System Protection Solutions

Surge protection for
your home, business
and enterprise

Basic
Protection
99.999%
Availability

APC SurgeArrest® protects your equipment from surges, spikes and noise

One out of four computers gets hit by a major power event every year. It's not a question of if you will experience a power problem, it's a matter of when. Even if you avoid a major catastrophe, every computer gets hit daily with sags, surges, and noise that can cause system lock-ups and data corruption. Short term increases in voltage, or surges, can occur for a number of reasons. Sometimes they happen when high-powered electrical motors in common household appliances are switched off, and the extra voltage is dissipated through the power line.

A good surge suppressor should protect your equipment and extend your system's life by allowing only clean, safe power through to your equipment.

In order to provide that clean, safe power, your surge suppressor must be able to reduce harmful excess voltage, let through only the power needed by your equipment and "give its life" to stop future spikes and surges.

45.3%

Power problems are the largest cause of data loss

Power Failure/Surge	**45.3%**
Storm Damage	9.4%
Fire or Explosion	8.2%
Hardware/Software Error	8.2%
Flood & Water Damage	6.7%
Earthquake	5.5%
Network Outage	4.5%
Human Error/Sabotage	3.2%
HVAC Failure	2.3%
Other	6.7%
Source: Contingency Planning	

HYPE: the Joule jive
Some surge suppressor manufacturers want you to believe that a superior surge product is based on its Joule rating. Joule ratings are considered invalid measures of performance by both the National Electrical Manufacturers Association (NEMA) and the Institute of Electrical and Electronic Engineers (IEEE).

Joule ratings do not always correlate to actual performance. In fact, some products have increased Joule ratings without any of the components changing .

LET-THROUGH: the truth
Two competitors' brands tested under the same criteria (using a 6000 volt electrical spike) let through an average of over 400V peak. Both of these competitors claimed Joule ratings of over 800 Joules.

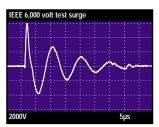In comparison, an APC Pro7 model, rated at 320 Joules, allowed an average of 85V peak let-through.

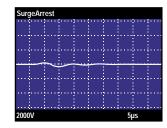The APC unit has a lower Joule rating but does a better job at suppressing the surge.

Don't be fooled by Joules!

IEEE 6,000 volt test surge	SurgeArrest
2000V 5μs	2000V 5μs

APC SurgeArrest offers unequalled protection and clean, safe let-through. Oscilloscope photos show the amount of voltage that passes through an unprotected line when subjected to a 6000-volt spike (above left). Notice how SurgeArrest suppresses the spike (above right) and protects your valuable and sensitive computer equipment.

"Only one company gave me the time of day: APC. The other companies seemed too busy to be bothered"

John Underwood
Intelligent Decisions, Inc.

SurgeArrest is the ideal candidate for the job
"I live in the Southeastern U.S. and run a home-based employment screening service. Besides having numerous home appliances, I have lots of office equipment in my home. To protect the higher-priced electrical appliances, I purchased over a dozen surge protectors within the same price range but made by four different companies. I did not want to place all of my protection with one company's guarantee.

"During the month of February 1998, the power company in my area unknowingly sent a power surge into my neighborhood. I was in my office talking on the phone when I heard a loud noise. I also began to smell smoke, that unmistakable hot electrical smell, in my house. All of my office equipment: computers, printers, fax machines; was completely fine. These were protected by the APC SurgeArrest surge protectors. In checking the equipment, I discovered that some of the surge protectors worked better than others (APC was one of those that worked).

"I had damage to our big family room television, five or six other items and thirteen surge protectors. However, when telephoning the various customer service departments of my surge protectors' manufacturers to inquire if their product was still good or if I needed to replace them, only one company gave me the time of day: APC. The other companies seemed too busy to be bothered.

"APC's customer service department not only wanted to find out which models of SurgeArrest I was using, they were also interested in finding out what had happened at the house. APC employees treated me with respect and, at the end of our telephone conversation, APC offered to replace my surge protectors at no charge if I sent my damaged units to them.

"Today, APC has replaced their three surge protectors at no charge; part of their Lifetime Warranty. I repurchased thirteen surge protectors and I bought three additional surge protectors, all APC this time. I know this is money well spent. There is nothing electrical that I own that is not worth the small price of protection with APC surge protectors."

