

BLU-RAY RISING New HD Movie Players Tested

The Perfect Vision

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MARCH 2007

NEXT-GEN TV

FIRST TEST: HP's MediaSmart LCD & Server

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Player



PLUS

Nintendo
Wii: Fun
for All

Movies
Anywhere,
Anytime

Canon's
Hot HD Cam



Tributaries TX500 & APC S15

Barry Willis

Power Conditioners



Tributaries TX500

Safeguarding A/V Gear

Few niches in consumer electronics are more confusing than power conditioners. Here are a couple quick facts: Electrical power fluctuates, depending on power plants' output capacity and market demand, and low-voltage conditions ("brownouts") sometimes prevail when the power grid is overburdened. Over-voltage conditions ("spikes") can also occur when the electri-

cal supply bounces back to normal. Both can cause damage to A/V gear.

The digital age has made electrical power noisy, or contaminated with frequencies not generated by power stations. Switching power supplies throw broadband noise back onto the electrical line, potentially injecting background noise in audio and video systems. Ground faults are another source

Good power conditioners are designed to repeatedly handle volatile electrical situations and can protect against all of this.

of trouble—such as the hum induced in audio systems when a cable feed is connected. Of course, lightning strikes can also spell big trouble for electronic components.

Good power conditioners are designed to repeatedly handle volatile electrical situations and can protect against all of this. Here are two serious contenders that have been in constant use *chez moi* since their arrival.

Tributaries TX500 Power Manager

The TX500 Power Manager from Orlando, FL-based Tributaries is the size of a typical home theater receiver. Its black chassis contrasts with a brushed-aluminum faceplate sporting a retro analog voltage meter. With ten outlets in three independently-filtered groups—for analog, digital, and high-current devices—the TX500 can supply 1800 watts of power, enough for almost any home theater system. Separate digital and analog outlets minimize system noise by isolating digital devices. Amp outlets have no current limiting, and there's no provision for coping with brownouts or over-voltage conditions.

The TX500 has pass-through protection for two coaxial feeds ("satellite" and "cable") and in/out for two telephone lines, providing security at all entry points for surges. Instead of one-shot metal oxide varistors (MOVs, devices that short-circuit above a certain threshold voltage), the TX500 uses silicon-avalanche diodes (SADs) that are said to withstand thousands of high-voltage hits. The conditioner's surge-suppression circuitry acts within a half-wave (1/120 sec.) and recovers within 2000 nanoseconds, according to the manufacturer. With three pairs of filter banks for suppressing broad-

band noise that can degrade audio and video performance and a polarity-inversion indicator on the front panel, the Tributaries unit also allows programmable delayed turn-on of various pieces of equipment.

I've used the \$750 TX500 extensively over the past year, mostly as a power source for two-channel audio systems under test for TPV sister publication *The Absolute Sound*. It offers a good balance of build quality, features, performance, reliability, and value. Electronic Testing Laboratories thought so, too—the TX500

The Last Word



- Effective, versatile power conditioner
- Well built and good looking



- No battery backup

Specifications

- Power capacity: 1800 watts/3000VA
- Number of outlets: 10
- Separate digital and analog banks: yes
- Surge suppression time: 1/120 second (half-cycle)
- Surge recovery time: 2000 nanoseconds
- Programmable delayed turn-on: yes
- Front panel indicators: Analog voltage meter, LEDs
- Warranty: 3 years parts and labor
- Price: \$750

Manufacturer Information

Tributaries Cable
(800) 521-1596
tributariescable.com



APC S15

was awarded a UL 6000 Second Edition rating when it was introduced.

One thing it doesn't have is a UPS (uninterruptible power supply) battery backup, a feature available for less money in some power conditioners marketed for computer use, or for much more money in conditioners for elaborate A/V systems, such as the APC S15 reviewed here.

or anodized black, the S15 is an ambitious A/V power conditioner capable of putting out 900 watts. A key strength over competitors is the unit's Automatic Voltage Regulation (AVR) feature, which enables the S15 to automatically raise low voltages and reduce sustained over-voltages without using the battery. This ensures that equipment has a constant, steady supply of voltage.

With the size, weight (over 60 pounds) and appearance of a large

power amplifier, the S15 has 12 outlets on its back panel for analog and digital. It also has pass-through protection for two phone lines and three coaxial sources, plus Ethernet connectivity. Its hefty weight is due to its internal rechargeable batteries, which let it deliver almost 20 minutes of power at half

capacity (450 watts) or a little over six minutes of power at full capacity. APC makes outboard "Sbatt" battery packs (\$500 each) that can be daisy-chained to extend the S15's runtime.

Backup power is important for home theaters with projectors, whose expensive lamps can

have their lifetime shortened by a sudden power loss—by some estimates, as much as 20 percent every time the power cuts out. Backup power also prevents interrupted recordings and loss of programming in satellite and cable DVRs.

The batteries also provide protection against no-voltage conditions, when they kick in to keep your gear running during temporary outages or for safe shutdown during longer power outages. Line voltage is indicated on the front panel's blue fluorescent display.

The APC S15's noise filtration is so good that it renders background noise invisible and inaudible. It has been the cornerstone of my home theater system for 18 months, proving itself well engineered and highly reliable. Don't start a movie without one. **TPV**

Backup power is important for home theaters with projectors whose expensive lamps can have their lifetime shortened by a sudden power loss.

APC S15 A/V Power Conditioner with Battery Backup

Industrial stalwart American Power Conversion (APC) has dug deep into competitors' offerings, uncovering many flaws and vowing not to repeat them. Consider, for example, the company's S15 model. Available in silver aluminum

The Last Word



- State-of-the-art engineering
- Automatic Voltage Regulation
- Rugged, reliable, good looking



- Heavy

Specifications

- Power capacity: 900 watts/1500 VA
- Number of outlets: 12
- Separate digital and analog banks: yes
- Efficiency under full load: 90 percent
- Output waveform: 60Hz sinewave, synced to AC line
- Transfer time: 2-4ms
- Programmable delayed turn-on: yes
- Audible alarm: yes
- Backup runtime: 20 minutes at half capacity, 6 minute at full capacity
- Battery recharge time: 8 hours
- Front panel indicators: blue alphanumeric display
- Warranty: 2 years
- Connected Equiq. Warranty: lifetime
- Price: \$1500

Manufacturer Information

American Power Conversion
 (800) 788-2208
 apcav.com

