

Torus 20Amp/120V/60Hz Power Isolation Unit

Source: Bryston Ltd.

Price: \$3,000.00 US

Rating: ♪♪♪♪



Torus Power products are brought to us by a joint-venture of two large companies—Bryston Ltd. and Plitron. Manufacturing is handled by Plitron, widely known for their toroidal power transformers, while marketing and sales (world-wide) are managed by Bryston. Both companies have a vested interest in good solid AC power and have addressed existing and future problems with the release of power isolation components for various applications. The line-up includes six rack-mount “balanced” models and

two rack-mount single phase 15 and 20 amp models, the A018, A024, A054, A072, A090 and A120. Prices range from US \$1,600 to \$8,550.

Three new BOX-style standard phase units: single 2.5 amp, single 5 amp and single 10 amp are now available.

Four wall-mount units are also planned, the A054, A072, A090 and A120. The wall mount units are designed for hard-wiring one or all electrical circuits in the house. Those who wish to use the

isolation units for audio or video components can also use one of Torus’ two “standard phase” units, the A018 and A024—the latter being reviewed here. The Torus units are uniquely different from similar components, known to us as power line conditioners, which is why the company realistically refers to them as “Power Isolation Units”. You’ll find the differences explained in our paragraph describing the...

Technology:

Firstly, we’d like to explain the dif-

ference between “balanced” and “standard” phase. The balanced phase units take advantage of the “live” or positive leads that provide double the household voltage used by light bulbs and ordinary appliances, including the refrigerator—120 volts. The clothes dryer and stove, on the other hand, work with 240 volts by employing the two “live phases”, thus doubling the voltage. In other words, one live and one negative lead provides 120 volts (hopefully) while connecting to two live leads produces 240 volts. Thus, the balanced units can be used where a 240 volt circuit leads to an outlet (Nema 6-50R, Nema 6-30R) and the “single-ended”, standard AC outlets (Nema 6-15R and 5-15R as well as the specialty 5020R) can be used where 120 volts are the only source available. This said, let’s have a look at the unit’s purpose and function in an audio or video system.

All Torus Isolation Units provide surge protection over a wide range—typically plus/minus 10% of line voltage. The surge suppression eliminates voltage surges starting at 2 volts above peak (most standard surge protectors typically only start surge suppression above 300 volts peak). However, the Torus, though not a “regular” power line conditioner addresses the same parameters as other high-end brands. Thanks to its patented circuitry, the Torus provides contamination-free AC and corrects or eliminates harmonic distortion, wave form irregularities and high frequency imperfections. This is achieved beginning with Plitron’s proprietary technology in an oversized toroidal transformer—an almost noise-free unit. There are interesting and, to us, strange technologies used here including NBT (Noise Band Technology) which works as a low-pass filter using the controlled leakage inductance and capacitance

within the transformer to cancel both common mode and differential mode noise. To achieve noiseless transformers, high-end amplifier manufacturers have, for years, routinely used low noise technology, and Plitron employs their own technique to reduce inrush currents—one of many problems. In addition, the Torus design employs Ultra Screen Technology (UST) which provides additional common mode filtering using a highly efficient faraday screen.

The Torus engineers stress the importance of the unit’s low impedance output with their balanced units wherein high-power primary input provides the most unconstrained, yet protected, energy source available to your equipment.

We include here some information from the manufacturer and Zero Surge Inc.® which patented the technology for series mode surge suppression over a wide voltage range (WVR ®). They state that most surge suppression circuits are shunt mode. Excessive voltage surges are shunted to ground which raises ground voltage and may contaminate A/V signals. Shunt mode protectors routinely use metal-oxide varistors (MOVs) which are sacrificial components that become ineffective with use. The Torus, however, employs the Zero Surge series mode which absorbs surges that are more than two volts above peak line voltage. But how does this technology affect the unit’s sonic signature...

