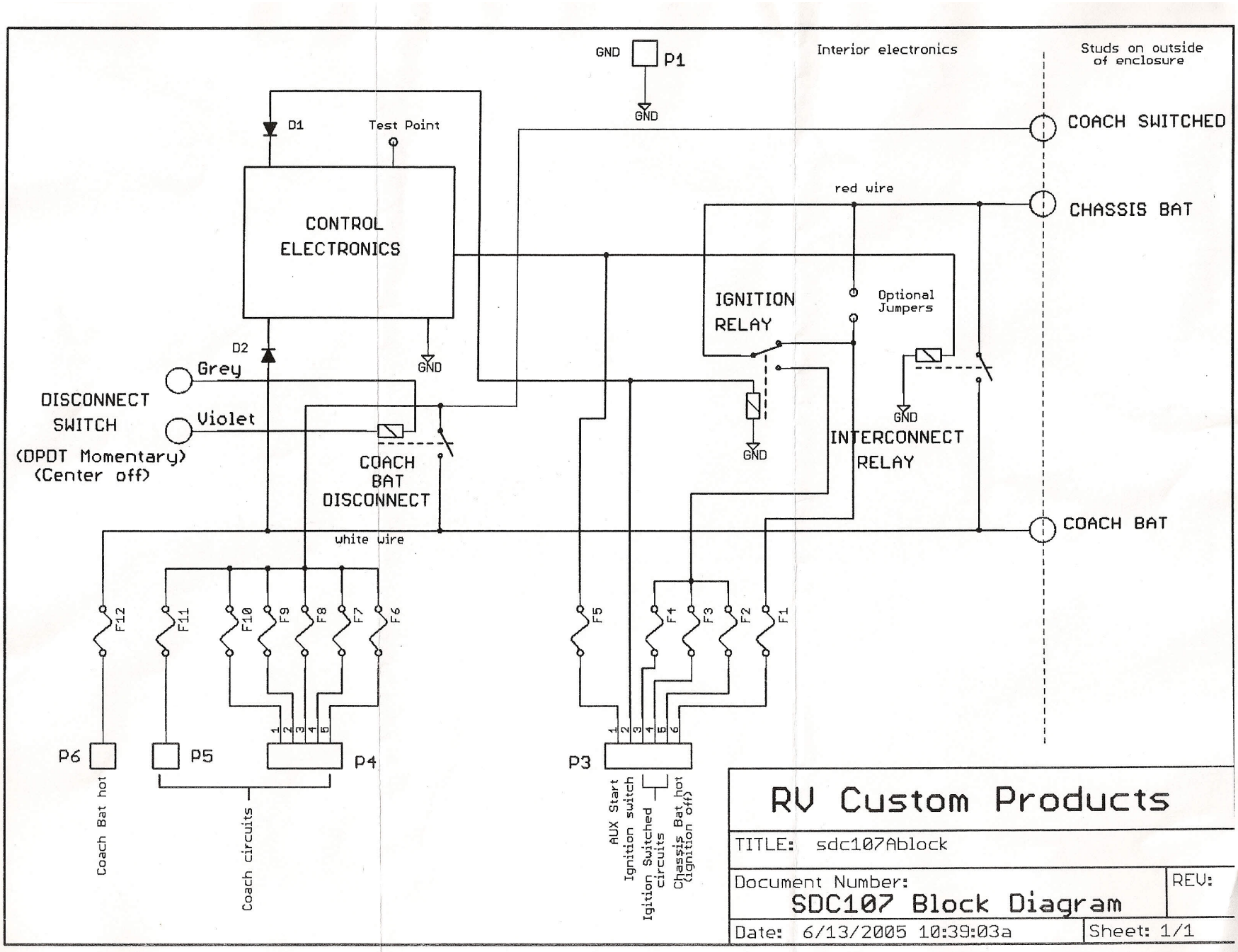
Interconnect Relay

Control electronics on the circuit board parallels the coach and chassis batteries with the interconnect relay. In addition, the batteries can be paralleled with a momentary push-button switch on the driver's console that applies +12vdc to P3-1.

For the purpose of charging the coach and chassis batteries, power for the control electronics is obtained from the ignition switch and coach battery through diodes D1 and D2. Underway, when the charging source is the engine generator, +13.2vdc on the ignition line triggers the electronics. After a 15sec. delay, the interconnect relay closes, paralleling the batteries. Should the battery voltage go below 12.7vdc, the interconnect relay will open after around a 15sec. delay. When the vehicle is parked and on shore power, when the converter brings the coach battery up to +13.2vdc, the interconnect relay will close after the 15sec delay, charging the chassis battery as well. As before, the relay will open when the battery voltage goes below 12.7vdc.

Ignition Relay

The ignition relay closes when the vehicle ignition switch is turned on (P3-2 goes to +12vdc). This provides chassis battery power to P3-3, P3-4 and P3-5 through fuses. P3-6 is hot when the ignition switch is off and dead when the key is on. Optionally, P3-6 can be hot all the time if jumpers are installed which circumvent the NC contacts of the ignition relay.


GND
P1
GND
Interior electronics
Studs on outside of enclosure
D1
Test Point
COACH SWITCHED
red wire
CHASSIS BAT
CONTROL ELECTRONICS
IGNITION RELAY
Optional Jumpers
D2
Grey
GND
DISCONNECT SWITCH
Violet
(DPDT Momentary)
(Center off)
COACH BAT DISCONNECT
GND
GND
INTERCONNECT RELAY
COACH BAT
white wire
F12
F11
F10
F9
F8
F7
F6
F5
F4
F3
F2
F1
P6
P5
P4
P3
Coach Bat hot
Coach circuits
AUX Start
Ignition switch
Igition Switched circuits
Chassis Bat hot (ignition off)
RV Custom Products
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SDC107 Block Diagram
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