MODELS
Per3
Per3T
Per7
Per7T
Per8T

The Personal SurgeArrest series is ideal for home use, providing for 3 (Per3 and Per3T) or 7 (Per7 and Per7T) outlets that are protected from surges.

Built-in single line (2-wire) protection

Since surges can affect your computer through phone lines, APC created the Per3T, Per 7T and Per8T with protection for telephone lines.

Home Office/Small Business

Professional SurgeArrest®

Advanced surge protection for high-end equipment

The Professional SurgeArrest series offers a great value for high-end home equipment and business applications such as small office/home office computers, high-performance stereo equipment, laser printers and modems.

The Professional SurgeArrest 7 outlet family offers:

- **<85V let-through rating**
- **7 surge protected outlets**
- **Built-in single line (2-wire) protection** for modems, fax and answering machines (Pro7T)
- **Right-angle plug** keeps the plug and cord flush with the wall
- **Protection working indicator** to alert you that the suppressor has been damaged
- **Building/site wiring fault indicator** to detect dangerous wiring problems
- **Up to $10,000 lifetime equipment protection policy**
- **Lifetime product warranty**

MODELS
Pro7
Pro7T
Pro8
Pro8T2/Pro8T2C
Pro8TV

The clear Professional SurgeArrest was specifically designed for the Mac and translucent computing environment.

Advanced surge protection for any desktop computer

With an innovative design engineered to allow the use of transformer block plugs and a front master on/off switch with a guard to avoid accidental turn offs, the SurgeArrest breaks new ground in surge protection.

The Professional SurgeArrest 8 outlet family offers:

- **<85V let-through rating**
- **8 outlets** to handle all your computer and peripheral equipment.
- **Room for up to 6 transformer blocks** (3 without covering other outlets)
- **2 "always on" outlets** for devices that require constant power
- **Master on/off switch** with a clear switch guard to prevent accidental turn-off
- **Built-in 4 wire, 2 telephone line protection** for modems, fax and internet (models Pro8T2/Pro8T2C)
- **Built-in cable, DSS, or cable modem protection** plus built in single line telephone/ modem protection (model Pro8TV)
- **Right-angle plug** keeps the plug and cord flush with the wall
- **Protection working indicator** to alert you that the suppressor has been damaged
- **Building/site wiring fault indicator** to detect dangerous wiring problems
- **Up to $10,000 lifetime equipment protection policy**
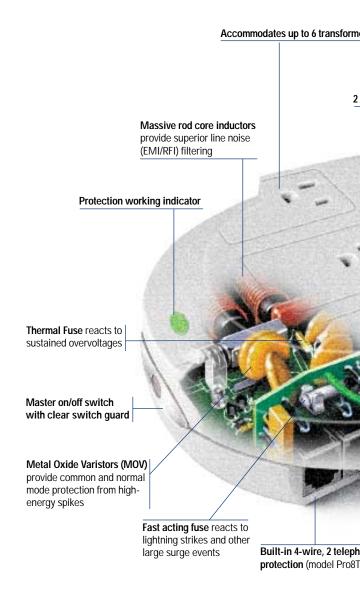- **Lifetime product warranty**

Protect your television or your computer from surges coming through the coaxial cable with the APC SurgeArrest Pro8TV.

Available only for the clear Professional SurgeArrest, Model Pro8T2C shown above.

Anatomy of a SurgeArrest

Accommodates up to 6 transform...

Massive rod core inductors provide superior line noise (EMI/RFI) filtering

Protection working indicator

Thermal Fuse reacts to sustained overvoltages

Master on/off switch with clear switch guard

Metal Oxide Varistors (MOV) provide common and normal mode protection from high-energy spikes

Fast acting fuse reacts to lightning strikes and other large surge events

Built-in 4-wire, 2 teleph... protection (model Pro8T...)

SPECIFICATIONS	Home Electronics					
	Per3	Per3T	Per7	Per7T	Per8T	Pro7
Let-through voltage	<300V					
Operating Voltage						
UL Suppressed Voltage Rating						
Energy Rating	240J					
Peak Current NM/CM	6.5kAmps NM,13kAmps CM					
EMI/RFI Noise Filtration	>20-60dB					
Dimensions (LxWxD)	2″x4.25″x6.25″		2″x4.25″x10.5″		1.75″x8.0″ x5.75″	2″x4.2...
Physical Weight	.7 lb	.8 lb	1.7 lb	1.8 lb	1.8 lb	1.9 lb
Lifetime Equipment Protection Policy	$2,500					

The APC PowerManager fits neatly under your monitor and allows you to power your equipment and peripherals individually.