The Sound:

When it comes to judging sound, absolutely nothing can replace the human ears. Consequently, we first unplugged our amplifiers and routed them through the Torus. The resulting sonic character was not greatly different from that achieved with our usual in-house Exact Power unit (reviewed in Vol. 16 #3). High frequencies

were a bit “softer” in nature, easy on the ears, but complete nevertheless. Folks with hard-sounding equipment will certainly benefit from this. The mid-highs (somewhere between 2500Hz and 5000Hz) are remarkable smooth, with that important inner detail and—provided the amplifier can do it, and ours could—an added degree of space. The range from about 150Hz to 1400Hz is considered the midrange, and the Torus handled that part of the frequency reach with the same smoothness and liquidity as in the top frequencies, a little less energetic and forward sounding than our in-house unit, but dynamic enough to complete what it is asked to do. Where the Torus really “shines” is in the bass area, from 160Hz down. Our auditioning amplifiers—the single-ended Wyetech Labs Topaz (reviewed in this issue) and the powerful Bryston 14B SST—clearly revealed the Torus’ ability to lay open texture, timbre and rich, but resolute bass. The solid state 14B amp fared a touch better than the vacuum tube Topaz in these tests.

For our next listening test, we disconnected all our components from the various power management devices we regularly use in our studio and connected the entire system(s) to the Torus. Our preamplifier, a couple of power amplifiers, a tuner, a CD player, an external DAC and a turntable were now all powered by the Torus. We wanted to examine and verify that each of the outlets is isolated and the easiest way was to plug a couple of “digital” components right next to the power and preamplifier outlets. Well, we found out; not only was there a “blacker” (noiseless) background, but the complete systems sounded “unleashed”, freed and very harmonious. Both systems had that last touch of musical finesse that elevated already great sound by a few

more notches—although one can't put a finger on one or the other component or a specific sonic ingredient. The Torus simply makes important elements such as inner detail, space/air, imaging, focus, resolution, etc. sound more tangible and closer to the original.

Synopsis & Commentary:

North America's power grid seems to be in trouble and governments will have to deal with it. In addition to unstable AC from our electric utility companies, our modern lifestyle contributes immensely to an already existing dilemma. All that digital equipment with which we live attenuates the predicament, by adding "digital hash". The main contributing source is likely the household computer(s), but digital video and audio components also play a significant part. We'd like to refer to an article in Canada's national newspaper, The Globe and Mail, published on Tuesday, March 28th, 2006 by Martin Mittelstaedt that reported on North America's problems with power. Here is an excerpt:

"Power quality is a well-known problem in the utility business, caused by the proliferation of computers, lighting dimmer

switches, energy efficient bulbs, and other modern electronic gadgets. These new devices cause a more complicated use pattern for electricity than old-fashioned items such as incandescent bulbs, producing negative feedback involving high-frequency peaks, harmonics and other noise on electric wiring.

The way to picture the quality effect is to imagine that electricity is like water flowing in a pipe. An incandescent bulb uses electricity steadily, just like an open tap allows a constant flow into the sink. Computers and other modern devices use power in variable amounts, similar to turning the tap on and off, or any setting in between, causing water pipes to clang.

This deterioration in power quality has been going on for years and would have likely escaped public notice, except that when home computers became popular in the 1990s they would frequently crash or malfunction because of it".

Those of us who have elaborate audio and video installations do have an option to avoid the deteriorating effects of contaminated AC. We can buy power line condi-

tioners, not the simple good-for-nothing surge protection bars with multiple outlets, but the really beneficial ones.

While we at *The Inner Ear* have reviewed some of the best available, we must admit that we have not previously seen or heard such a complex and exhaustive design as the Torus. Though its sonic attribute (its sound) did not totally overshadow our in-house unit, we strongly recommend its use. All of our panelists thought it better than anything else we had in our studio. Our Editor stated that "the Torus sounds wonderfully musical and provides unquestionable AC stability". We may add that it provides confidence that you are getting the best possible AC source for your audio and video equipment. The Torus is a fabulous component and should be regarded as the foundation on which to assemble superb audio and video systems. The company calls the Torus a power isolation device which can be regarded as a power station, completely segregated from all AC powered devices in your house. Try one in your system; chances are, you'll wonder how you ever lived without it. ¶

For more information contact:

Bryston Ltd.
P.O. Box 2170,
677 Neal Drive
Peterborough, Ontario
Canada K9L 7Y4
Tel: (705) 742-5325
Fax: (705) 742-0882
www.bryston.ca