

the absolute sound®

The High End Journal™

An Excerpt From: The Absolute Sound® Volume 13 Issue 53 May/June 1988

THE SOUND

DRIVING RHYTHMS

TWO CAR STEREO AMPLIFIERS

AUDIOPHILES do not take car stereo seriously. Most expect limited sonic realism from their automobile and even hardcore auto-audio fanatics consciously or subconsciously ratchet down their expectations of what a car system can do. I do take car audio seriously, and I believe a damn good approximation of home audio can be achieved for not that much more than dealer showroom (manufacturer's) units. (By the way, I have not been impressed with a single car manufacturer/dealer-installed audio system I have heard, including the ones associated with the audio "names", which, by the way, are also the most outrageously priced.)

Before I review two attempts at state-of-the-art basic amplifiers for the auto, let me set out my own personal guidelines for putting together a High End sound system on wheels:

(1) Choose the front end carefully. Many of the cassette/tuner/preamps available are awash with gadgets, and the gadgets, more often than not, add considerably to the price tag without necessarily giving you higher sound quality. Don't buy gizmos you don't need; put the money into upgrading the system elsewhere. One gadget, however, that is usually overlooked, is essential: tone controls. At the minimum, you need separate bass and treble control; and, in extreme cases, a graphic equalizer should be used. A car interior is not an acoustically neutral environment. The amount of tonal doctoring required will vary with the car, the associated equipment, and the method of speaker mounting.

(2) Don't skimp on power. Most of those contained-in-dash receivers put out a highly distorted two or three watts. Get a separate amp and mount it under the dash, under the seat, or in the trunk. Depending upon amp, speakers, and car, 20 to 50 watts per channel of full-range speaker should be sufficient.

(3) Don't skimp on wire. Wire it as if it were your main system. Choose sonically acceptable interconnects and speaker wire. Monster, for example, has an entire line of car stereo wire, including speaker wire designed to be hidden under rugs and rocker panels.

(4) Choose speaker placement carefully. This is the most controversial of my recommendations. Most people use two pairs of speakers, front and rear, to fill the car with sound. I have a problem, psychoacoustically, with schizophrenic sound hitting me fore and aft, especially when the front speakers cannot be mounted to reproduce the bottom three octaves. I prefer to have one pair of extended-response speakers mounted in the rear. In my large mid-Seventies sedan, I chose to mount 6 × 9-inch speakers on the rear deck of my car, effectively using the trunk as a shared speaker cabinet. Of course, this wreaks havoc with stereo separation from the upper bass down. But I achieve the most extended and reasonably flat response I have ever heard from a car. Yes, friends, with my oversized trunk, my speakers can produce a convincing 25 Hz. Note that this technique will not work with hatchbacks or, heh-heh, Corvettes.

Another alternative is to put a pair of High End bookshelf speakers in the back. Jeff Percy of Mirage claims to get excellent results in his Corvette with a pair of (surprise!) Mirage 200s. Al Milbert prefers, with his amplifier, the sound of Morels, ProAcs, or a pair of Metronome 7s.

The Reviewing Methodology

THESE TWO AMPLIFIERS were auditioned in the car as well as in my listening room (using an external DC power supply). My car system consists of a Proton 202 cassette/tuner and a Proton 250 amplifier, both now discontinued. It is a bare-bones design featuring Dolby B, separate tone controls, and manual knob tuning, with no presets. (It has since been replaced with the 201, at \$149, with more features.) The unit is ergonomically robust, reliable, and has a warm, euphonic, almost tubelike tonal balance, with a somewhat rolled top octave. The tuner also does an excellent job of picking up tough stations in New York City, and I do not use a fancy antenna. The speakers are the fabulous PHD-recommended Peerless LeMans 6 × 9s, also discontinued. Wires are Monster Interlink Spe-

cial interconnects and Monster Hotwires speaker wire. Most of the listening was done with cassettes recorded on my Goldmund Studio, Syrinx PU-3, Grado Signature 8MR, Audible Illusions Uranus 2 via a Nakamichi BX-1. (The difference in azimuth angle between my Proton and Nakamichi was rectified via a slight treble boost.) I also used the first three Chesky real-time cassettes (especially the Wild) and the tuner.

