

Harry Pearson granted permission for us to use this review simply as an example of the historical evolution of AtmaSphere products. You will note the date of the review and know that this finding was an early one and not necessarily the conclusion he would reach today.



ATMA-SPHERE MA-1 AMPLIFIER

MANY OF THE CURRENT crop of tube designers - a group growing in number of late - are improving upon old ideas by applying modern technology. The Atma-Sphere MA-1 is a good example of what can be done with a classic tube circuit and some creativity. It uses design ideas from the original Hall amplifier and the Wiggins Circlotron. (I'm not sure what that is, but it's a great name.) The result is one of the most accurate amplifiers I have heard.

The MA-1 has been on the market for a little over three years now. It is an output transformerless (OTL) direct coupled design that is all triode and operates in class A. It utilizes a single stage of amplification and is a balanced, differential design with both RCA and XLR input jacks (the jacks not in use should be shorted). The MA-1 is phase inverting and each mono amp is rated at 100 watts pr channel into 8 ohms and 90 watts into 4 ohms. Because of potential problems in driving low impedance loads, Atma-Sphere now provides a separate, outboard Z Music Transformer housed in an oak box. This transformer may improve the amplifier's performance wth speakers rated at 4 ohms and lower or that have impedance curves that dip this low below 200 Hz.¹

The on/off standby switch is located on the front panel of the amplifier next to a row of three LEDs; the "standby" mode allows the tubes to warm up before applying the b+ voltage to them. Leaving the amplifier on "standby" for at least 30 seconds before turning to "on" prevents damage to the tubes and lengthens their life. Atma-Sphere claims a tube life of 10,000 hours, if the amps are operated with care. The MA-1s are very stable and have a reputation for being extremely reliable. They sound good after a brief warm-up, but are at their best after an hour.

By their physical appearance, the MA-1s give no hint of costing nearly \$3000 each. The chassis is black brushed aluminum with wood side panels and gold lettering. The 15 tubes are placed in the rear of the amp, uncovered.² A bias adjustment screw, a built-in meter, and a screw for adjusting DC offset makes such adjustments easy, even for someone as non-technical as I am. Each amplifier weighs 47 pounds.

Ralph Karsten, Atma-Sphere's designer/owner, cautioned me to set the MA1s at least a foot apart side-to-side. Otherwise, the electromagnetic radiation given off to the sides by the two

side-mounted toroidal transformers will interfere sonically with the adjacent amplifier. Karsten also suggested the amps would sound better not grounded, but with a "cheater" on the three way plug, that is unless I encountered hum problems.³

The MA-1s are among that small handful of components that deviate so little from neutrality that their sound becomes difficult to describe. As reviewers, we are used to looking for the areas of exceptional performance or the little flaws in the sound of components. The Atma-Spheres seem to do everything well, and although they may not set any new standards in any particular area, there is very little that I can criticize about their performance. What impresses me most about the sound of the MA-1, besides its neutrality, is its open, transparent soundstage and its bass.

By neutrality, I mean that the reproduction of voices and instruments is believable and without an emphasis on any particular band of frequencies. Harmonic overtones bloom naturally from the fundamentals, and the sound is neither too dark no too bright.

The stage that the MA-1s set is fairly wide, very deep and sounds open and airy. One thing that contributes to the excellent soundstaging is a total lack of grain or texture to the background. Intertransient sibilance is excellent. Instruments are separated in their own space and are very well focused on the stage – as we have come to expect from mono amplifier designs - and you are able to hear clearly back into the musical performance. One example of this is from Robert Cray's fine new CD *Midnight Stroll* [Mercury 846 652-2]. I recently heard him perform this material live in a medium size theater. On "The Forecast Calls For Pain," Cray is backed by Jimmy Pugh on a Hammond B-3 organ. Through the Atma-Spheres, I was able to follow the organ's rich sound clearly all the way through, even though it is placed back in the mix. This gave me much more of the feel of the live concert than other amplification on the same material. Hearing the first tympani in the beginning movement of Reiner ans CSO's *Sheherazade* [Chesky RC-4} through the MA-1s , the drums are clearly at the rear of the stage and you are aware of the rear wall and the movement of air. The MA-1s provide you with much detail and low level dynamics from instruments and voices whether at the front or rear of the stage; small intonations on a solo horn of violin are easily heard and add more shading to the musical colors.

