

I first evaluated the FTA-100's FM section, actually checking its reception capabilities on 3 different outdoor antennae. The first was the older Yagi on the tower (that came with the house), problems with some of the second a new Channel Master 3025 10-element Yagi in the listening room; and the omnidirectional feeding on the same tower mast for analog and digital TV (only the Bell ExpressVu roof peak. Talk about m

The first run for station older Yagi, which yielded also showed a good deal and stereo quieting that I then tried the new Yagi went down (largely because of directionality), aimed at Toronto's CN Tower; that anyway, the closer location from the antenna's side was vastly improved, essentially virtually disappeared here. Here the count was an 8 or 6 (as with the other antenna conditions. All these tests noon to minimize weather

Antenna number 3, though grabbed more stations, tuner's selectivity, with some more distant signals in stereo. To a greater extent in handy, but even here WJLB at 94.5, were like Radio 2 at 94.1, the NPR most of the time.

In sum, the most directional antenna, the new Channel Master, provided the quietest signals, with purest sound, and made excellent stations like Radio 2 a joy to listen to. If you record off-air concerts as I do, this tuner and antenna were mated in heaven, and FM listeners unlucky enough to have favourite stations coming from many directions may want to consider either a rotor with an antenna like this, or something like the omni Lindsay. From here in King City, everything of any consequence is pretty much directly south and southwest, especially in a programming climate where most of the stations offer lousy music in lousy sound.

At its best, the FTA-100 was the equal of any tuner I've reviewed in terms of sensitivity and selectivity, except, perhaps, for the McIntosh MR-80, but more important to most of us, the sound quality was absolutely superb, crisp, clean, and full, with sweet upper frequencies and extended, articulate bass.

I did compare it with our resident Onkyo T-4, a classic analog FM design, which was neither as sensitive nor selective, bringing 42 stations on the same afternoon from the Channel Master, with equally quiet stereo on the best of them. Sonically, it was bit rounder and more analog, I suppose, in its overall sound. At this level of

fidelity, I suppose the slight tonal difference is more a mere matter of personal preference.

The Fanfare's AM performance was harder to quantify because reception conditions are not the same as for the Oak Ridges Moraine. The powered AM antenna was not as sensitive as the omnidirectional antenna provides a tuning range inside it, and uses AC power, so could be operated at currents less than 100Ma. Like the antenna of a few years past, it is tuned to a narrow part of the range, but the antenna element is connected to the antenna, and was mounted as a separate antenna stuck into the top level of the tuner either in proximity to the ferrite core that surrounds the ferrite antenna.

In the end, it didn't do much better than the other, I only didn't discover any stations on 1010, now all talk, and I abandoned what was left of the other remaining stations. These came from much farther than the electronic digital buzz. I think AM's smidgeon of microprocessors haven't helped. Obviously, the most stations now primarily still seems to have a firm grip on the AM band, too.

I can happily sum up by saying that this is one of the best FM tuners in terms of sound quality. It is very good sounding for anything more than local FM as well. You can't ask for anything more than this broadcast reference quality, except perhaps in a few products at much higher cost. In this context, the name McIntosh still comes to mind.

Torus Power AO24-ACB-A1AB 20 Amp/120 Volt Power Conditioner
Sugg. Retail: \$2800.00US
Weight: 95 pounds
Manufacturer: Torus Power, PO Box 30030, Toronto, ON M3J 3L6 (416) 667-8473
Marketing: Bryston Limited, 677 Neal Drive, PO Box 2170, Peterborough ON K9J 7Y4 (705) 742-5325 FAX 742-0882 www.bryston.ca

The power conditioner market seems to be quite highly populated these days, and new players, one would hope, will have a real story to tell, rather than just a smoke-and-mirrors exercise like some players currently out there. We've seen the giant parallel bypass inductors that come out of the swamp defying physics, and other approaches that themselves approach fraud. Close encounters of this kind we don't need.

We want protection that doesn't self destruct, like that provided by MOVs (Metal Oxide Varistors), which tend

to die for the cause, leaving you powerless. We want isolation that doesn't introduce hum, buzz, or power limiting and compression. We also want all of this without any audible effects on (if not improvement of) sound



quality. An AC signal should be free of any riders on the 60 Hz waveform, as well having its power factor correct, that is, current and voltage in phase to prevent nasty harmonics.

The Torus approach is firmly based in physics. Here's how it is described in the manual of the model reviewed here: "Torus PIUs (Power Isolation Units) combine the best surge suppression with unique toroidal transformer technologies from PLITRON to provide the ultimate in AC power conditioning and protection for sensitive audio and video equipment applications."

"Units are available in either 120V input, or dual 120V (balanced) input. Balanced input power from two standard 120V phases provide high input power and noise cancellation. Using balanced input power provides the benefits of symmetrical power without the requirement to use GFCI (ground-fault circuit interruption) outlets. GFCIs are prone to nuisance-trips. The toroidal isolation transformer steps-down the 240V input to 120V to power equipment"

"PIUs use ZeroSurge R patented series-mode surge removal filters to absorb dangerous voltage surges and safely dissipate them without using failure-prone MOVs (metal oxide varistors). Also, unlike MOV-based protection, voltage surges are not shunted to ground."

Isolation is combined with proven proprietary technologies from PLITRON in the oversized toroidal transformer. NBT works as a low pass filter using the controlled leakage inductance and capacitance within the transformer to cancel common mode and differential mode noise. LoNo technology has been used for years by high-end audio companies who demand silent transformers. Imin technology reduces inrush currents. UST provides additional common mode filtering using a highly efficient faraday screen."

"Low-impedance output with balanced high-power primary input provides the most unconstrained, yet protected, energy source available to your equipment."

