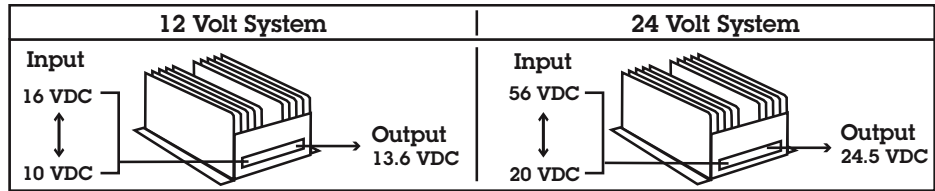


# DC Power Conditioners

## 12 & 24 Volt Stabilizing Converters

Feed sensitive electronics with proper voltage regardless of battery condition. These stabilizing converters provide continuous, precisely regulated output over the entire range of a battery's usable voltage. This prevents subjecting loads to fluctuating input voltage which can cause shutdown, diminish performance and possibly damage sensitive circuitry.



### Application benefits include:

- Operate electronics at optimal input voltage, even from nearly drained batteries
- Boost voltage to compensate for voltage drops in long wire runs from batteries
- Eliminate voltage drops during momentary high current drain from batteries, as during engine start
- Eliminate voltage fluctuation from charge sources
- Eliminate voltage overshoot due to sudden removal of high current load

These converters provide total input/output isolation, virtually eliminating conducted line noise and permitting connection of negative ground loads to positive or floating ground systems, or vice versa. They can also be modified for use as battery chargers, allowing maintenance of a battery at a great distance from the charging source, providing reserve power if the main source fails. The rugged anodized aluminum case is ideal for mobile applications

Model	Input Range	Output Voltage	Output Amps Int.	Output Amps Cont.
12-12-12I	10-16 VDC	13.6 VDC	12	8
12-12-35I	10-16 VDC	13.6 VDC	35	20
48-24-3I	20-56 VDC	24.5 VDC	3	3
48-24-6I	20-56 VDC	24.5 VDC	6	4
48-24-9I	20-56 VDC	24.5 VDC	9	5
48-24-18I	20-56 VDC	24.5 VDC	18	10

### Options/Factory Modifications

- Operation as a battery charger (contact factory)
- Parallel/redundant operation (contact factory)
- High vibration mounting kit (see page 18)
- Non-standard output voltage (contact factory)

See page 19, Isolated Series Converters for complete specifications and mechanical description.

## Noise Filters

The interference or electronic "noise" generated by alternators, ignition systems, motors, etc., can render a vehicle's radio, data transceivers or other electronic equipment virtually useless. This interference takes the form of popping or static on radios or audio gear and garbled images or "hash" on video displays.

These specialized filters can be used singly or in combination to attenuate conducted line noise, either at the affected equipment or at the noise source.

### Filter Features:

- Heavy duty aluminum construction
- Operate on 6-48 VDC systems
- Integral mounting flanges for secure installation
- Nickel-plated brass stud connectors on alternator filters accommodate high current cables and terminals
- Color coded wire leads on all other models make in-line installation easy



### Models:

- 150A - Alternator filter, 150 amps
- PC-10 - Affected equipment filter, 10 amps,
- PC-25 - Affected equipment filter, 25 amps,



Model: APS-70

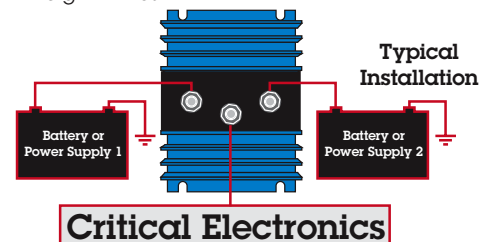
## Automatic Power Selector

The Automatic Power Selector (APS) is a solid state device which enables installation of a seamless, redundant power system for critical electronic loads. It selects the higher voltage of two isolated DC power sources and routes power to the load. Should one source falter or fail, the other will automatically supply the load with no transfer delay, operation continues uninterrupted.

Easy installation, two independent power sources are wired to the APS and routed in a single output to the vital load.