PowerManager also protects your equipment from harmful Electro-Static Discharge (ESD), which can reach 25,000 volts! Pressing any of PowerManager's buttons will discharge ESD safely.

Mobile Computing

SurgeArrest® Notebook

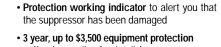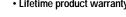**Basic protection for the mobile professional**

Protecting just the AC line for a notebook computer is not enough. Damaging surges can enter and destroy your equipment through the phone lines as well. The SurgeArrest Notebook protects both paths – and guarantees it.

The SurgeArrest Notebook offers:

• **<400V let-through rating**

• **One surge protected AC outlet**

• **Surge protected phone jacks**
  for fax/telephone, answering machines,
  portable electronics

• **Protection working indicator** to alert you that
  the suppressor has been damaged

• **3 year, up to $3,500 equipment protection**
  policy (see policy for details)

• **Lifetime product warranty**

The PNote1 easily connects into any outlet and protects your laptop from electrical and phone line surges.

(Actual size)

Mobile Computing			
	PNote1	**PNotePro**	**PNotePro3**
Operating Voltage	120 Vac, 50/60 Hz	100-240 Vac, 50/60 Hz	
AC line Let-Thru Voltage	<7%	<5% at 100, 120 Vac; <15% at 240 Vac	
UL Suppressed Voltage Rating (L-N)	400V	330V	
Energy Rating	114 J	140J at 100 Vac, 120 Vac; 175J at 240 Vac	
Telephone Breakover Voltage	260Vdc	260Vdc	
Excess Current Detection Indicator	No	Yes, >140 mA	
Peak Surge Current NM/CM	4.5 kAmps NM, 9.0 kAmps CM	10 kA (100, 120 Vac); 6 kA (240 Vac)	
Plug Style	NEMA 5/15	C8 connector	C6 connector
Dimensions (L x W x H)	3.33" x 2.80" x 1.50"	4.9" x 1.5" x 1.2"	
Physical Weight	.8 lb	.5 lb	
Agency Approvals	UL 1449, CSA	UL1449, CSA, and FCC Part 68	
Equipment Protection Policy	3 year, up to $3,500	5 year, up to $5,000	

SurgeArrest® Notebook Pro

Worldwide surge protection for the mobile professional

The SurgeArrest Notebook Pro surge protectors provide the mobile notebook professional with advanced AC and telephone line protection. The unique, in-line design creates a compact, lightweight surge protector that is truly portable and appropriate for use in any country throughout the world. With built-in excess current detection, the SurgeArrest Notebook Pro warns you against potential modem damage. A Velcro mounting strap and 6 ft. telephone cord eliminates the need to carry any additional accessories.

The SurgeArrest Notebook Pro family features:

• **Compact, lightweight in-line design** makes the
  Notebook Pro a truly portable surge protector

• **Innovative multi-voltage** (100-240 Vac) electri-
  cal design allows the Notebook Pro to operate
  in any country throughout the world

• **Excess current detection** warns you against
  potential modem damage caused by excess
  current on many phone lines (excess current
  is often associated with digital lines)

• **AC/telephone/modem protection**

• **One time setup-** A Velcro strap is provided for
  convenient attachment to the AC adapter or
  for gathering all your power cords. Ensures
  you won't leave it behind!

• **Protection working indicator** warns you if the
  Notebook Pro's circuitry is ever damaged

• **5 year, up to $5,000 equipment**
  protection policy

• **Lifetime product warranty**

PNo

C8 connector (PNotePro)

Which APC Notebook Pro is right for you?

Business and Networks

Network SurgeArrest®

Maximum surge protection for business equipment

The Network SurgeArrest series provides maximum protection for network and business computer equipment including workstations and network modems.

The Network SurgeArrest family offers:

MODELS
Net3
Net3T
Net7
Net7T
Net8
Net8N

- **<40V let-through rating**
- **3 and 7 surge protected outlets**
- **Built-in single line (2-wire) protection** for modems, fax and answering machines
- **Right-angle plug** keeps the plug and cord flush with the wall
- **Protection working indicator** to alert the user that the suppressor has been damaged
- **Building/site wiring fault indicator** to detect dangerous wiring problems
- **Up to $25,000 lifetime equipment protection policy**
- **Lifetime product warranty**

The SurgeArrest Network series provides advanced AC surge suppression and phone line protection (models Net3T and Net7T), plus all the features you'd expect on an APC product.