Well, now that we've been buried in acronyms, we'll just have to go a little deeper to find out what they all

mean, and do! According to the Torus section of the Bryston web site, NBT stands for Narrow Bandwidth Technology, which "substantially attenuates differential and common-mode noise without external circuits such as low-pass filters. NBT also starts to attenuate noise at lower frequencies, starting at 1 kHz."

"UST (Ultra Screen Technology) is a highly efficient and effective means for further attenuating noise. Torus products use triple screens for extreme performance."

"Inrush currents are usually a concern in large transformer applications. Imin technology dramatically reduces inrush to a quarter of standard toroids. This eliminates the need for series current limiting devices such as PTCs (positive temperature coefficient resistors) or soft-start circuits."

"LoNo technology eliminates audible noise in the power transformer regardless of line conditions, including DC offset and overvoltage. Noise is quantified and specified to (noise criterion) [sic] curves. Torus products are all less than NC 10."

"Toroidal transformers are typically 1/10th the magnetic field of standard EI transformers. PLITRON's LoS-tray technology further reduces magnetic emissions from the transformer without the requirement for additional shielding."

Acronyms always lead to jargon (or is it vice versa?), and we've probably had enough of either, but it does underline the level of design thought behind the Torus products. Their surge suppression techniques are directly licensed from Zero Surge Inc., as are those of



Surgex, a Canadian company, whose products I have seen withstand 6000 volts repeatedly, and easily survive, during research for a series on the subject that never saw the light of day for a variety of reasons beyond my control.

The only aspect of AC power control missing from current Torus products is the UPS (here we go again!) Uninterruptible Power Supply) aspect, where a battery takes up power supply duties in the event of a power outage, usually for an hour or less. I wouldn't be surprised to see this approach, common with computers,

to be applied in the next generation of products, or offered in separate models. After all, the current ones are very heavy already, and the addition of large batteries to large transformers might just make them physically unmanageable.

Whatever the future, we are dealing with the here and now, and what this unit gives to or takes away from audio or video system performance. It may be the latter lack of contribution that's more important.

I connected the Torus AO24-HCB-A1AA (I think they need to work on the model nomenclature here: I'll never be able to remember this one for the rest of my life; we'll call it the AO24, or is it the A024 [as in zero, as opposed to the letter O; oh, the ambiguities of modern life!]. As I was saying, I connected it to my direct-to-the-breaker-box outlet closest to my amplifiers, this outlet being about 4 feet from the box. All my 120V circuits are 15 amp, and this has always provided more than necessary current delivery. Into the Torus I plugged the 3B SST, my normal reference, and the B-100DA, and my pair of Sunfire subwoofers. This covered all the major current-draw intensive items in the audio system, with the exception of the Nitty Gritty record cleaning machine, which probably doesn't need purified power to clean records better (but then, you never know!)

I also attempted to integrate power for the sources part of the system with amplification, but this proved unworkable, as it has in the past, loud ground-loop hum being the result. I don't know why this is, but there are grounded audio links between my two rooms, the studio/listening room and the home theatre one. I've always felt it's just as well to have the AC for power and sources separated, anyway, and that tradition continued with the A024. The sources are all powered through a Chang Lightspeed filter.

This particular Torus model can be used with either a 20- or 15-amp outlet, the power cords differing in plug type for each. It has 12 hospital grade 3-prong AC outlets, all filtered and treated equally. Some other brands boast specific filtering for particular kinds of inputs, which is, I think part of the hype that's been thrown about for these kinds of products by some manufacturers attempting to differentiate and justify their own offerings. Clearly, the same type and grade of filtering should be provided for all outputs, and what is more important by far is their electrical isolation from each other.

In initial listening tests I found the Torus sound to be essentially unchanged from what I'd been experiencing

with the UPS, which is an audiophile oriented model that costs at least as much as the AO24, and is no longer being made, as far as I know. This lack of sonic difference is a good thing, indicating that the Torus approach is completely unobtrusive. I should also confess that I've been using a Kimber Palladian power cable on the 3B SST, and continued the practice with the Torus in circuit.

The overall result was an expected ease and purity of sound that unfailingly astonishes those who hear my system for the first time. The source doesn't seem to matter, since FM (Onkyo T-4, Channel Master Stereo Probe 3025, foam-shielded low-loss 300 ohm cable), phono (Heybrook TT-2 w/outboard power supply, Dynavector DV-20X, SAEC 403/27), and numerous upsamplers (Assemblage D2D 1/DAC 2.7) digital sources are pretty much as good as I can afford to make them.

Bypassing the Torus amply demonstrates its improvement of AC, as does doing the same for the Kimber Palladian. Both used together give the 3B SST its full diet of clean power, with all line junk removed, and the difference is very audible: in a broadening of soundstage width, much greater depth, and an airy freedom in the ambient field that was palpable. Going back to the regular power cord simply closed things down, all the remaining resolution being more squeezed towards the centre, as well as less clear overall.

Of course, to achieve the benefit of spending this much money on processing power, you have to have invested concomitantly in the rest of the system to hear the results. And this includes speaker cables, which, whether single, bi- or tri-wired, make a tremendous difference in ultimate system resolution.

However, it all starts at the source. And we can't forget that there are two sources, or more properly, two categories of source in any audio or video system: the audio signal itself, and the AC power which allows its amplification. Without the effective combining and separation of these two (a seeming paradox), ultimate audio performance is not possible.

I haven't yet tried the Torus in my A/V system, so this will have to wait until I can get some help in moving it to the other room (85 pounds, the weight of my Yamaha 9.9 horse outboard motor is my personal limit). That will be a follow-up report. But as far as audio is concerned, the approach taken in the Plitron/Bryston partnership is the expected combination of superb parts and engineering adding up to unimpeachable performance, a major step in improving any already good audio system.

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