The sound of the MA-1s is smooth and liquid yet the amp is "fast" in responding to transient demands. It is easy to follow an instrument or section of the orchestra through the most complex and demanding of passages. The sound never becomes congested nor feels compressed.

Related to their apparent "speed," the MA-1s also have excellent high level dynamic contrasts. Good bass dynamics also capture my attention and the MA-1s are terrific in their lower range. High frequency dynamics are also excellent, such as the sound of a bell or cymbal being struck. A good example is at the opening of "Dusk" from Amanda McBroom's *Growing Up in Hollywood Town* [Sheffield Lab 13]. Here a bell is struck twice, harder the first time, and the MA-1s seem to respond to the change very quickly. Otherwise, the high frequencies sound very extended and just a little soft and delicate in the very top octave.

On the Thiel CS 3.5s, the MA-1s have the best bass response of any tubed amplifier I have ever heard. Since I have been living with the Manley Reference 350s for the past year, I consider this quite an accomplishment.⁴ The Atma-Sphere's bass is powerful and dynamic but its superb definition is what makes it something special. First of all, the midbass is tight and clean, reminding me of good solid state amplification, but the associated dryness. The midbass also has what the British refer to as "tunefulness" and "rythmic drive." * Pop music and jazz really come to life; you will not be able to keep your foot still. You can hear the air of the lower frequencies and the pitch of each drum beat and synthesizer note. The rest of the lower frequencies are also well defined, detailed, and extend very low. Well recorded tympani, for example, such as Reiner and CSO's *Lt. Kije* [Chesky RC10], caused my floor to shake.

In comparison to the (un-updated) Manley 350s, the differences in the Atma-Sphere's sound are small and mainly ones of perspective. The two amplifiers sound more aloke than most brands of interconnect cable I have compared (Julian Hirsch would say, "I told you so."). But just because I found the difference to be small ones does not mean that you would not clearly prefer one over the other on your system. For example, the Manley seems to put you a little closer to the music; its sound is richer, darker and more immediate. The MA-1s seems to put you back a few rows with a little less upper midrange and high frequency energy. Violins sound smoother and more liquid through the MA-1s, with less bite, as though you were a distance back from them. The Atma-Spheres also have a more open, deeper and more transient soundstage than the Manleys (which adds to the feeling of being a little further back) and a little better bass definition, but the Manleys may have a little more bass power (with three and a half times the power rating).

Traditionally, with Class A, purist amplification, you pay a high price for a given power rating. What you get is musicality with an ease of reproduction and sense of refinement that may not be available in amplifiers operating in other classes with higher power. Some loudspeakers may require more power than the MA-1s can provide and make a poor match with this amplifier. For those who can't live without the sound of the MA-1s but have speakers requiring more power, the MA-2 has just been introduced. The Atma-Spheres also provide the option of using them in a balanced configuration, a feature that is bound to become more popular in the future.

The Atma-Sphere MA-1s are as musical and neutral as any amplifier I have heard. Their soundstage is open with the images focused clearly and a high degree of transparency and inner detail. Their bass response sets a new standard for tubed amplifiers in my experience. While the MA-1s may not break new ground for any individual parameter of performance, when you add up all their strengths, they may well be one of the best-sounding 100-watt amplifiers available.

-MK

¹While reviewing the MA1s, I only had the Thiel 3.5s and Vandersteen 2Cis on hand to use with them, neither of which presented a difficult load nor really challenged the power rating of the amplifiers. My comments about their performance must be taken in this context. Perhaps Steven Stone can shed some light on how they fare with lower impedances or more demanding loads in his comment. I also did not use the MA-1s in their balanced mode.

²Tube compliment is twelve 6AS7 output tubes, one 6CG7 driver tube and a 12AT7 and a 6DJ8 for differential cascode voltage amplifiers.