Built-in single line (2-wire) protection

Maximum surge protection with maximum versatility

The Network SurgeArrest's advanced design provides the best protection for the corporate environment especially enterprise desktops and networked computers.

- **<40V let-through rating**
- **8 outlets** to handle computer and peripheral equipment
- **Room for up to 6 transformer blocks** (3 without covering other outlets)
- **2 "always on" outlets** for devices that require constant power
- **Master on/off switch** with switch guard to prevent accidental turn-off
- **Built-in 100Base-T, 10Base-T and Token Ring protection** to prevent surges from damaging connected LAN equipment (Net8N only)
- **Right-angle plug** keeps the plug and cord flush with the wall
- **Protection working indicator** to alert the user that the suppressor has been damaged
- **Building/site wiring fault indicator** to detect dangerous wiring problems
- **Cord management straps** to organize your cord clutter
- **Up to $25,000 lifetime equipment protection policy**
- **Lifetime product warranty**

Built-in Ethernet protection compatible with 100Base-T, 10Base-T and Token Ring. (Net8N model)

SurgeArrest's handy straps on the back of the unit help organize your cord clutter.

Network SurgeArrest® Rack-mount

Maximum surge protection for rackmount devices

The Network SurgeArrest Rack-mount offers maximum surge protection in a clever mounting system for flexible installation in any standard 19" rack, including a "zero" U mounting position.

MODEL
Net9RM

The Network SurgeArrest Rack-mount offers:

- **<40V let-through rating**
- **9 outlets total with surge suppression**, one "always on" outlet for devices that require constant power
- **Multi-positional mounting bracket** provides real installation flexibility
- **Guarded master on/off switch** to prevent accidental "turn-off"
- **Extra long 15 foot power cord** to reach a distant receptacle
- **Cord management** to organize power cords
- **"Plug pull protection"** brackets to prevent accidental plug removal
- **Protection working indicator** to alert the user that the suppressor has been damaged
- **Building/site wiring fault indicator** to detect dangerous wiring problems
- **Up to $25,000 lifetime equipment protection policy**
- **Lifetime product warranty**

Cord management

9 outlets total with surge suppression

SPECIFICATIONS	Business and Networks						
	Net3	Net3T	Net7	Net7T	Net8	Net8N	Net9RM
IEEE Let-Through							
Nominal Line Voltage	120Vac,50/60Hz						
Maximum Line Current	15 Amps						
UL Suppressed Voltage Rating	330V						
Energy Rating	480J						
Peak Current NM/CM	13kAmps NM,26kAmps CM						
EMI/RFI Noise Filtration	>30-70dB		>40-70dB		>35-70dB		
Physical Dimensions	2" x 4.25" x 6.25"		2" x 4.25" x 10.5"		1.75" x 8.0" x 5.75"		1.75"x19"x5.75"
Physical Weight	1.0 lb	1.0 lb	1.9 lb	2.1 lb	1.9 lb	1.9 lb	4.8 lb
Lifetime Equipment Protection Policy	$25,000						

ProtectNet™

Maximum protection from surges traveling through data lines

A surge protection plan incorporating data line and AC line surge suppression will "bulletproof" your system against the hazards of surges caused by lightning, Electrostatic Discharge (ESD), and wiring problems.

Plug your data line into ProtectNet surge protectors before plugging them into your equipment's network, telephone, serial or parallel ports.

Incorporating ProtectNet data line surge suppression into your comprehensive power protection plan provides surge suppression on all potential paths to your computer equipment.

MODELS	
PS9-DTE	P10B2
PS9-DCE	PNET4
PSP25	PTEL1-4
PTEL2	P232-4
PDigiTel	PRM
PNET1	PV

The ProtectNet line consists of:
• **The PNET1, P10B2 and PNET4 ProtectNet** models protect your network interface cards and other LAN equipment from surges and transients on Ethernet 100Base-T, 10Base-T, Thinnet 10Base2, and Token Ring connections.

• **The PSP25 or PS9-DCE ProtectNet** models are designed to protect the RS-232 serial port connections of your data communications equipment like printers, plotters, and modems.