### Model: APS-70

Voltage Rating: 6-50 VDC, neg. ground  
Peak Load Current: 70 amps  
Size: 3.25" x 4.5" x 3.1"  
Weight: 2 lbs.



Critical Electronics



Powering the Network

# DC Power Conditioners

## StartGuard™

The abrupt DC system voltage drop that accompanies engine starting can cause microprocessor-based voice and data transmitters to "dump" programmed memory.

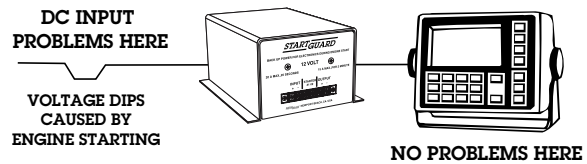


Provides Voltage Protection During Engine Start

StartGuard solves this problem by providing supplemental voltage to sensitive electronics while the engine is cranked. It contains a sealed rechargeable battery which is switched on-line to electronics when the starter switch or solenoid is engaged. When the engine is running StartGuard automatically goes off-line and the internal battery is recharged by the alternator.

### Specifications

- Input Voltage:** 13.8 - 14.8 VDC nominal, 15.5 VDC max.
- Relay Activation Input Voltage:** 7-15 VDC
- Output:** 20 amps max.
- Battery:** 12 VDC, sealed rechargeable, 5- 7 year life (typical) 4 amp-hour capacity, Certified by DOT and IATA for shipment by air.
- Back-up Capacity (Fully Charged):** (See matrix)



Model	Input	Back-Up Capacity		Dimensions		Weight	
		1 Minute	2 Minutes	Inches	Centimeters	Lbs	Kg.
NS-12-20	13.8-14.8 VDC Nominal 15.5 VDC Max	20 amps	18 amps	8.25 x 4.9 x 3.5	20.1 x 12.5 x 8.9	5.5	2.5

## NAV-PAC™

Mobile communication electronics such as programmable two-way radio and data transceivers, vehicle location systems and other microprocessor-controlled devices require clean and steady DC input power. Their sensitive circuitry is highly vulnerable to voltage drop from engine start, noise and line spikes from alternators and motors, and conducted noise from various other electronic devices. NAV-PAC prevents all of these problems.

- Prevents voltage "drop-out" during engine start
- Absorbs line "spikes"
- Filters out electrical interference
- Provides supplemental voltage/battery back-up for up to 15 min.
- Remote monitor panel provided

NAV-PAC has been successfully employed for years by thousands of Fire Trucks and other Emergency Service vehicles nationwide



Model: NP-12 U.S. PATENT #: 5172292

Output: 15 amps Max. @ 12 Volt

Back-Up Power:

- 8 Amps for fifteen (15) minutes
- 12 Amps for eight (8) minutes
- 18 Amps for two (2) minutes

**Battery:** Sealed Rechargeable 4.0 Amp-Hour, 5-7 years typical life, can be replaced. Low-voltage disconnect circuit protects battery from total discharge. Certified by DOT and IATA for shipment by air.

**Noise Filtering:** Audio through 200 MHZ

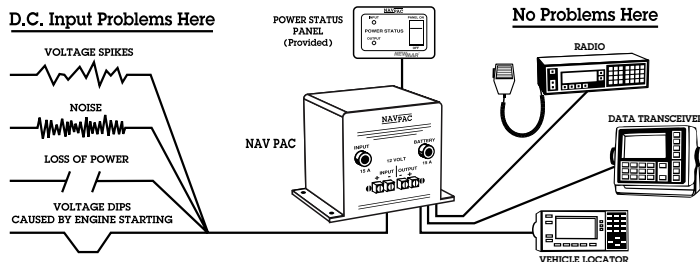
**Voltage Spike Protection:** Transient energy capability; 100 Joules, 4,000 amps Max (8 x 20 micro seconds)

**Size ( H x W x D):** 5.25" x 6.2" x 7.4", 13.3 X 15.7 X 18.8 cm

**Weight:** 5.9 lbs., 2.7 Kg.,

**Panel Dimensions:** 3.5" W x 2" H (8.9 x 5.1 cm)

Provides Continuous Voltage Protection



Powering the Network