³While working with the Atma-Spheres, I happened to have a conversation with Ray Schab of Arcici about their setup and physically isolating electronic components. I had been using the amplifiers in Mission Isoplats with Navcom Silencers between the amp and the Isoplat surface. Schab suggested that I would get better results by putting the Navcom under the Isoplat and leaving the amp on a solid surface. And wouldn't you know it – he was right. Although differences were subtle, I heard more detail, a shade more dynamics and better definition in the bass. Schab's theory is that putting Navcom or similar materials directly under an electronic component may actually overdamp its sound, rather than simply preventing floor vibrations from reaching the component.

⁴At this writing the Manleys have their original compliment of 6550A tubes and have not yet been updated to the KT90s.

*Typical British silliness. The music has this. Not the equipment. Ever. Granted there is some equipment that lets it through more easily – but to attribute a characteristic of the music to the equipment is quite simply wrong.

Manufacturer: [Atma-Sphere Music Systems](#),

160 South Wheeler, St. Paul, Minnesota 55105.
(612) 690-2246. **Source:** Manufacturer Loan.
Serial Number: 019. **Price:** \$5800 per pair.
Warranty: Two years parts and labor. One year
on all tubes.

Associated Equipment

Analogue front end:

Sota Star Sapphire
Series III with Cosmos Platter, Cogan-Hall
armboard, Alphason HR100-MCS pick-up
arm, Straightwire pick-up arm cable and
Monster Alpha Genesis 1000 cartridge, all
sitting atop a Lead Baloon.

Preamp:

Rowland Reference 1, Series II
with Cardas power cord.

Amplification:

Manley Reference 350 mono
amps with MAS power cords.

Speakers:

Thiel CS 3.5

Cables:

Theta Digital, Straightwire Maes-
tro, MIT Shotgun, MIT 750 speaker cable.

Accessories:

Sota Reflex Calmp, Isoplats,
Navcom Silencers, VPI Bricks.

Manufacturer's Response:

Thanks to Mike Kuller and TAS for this
glowing review. Mr. Kuller has said it so
well that I have little to add. There are a few
points I wish to clarify: The rack-mount
front panel for the MA-1 is optional, and
was not included on the review sample.

We are dedicated to the use of balanced lines and differential circuitry, which are found in every product we make.

The Z Music transformer has dramatically expanded the number of usable speakers with the MA-1. It seems a contradiction of terms, but using a transformer on an OTL eliminates several problems that plague conventional transformer-coupled designs, core saturation (due to DC current in the primary winding) and turns ratio, to name two examples.

**- Ralph Karsten
Atma-Sphere Music Systems.**

SS Comments:

I have quickly developed a reputation at Sea Cliff as the Amp Killer, the guy to send amps to see if he can melt them down. My job, as MK mentions in his review, is to address the question of whether there really is a tube solution to the problem of driving low impedance loads. The answer is unequivocally yes. That solution is the Atma-Sphere MA-1 and Atma-Sphere's Z Music Transformer. Never in my wildest fantasies, have I ever dreamed of using a tube amp to drive one-ohm impedance Apogee Scintillas.¹ The arrival of the Atma-Sphere MA-1 and its matching Z Music Transformer changed non-existent dreams into reality.

The MA-1 is the only amp I've had in my system that can be used on both my old Quad ESLs² and my Apogee Scintillas with the results being much more than merely satisfactory on both. The MA-1 is also powerful enough to drive Apogee Full-Ranges (the original four ohm 7 1/2 feet tall, 300 lb. Design) to reasonable levels in a large room. This is indeed a versatile (and rugged) 100 watt power amplifier.

The Units I have are about three years old, and have been from coast to coast, including a stop and update at home base in St. Paul before being shipped to MK. While their shipping boxes are literally falling apart now, they show no appreciable signs of wear or tear, and haven't done anything but work perfectly since they arrived. When I compare the Atma-Sphere's reliability to OTL designs of the past (for every three Futtermans and NYAL OTLs I've seen, only one was working), I'm well impressed with the MA-1's reliability.