• **The PSP25 or PS9-DTE ProtectNet** models are for RS-232 serial and parallel port protection of your data terminal equipment and personal computers.

• **The ProtectNet PV** model protects your cable modems, DSS control boxes, VCR/TVs, and other audio/video equipment from surges traveling through coaxial cables.

• **The PTel2 and PTel1-4 ProtectNet** models provide protection for your voice mail, answering machine, telex and fax machine, modems and other telephone equipment.

• **The PDigiTel ProtectNet** model provides protection for ISDN, T1, DLL 56K and other digital telecommunications equipment.

• **The P232-4 ProtectNet** model offers protection for multiple lines for RS-232 applications such as POS equipment, serial printer spoolers and multiplexers.

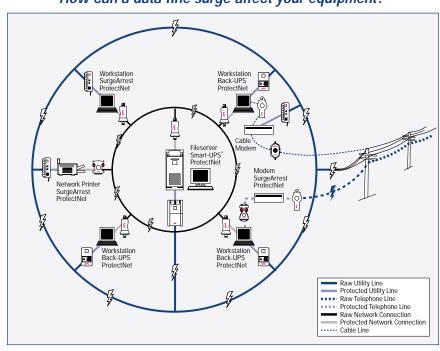*All ProtectNet models should be used with APC power products for comprehensive network protection.*

PNET4
PTEL1-4
P232-4

PNET1

PSP25

P10B2

PS9-DTE
PS9-DCE

PTEL2
PDigiTel

PV

How can a data line surge affect your equipment?

Transient power spikes or surges can be introduced into the network from various sources.

The IEEE 802.3 Ethernet standard lists four electrical hazards to which networks are susceptible during use:

• *Direct contact between local network components and power or lighting circuits*

•*Static charge buildup on local network cables and component*

• *High-energy transients coupled onto the local network cabling system (those induced by other cables which are installed in the general proximity of network cables)*

• *Potential differences between safety grounds to which various network components are connected (such as the slight differences which may be found in safety grounds from one building to another)**

* Source: LAN Times, July 8, 1993

APC Part Number	Connection	ProtectNet Model Name	Application Description	Lines Protected	Peak Voltage peak nominal	Breakover Voltage	Physical Size/Weight	Includes
PS9-DTE		9-pin serial port surge protector (female to male)	protects serial DB-9 port of data terminal equipment and personal computers	1-9	±6000 V*	30 V	3"x1.375"x0.6" 7.6x3.4x1.5 cm 0.125 lb (56.7g)	thumb screws
PS9-DCE		9-pin serial port surge protector (male to female)	protects serial DB-9 port of data communications equipment like printers, plotters and modems	1-9	±6000 V*	30 V	3"x1.375"x0.6" 7.6x3.4x1.5 cm 0.125 lb (56.7g)	thumb screws
PSP25		RS-232 serial/parallel port surge protector (male to female/ female to male)	protects DB-25 serial and parallel ports of computers and peripheral equipment	1-25	±6000 V*	40 V	2.75"x2.25"x0.6" 6.9x5.7x1.5 cm 0.175 lb (79.3g)	thumb screws
PTEL2		2-line telephone surge protector (RJ11 or RJ45 Type)	protects telephone equipment such as fax machines, modems, and answering machines	1, 2, 3 and 4 on RJ-11 connector 3, 4, 5 and 6 on RJ-45 connector	±6000 V*	260 V	4.1"x1.5"x1.0" 10.4x3.8x2.5 cm 0.195 lbs (88.4g)	6ft. ext. cable, mounting fasteners
PDigiTel		Digital telephone line surge protector	protects ISDN, T1, DLL 56K and other digital telecommunication equipment	1-8 on RJ-45 connector	±6000 V*	60V	4.1"x1.5"x1.0" 10.4x3.8x2.5 cm 0.19 lb (86.2g)	patch cable, mounting fasteners
PNET1		Ethernet 100Base-T/ 10Base-T/Token Ring network surge	protects 100 Base-T, 10 Base-T and Token Ring network interface cards, hubs or LAN equipment protector(RJ45)	1-8 on RJ-45 connector	±6000 V*	8 V	4.1"x1.5"x1.0" 10.4x3.8x2.5 0.19 lb (86.2g)	patch cable, mounting fasteners
P10B2		Thinnet 10Base-2 network surge protector	protects Thinnet 10 Base-2 network interface cards, hubs or LAN equipment	center and shield conductors on BNC	±6000 V*	8 V	3.4"x1.38"dia. 8.6x3.5 cm dia. 0.175 lb (79.3g)	
PNET4		4 outlet Ethernet 100Base-T/10Base-T and Token Ring surge protector(RJ45)	protects four (4) input lines for 100Base-T, 10Base-T and Token Ring network interface cards, hubs or LAN equipment	1-8 on RJ-45 connector	±6000 V*	8 V	3.11"x3.49"x1.6" 7.9x8.8x4.1 cm 0.8 lb (400g)	ground cable, patch cable; brackets for wallmount
PTEL1-4		4 outlet 1-line telephone surge protector (RJ11/RJ45)	protects four (4) input lines for telephone equipment such as fax machines, modems and answering machines	2 and 3 on RJ-11 connector 4 and 5 on RJ-45 connector	±6000 V*	260V	3.11"x3.49"x1.6" 7.9x8.8x4.1 cm 0.8 lb (400g)	ground cable; brackets for wallmount
P232-4		4 outlet RS-232 serial port surge protector (RJ45)	protects four (4) RS-232 input lines for POS machines, serial printer spoolers or multiplexers	1-8 on RJ-45 connector	±6000 V*	20 V	3.11"x3.49"x1.6" 7.9x8.8x4.1 cm 0.8 lb (400g)	ground cable, patch cables, brackets for wall mount
PV		Coaxial Cable surge protector (F type)	Protects equipment communicating through coaxial cable data lines	Center wire and shield	±6000 V*	30 V	3.25"x1.70"x 1.07"	12" coaxial cable
PRM		ProtectNet 4 outlet modules rackshelf kit	19" rackshelf kit (20 lines 5 modules front access, 40 lines total)	n/a	n/a	n/a	19"x8.375"x 1.75" 48.2x21.2x4.4 cm 1.07 lb (535g)	