In the house. I used the aforementioned front end, combined with Mirage 350 speakers, Monster Interlink Reference A interconnects, and either MIT MH-750 of Monster Powerline 2 speaker cable.

Before reviewing the two amps, a word, first, about my reference Proton 250. Unlike most of its mass-market Japanese competitors, the Proton has a very musical, tube-like tonal balance. There is a bit of emphasis in the upper/middle bass and upper midrange, however, and the extreme top is rolled. But the low bass and the dynamic range of the 250 is superb, especially on rock recordings. (I have not heard the latest Protons, which are said to be significantly different from mine.)

The superior detail resolution and ambience-retrieval capabilities of this amplifier taught me quite a bit about in-car soundstaging. In my living room, it reveals itself as no slouch in soundstaging, particularly in the areas of image specificity, depth, and hall-sound reproduction. Yet, even in the car, its ambience-retrieval capabilities give me psycho-acoustic hints of a soundstage. That is, I can detect that instruments along the back wall generate a ratio of direct-to-reflected sound different from that produced by the instruments in the front row. My mind registers those cues as simulated front-to-back depth (actually, back-to-further-back depth).

The Milbert BaM-230

A 30-WATT \$1400 TUBE car power amplifier? Are they out of their minds? Maybe not. Read on.

As you can gather by the model number

of this unit, the Milbert is a car version of David Berning's classic EA-230 amplifier design. The amplifier features 10 tubes (five per channel), one 12AX7, one 12AT7, one 6SN7, and a pair of 6JN6 power tubes, and can be strapped for monophonic operation.

This amp is very large for a car unit (18" × 6.75" × 4.5", weighing in at 15 pounds). As this is a very unusual car amplifier, set-up, installation, and user precautions are spelled out in gory detail in the excellently written owner's manual. I will detail some of the peculiarities of this unit, as the potential purchaser must be well aware of its idiosyncrasies before contemplating purchase.

Once powered, the Milbert contains voltages of up to 1500 volts and enormous current reserves, a potentially lethal combination. In fact, the charge developed across the power supply capacitor is sufficient to shatter the shaft of a screwdriver shorted across it. The Milbert cannot be operated with the cover removed and *must not* be exposed to rain or moisture. The unit draws about 5½ amps when no signal is present and 20 amps at full power. As a single headlight draws from 3½ to 5 amps, your car battery will not last long if this amp is operated for an extended period of time when the engine isn't running.

According to the manufacturer's instructions, the Milbert cannot be mounted upside-down, and enough space should be provided above the unit for heat dissipation. Nor should the unit be mounted in the trunk if gasoline vapors leak into it.

Hooking up the amplifier with reverse voltage can damage it, as will jump-starting your car via a 24-volt tow truck with the unit connected. Installation is also a bit elaborate; a hole must be drilled in the firewall to pass the thick battery cables provided with the unit. My installation was temporary, so I hard-welded battery jumper-cable clamps to the wire and ran it out the door and in the open hood, directly to the battery terminals. As you can gather, I am skeptical that your typical car stereo dealer can be qualified to do all this. However, all the necessary hardware is provided and the instructions are crystal clear, and if you are willing to put up with these installation requirements, read on.

Because, my friends, even at \$1400, it's all worth it. The sound of this amplifier is exceptional, far beyond anything I expected from a state-of-the-art car stereo. How can I describe the sound? With shrieks and tears and screams. More specific? If you insist. This is the sound of a truly High End living-room tube amplifier. The midrange is silky and sweet, the highs airy and harshless (mmm, a new word), more extended in the top octave than my Proton, but still missing that last bit of harmonic sparkle above 15 kHz. The lower midrange down to the midbass is not thick and muddy. In fact, that bass is less colored and more extended than that of the excellent Proton 250.