The combination of the Atma-Sphere MA-1 with Z Transformer and the Apogee Scintilla was, up to the point of clipping, the best sound I've heard through my system in every audio parameter except bass performance. The PS Audio Delta 250's Bass has greater speed, tighter bass control, better articulation, and more robust dynamics than the MA-1. The MA-s bass is juicy and round, more tube-like, and definitely not as tight and controlled as the PS Audio's solid-state 600 watt at four ohm mono-block unit.

If I used Scintillas in a small room the MA-1 might have enough power to keep me happy, but I found them too easy to clip. The MA-1s don't get nasty or weird when clipping, they just get smokey, and then if pushed any harder, start to muddy up; it's the aural equivalent of stirring up the bottom of a previously crystal clear puddle. Now the Atma-Sphere MA-2 at 200 watts could be fantastic with the Scintillas...

I was really looking forward to the Quad/MA-1 combination, and after a disappointing beginning, my expectations were fulfilled. At first there was no air on top, and upper frequencies were attenuated. Switching my cables - in lengths and brand - restored the upper frequencies and top end air. The Atma-Sphere/Quad ESL combination seem made for each other - they even both invert phase, so you can hook up speaker cables red to red and black to black just as if both were non-inverting.

The Quads sounded wonderful coupled to the Atma-Sphere MA-1. Talk about grainless midrange, an expansive open soundstage, and effortless dynamic peaks. It can also play loud - for Quads, I measured 95 db A-weighted peaks at eight feet from the speakers on a Radio Shack hand-held SPL meter with no audible distortion or sense of strain.

On the quiet side of things, there is an immediacy and sense of intimacy from this Quad/MA-1 system that is magical. On Wendy MaHarry's first album [A&M SP 5283] Side One, cut one "All that I've Got," it's actually possible to make out what the back-up singers are saying as the song begins. The system has a high level of resolution without being detail oriented or up-tight sounding. With the MQA-1 there is a noticeable lack of smearing of locational information. This lack of smearing if detail and nuance, and a rock-solid image stability regardless of volume, must be listed along with the MA-1's other strengths. It is a truly great Quad amp.

Such divergent types as Quad ESL owners, Infinity RS-1 and Beta owners, Apogee owners, and esoteric mini-monitor owners may find the 100 watt MA-1 as irresistible as I do. Properly set up and mated to a symbiotic speaker system, even a rabid toy-boy could enjoy this amp's charms for many years to come.

¹After talking with Ralph Karsten of Atma-Sphere I found out that Atma-Sphere never tried their Z Transformer with a real-world one ohm load! They tested it of course, but didn't have access to a one ohm Scintilla to actually try it out. I love being a guinea-pig.

²The Atma-Sphere MA-1 is the only amplifier I know of that can be either 100, 50, or 25 watts into eight ohms. Depending on how many power tubes are left in their sockets, the output of the MA-1 can be lowered to 25 percent pf its maximum output.

The Z Transformer Technical Information

So what the hell is a Z Music Transformer? According to Atma-Sphere's technical info page on the Z Transformer, it is actually an "autotransformer" - since it doesn't have to block DC voltages from the speaker, it has no secondary winding, only a primary one. Atma-Sphere claims the autotransformer has improved saturation and inductance characteristics when compared to conventional transformers. The Z Transformer has a input impedance of 11 ohms, presenting the MA-1 with an especially benign load, permitting it to achieve its maximum rated output of 100 watts.

The Z Transformer has output taps for one, two, three, and four ohms. The transformer's turns ratio is 2.36:21 input to one ohm tap. It has a bandwidth of five Hz to 200 Khz +1 or -1 dB, weighs 22 lbs., and comes with a two year warranty. It can handle up to 150 watts of power, and can be used not only with the MA-1, but also with Atma-Sphere's \$11,800 200 watt/8 ohm OTL amp, the MA-2. (This combination should be able to drive any speaker in the world to within an inch of its life). The Z Transformer can also be used with other tuber amps, whether transformerless, or with transformers.