* 1.2/50 US test waveform.

Emergency battery back-up and surge suppression for home/office systems

The Back-UPS Office® is the ideal companion for your home computer, printer and peripherals

The APC Back-UPS Office gives you a safe place to plug everything that needs protection: your computer, your peripherals and your fax/modem lines.

Plugging a phone line into your computer doubles the likelihood of bad power reaching your computer. Add any peripheral and the odds triple!

The APC Back-UPS Office has got you covered. You get space for bulky transformer blocks and world-class surge protection on six outlets; three with instantaneous battery backup power. It also comes with phone/fax/modem line protection.
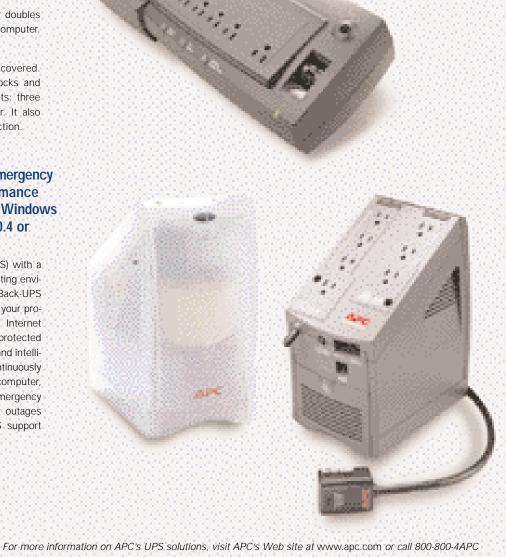
The Back-UPS Pro® USB offers emergency battery backup and high-performance surge suppression for Microsoft® Windows 98 and 2000® and Mac® OS 9 (9.0.4 or higher) computers

The first uninterruptible power supply (UPS) with a USB port that was designed for the computing environment. APC Back-UPS Pro 350 and Back-UPS Pro 500 are uniquely designed to improve your productivity by ensuring that your computer, Internet connection, and all of your peripherals are protected with high-performance surge suppression and intelligent battery backup. APC Back-UPS Pro continuously conditions the power coming into your computer, and instantly switches your computer to emergency battery backup power during brief power outages without data loss or downtime. Mac OS support available only with the BP500CLR.

Easy installation with

USB — UNIVERSAL SERIAL BUS
Mac
Designed for Microsoft® Windows®98

For more information on APC's UPS solutions, visit APC's Web site at www.apc.com or call 800-800-4APC

APC
Legendary Reliability™