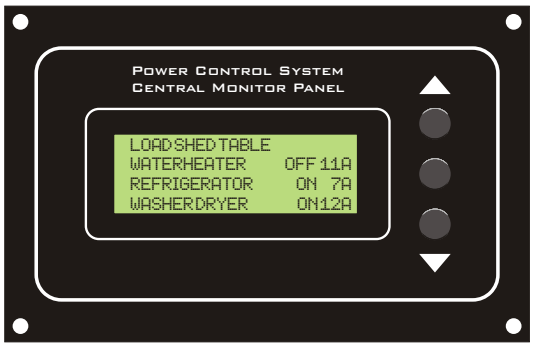
Precision Circuits Inc

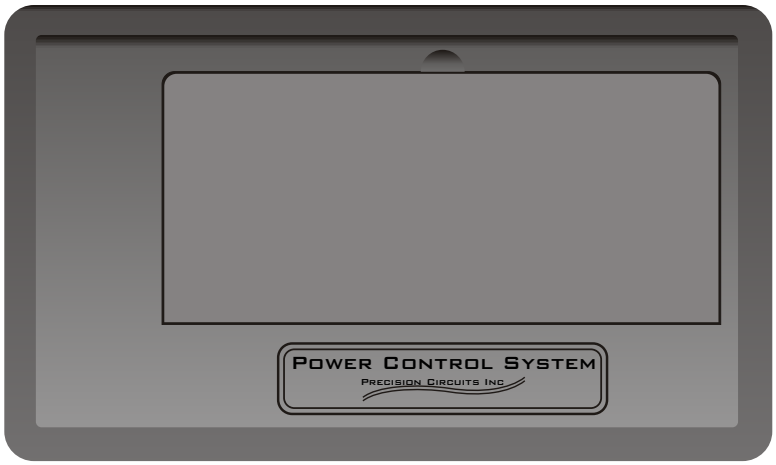
Power Control System works with the MAGNUM Energy Inverter/Charger to bring the RV industry a revolutionary new concept. In the past, energy management systems operated when 120VAC was available and inverters operated when 120VAC was not available from either shore power or generator.

The **Power Control System** brings these two worlds together.

While plugged into shore power, or when the generator is running, the **Power Control System (PCS)** will allow the RV to have more power than available on the shore power or generator, for short periods of time. When the **PCS** senses that 120VAC power has reached its maximum current, the **PCS** communicates to the MAGNUM inverter requesting additional power be generated from the battery. If more demands are put on the RV with additional appliances, the **PCS** will shed non-critical loads and avoid nuisance tripping of circuit breakers.



Central Monitor Panel



Panelboard (Optional Subpanel)

Features:

- Only RV system that is UL Rated for 60°C operation.
- Monitor and Manage total RV current to avoid nuisance circuit breaker tripping.
- Manage power no matter what the source:
  50-amp Service, 30-amp Service, 20-amp Service, Generator.
- Manage battery charging during high peak demands
- Provide additional power from battery bank to smooth high peak demands.
- Shed non-critical loads during high peak loads.
- Remote Panel displays Service Type, Load Status, and RV Current & Voltage.

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Power Control System Model 100

5403 Patton Drive Unit 222 Lisle, IL 60532 www.PrecisionCircuitsInc.com 630-515-9100 Rev B

POWER CONTROL SYSTEM MODEL 100

Operation:

50-amp Service - **PCS** senses 240VAC between L1 and L2 to determine this mode of operation. It has two current sensors which monitor the current on each leg of 50-amp service. When the current on either leg exceeds the 50-amp limit, because possibly the owner has turned on the Microwave, the **PCS** will independently limit the current on each leg by performing the following in order:

1. Reduce Battery Charging Current
2. Operate appliances from Inverter
3. Shed appliances.

Once the total RV current has dropped, for example because an owner operated appliance has been turned off, the **PCS** will reverse the above procedure, returning power to appliances whose operation was not immediately critical. Appliance shed order is easily determined by the manufacturer by wiring the appliances to the appropriate number relay.

30-amp Service - PCS senses 0VAC between L1 and L2. It performs the same functions as above except that it adds the current of the two sensors and limits total current to 30 amps.

20-amp Service - PCS senses 0VAC between L1 and L2, and the owner selects 20A on the Remote Display. **PCS** performs the same functions as above except that it adds the current of the two sensors and limits total current to 20amps.

Generator - PCS senses power to the Gen Hour Meter and performs the above functions, but sets the maximum allowable current to match the generator.

Inverter - **PCS** communicate to bring the owner the most trouble-free camping possible.

Remote Display - Features include:

- 4-Line LCD Display
- Displays Load Names and Status
- Digital Amp meter which shows total RV current.
- Digital Volt meter
- Camp Ground Shore Power Wiring Check and warning

Specifications:

Part Numbers:	00-10020-000 Power Control Center w/Subpanel; 8-Main, 4-Sub positions
	00-10020-100 Power Control Center with 12 breaker positions
	00-10019-000 Central Monitor Panel
	00-10020-500 50amp PCS Controller (Included with either panelboard)
Service type:	120/240VAC 50amp service
Main Breakers:	50amp max
Branch Breakers:	(8) Breaker stab positions (2 Main & 12 breakers max using twin type)
Subpanel Breaker:	30amp max
Subpanel branch:	(4) Breaker stab positions (2 Main & 4 breakers max using twin type)
Breaker Type:	Cutler-Hammer Cat No.: BR, BD, GFCB; Filler Plate BRFP;
	SquareD Cat No.: HOM, HOMT;
	Siemens Cat No.: QP, QT, MP-T, MH-T; Filler Plate QF3;
	Connecticut Electric Cat No.: TB, (TBBD)
Generator:	120/240VAC Dual 50 amp breakers
Relays:	(3) DC 16VDC, 1.0A (Thermostat)
	(4) AC 120VAC, 18A, 1HP (Main Panel)
Delay:	2 minute minimum off time on all loads
Environment:	Indoor, Out of direct weather
Dimensions:	17-1/4" wide, 10-1/4 " high, 4-1/2" deep
Mounting Hole:	15-1/2" wide, 8-5/8" high

	Minimum	Typical	Maximum
Volts DC	9.0VDC	12.0VDC	16.0VDC
Volts AC	90VAC/line	240VAC	135VAC/line
Main Feed		50 amps	
Ambient Temperature	-40°C		-85°