But this amplifier really excels in delicacy, ambience retrieval, lack of distortion, speed, and, yes, the simulation of a soundstage. I raved about the dynamics of the Proton? The

Milbert is better still.

Let's check those listening notes for specific musical references. The Milbert owner's manual states that one should get used to the sound of this amplifier before driving. No exaggeration. This thing is a health hazard in the way its sonic realism takes your mind off the road. I wrote many, many times in my listening notes "Drove off the '!?!@' road"!

The (Dorati) Firebird really got to me. In particular, the air surrounding the bass instruments, the drum, and the string basses. If I had to name one overarching strength of this amp, it is the reproduction of brass, which is reminiscent of old Carnegie Hall. The initial attack and metallic bite of the trumpets and trombones are there with remarkable clarity, together with the warm, burnished tone of the instrument and all the associated ambience. Oh, that fanfare in the final movement of *Scheherazade*. With the Milbert, the simulation of a soundstage in the car is uncanny. Percussion is another strength, the cymbals and drums of George Crumb's *Makrokosmos III* and the bell tree from *James Newton Howard and Friends* shimmered with stunning realism.

Rock music is incredible. On *Kraftwerk*, I never really noticed that the digitally synthesized snare drums varied in pitch throughout the piece. And Evelyn King's vocals are haunting, with minimal sibilant distortion. The high-frequency transients and bass clarity on *Propaganda* gave me goose bumps.

But I lost it with Janos Starker's *Bach Cello Suites* on Mercury. The attack, the resonance of the wood, the air around the cello; I was sitting in my driveway in tears, listening to the nuances of this recording (what a sight for the neighbors!).

OK, let's nitpick. There is a bit of a forwardness around 1 kHz that tends to make certain vocal phrases on closely miked females project more than they should. And the midrange does have a bit of a tube coloration not inconsistent with that of early Eighties tube designs. (It is still less colored than the Proton.) And the occasional lower high-frequency percussion transient is a bit sweeter than it should be.

That's it for flaws, folks. In my living room on the Mirage 350s, the sound of this amplifier is remarkably close to that of my Quicksilver Monos.

More good news: Milbert and Berning are working on a companion crossover and preamp/cassette/tuner.

Conclusions

A VARIED DUO of amplifiers here, high-quality and recommendable, but also highly subject to taste. No, I am not buying the Milbert, partly because of cost and partly because there is no way to mount it in my car where it would not be visible. (I do live in New York City.) I have decided to keep my Proton 250, which, to be frank, surprised me. It is a much better amp than I had realized. Yet the Hafler's midrange and midbass neutrality make the colorations of the Proton more troubling

to me. I wonder what Musical Concepts could do with the MA-1. Better still, David, how about an Excelinear amplifier modeled after the XL-280? if you do, David, where do I send the check?

—Robert J. Reina

Milbert BaM-230. Manufacturer: Milbert Amplifiers, P.O. Box 1027, Germantown, Maryland 20874. *Source:* Manufacturer Loan. *Serial Number:* 00010. *Price:* \$1395.

This review has been reprinted in its entirety from **The Absolute Sound**®, with not one word censored or deleted. **The Absolute Sound** is the journal of High End audio and it reports findings on audio components and recordings without fear of or favor from any commercial interests. Its literate evaluations and tests take place in real listening conditions, i.e., the home, without recourse to confusing or misleading measurements. The only standard is that imposed by real music taking place in a real space, hence, music (the absolute sound) is the measure of reference. Subscriptions and/or single copies may be obtained from the business office at \$7.50 per issue or \$33 per volume. You will call us directly with your AmEx, Visa, or MasterCard in hand at (516) 671-6342 or mail your check to **The Absolute Sound**, Box L, Sea Cliff, New York 11579.