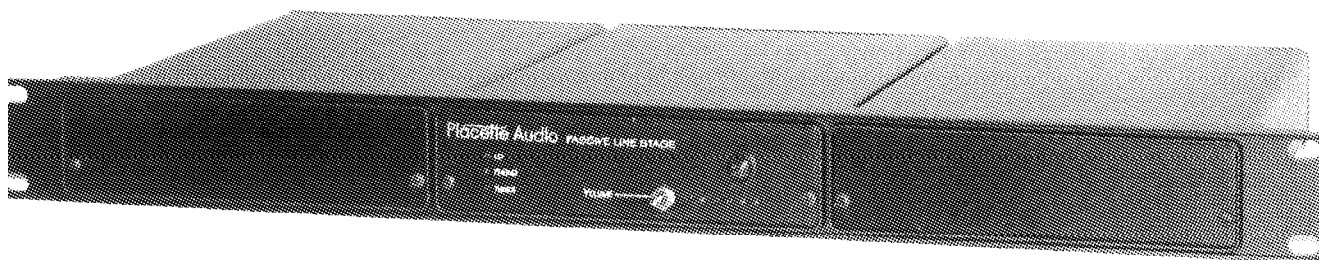


# Placette Passive Line Stage

Dan Pond



**L**ET'S BE CLEAR from the start: A *passive preamplifier* isn't, doesn't, and can't.

That is, a unit which (pre)amplifies is not passive, and a passive unit does not and cannot amplify an audio signal. Nonetheless, a few clicks of the mouse will quickly reveal multiple examples of both manufacturers and reviewers using this oxymoronic term. We'll abide none of that at *TAV* nor, I'm pleased to report, will Guy Hammel of Placette, manufacturer of the *Passive Line Stage* under review.

The fact is that in many applications an active preamplifier does not actually amplify a line source, that is, a signal source with a high-level (typically two-volt) output, although they may well be capable of doing so. For example, my *Classé Six* pre-amp attenuates the input signal until the volume control reaches the 12 o'clock position. Despite the number of different sources, amplifiers, and speakers I've had in-line with the *Six* during my tenure as a reviewer for *TAV*, this control has never been 'round *midnight* (so to speak) except when listening to *Monk* or others on vinyl through the *Six's* internal moving-magnet phono stage. With the increasing market domination of CD players, DACs, and other sources that need no signal amplification to drive most amplifiers to full power output, designers of passive attenuators took this opportunity to eliminate gain

circuits and (perhaps) reduce the cost of providing the remaining primary preamp functions, volume control and (sometimes) input selection. Such units are properly called *passive volume controls*, *passive volume attenuators* (which is, of course, what's really being done) or, for units such as Placette's *Passive Line Stage* that also provide input switching capability, *passive control centers*.

Audiophiles, especially "purists," often suggest they seek the shortest and simplest circuitry between source and sound waves, yet to a surprisingly great degree the high-end has shunned the passive devices that, by eliminating active circuits, exemplify this design philosophy. Successful implementations of passive attenuators are often found to offer neutral, effortless, and grain-free musical presentations, with outstanding low-level detail, harmonic texturing and transparency. (This last characteristic has been Guy Hammel's Holy Grail, something he especially strives for in his designs of Placette equipment.) In other applications, passive units have sometimes been associated with lifeless music reproduction, rolled off highs, weak bass, and/or poor dynamics. Why such dramatic differences? Passive-ists frequently point to various component compatibility issues (about which, more later) and, indeed, many sonic shortcomings can be ameliorated by

attention to such details. However, Placette takes matters one sizeable step further. Hammel assertively asserts that potentiometers and all other traditional volume controls, regardless of quality, cost, or reputation, result in impedance losses and contribute grain, smearing, brightness, and other distortions by an order of magnitude more than any other electronic component or circuit. And therein lies the heart of Placette's *Passive Line Stage* and this review.

Like Placette's other units (their single-source volume control and an active, albeit without gain capability, line stage), the bedrock of the *Passive Line Stage* is a sizeable cache of very expensive Vishay S-102 bulk metal-foil resistors. Although this technology was developed some 40 years ago, many circuit designers still say it outperforms other resistors in terms of performance tolerances, speed, and stability over time with varying operational conditions. Consequently, it is favored for high-precision medical, measurement, and military applications. Some of the features offered to circuit designers by the S-102s resistors are both low inductance and low capacitance, an almost purely resistive load, speedy rise time, and essentially unmeasurable insertion noise from d.c. to the megaHertz range. Equipment is thereby helped to avoid a false sense of dynamics in reproduction,

and source components always play into the easiest possible load. Importantly, because their use in the Passive Line Stage helps assure that the source sees the same load with any degree of signal attenuation, the resulting sonic character is much more nearly constant throughout the volume range.

While Placette isn't the only audio manufacturer, or even the only manufacturer of passive attenuators, to use Vishay resistors, the firm believes that no other does this so exclusively and so thoroughly in every part of the audio circuit. Says Guy Hammel, "these incomparable [Vishay] resistors simply do not damage the audio signal. They pass it along intact, unlike any other resistor."

I compared the Placette to another, less-expensive passive attenuator and found that it does indeed take more than elimination of active circuitry to achieve aural nirvana. In fact, Guy says his unit succeeds not because it's passive, but in spite of it.

Like some ordinary appearing Plymouth sedans from the late 1960s which discretely hid a high performance 426 cubic inch, hemi-head engine beneath the hood, Placette's Passive Line Stage comes in a modest, non-metallic, utilitarian chassis. (And, just as when facing a Stealth 426, you should be cautious about putting up your high priced preamp's proverbial pink slip against Placette in a head-to-head dual!) The main unit is actually three separate, horizontally arranged, chassis sharing a common faceplate and containing left-channel signal, powered input switching and volume control functions, and right-channel signal, respectively. It is thus earnestly "dual mono," with the delicate audio signals in the outboard modules clearly separated from the low voltage circuits in the center module which are fed from an external power supply. Three inputs and two outputs, all single-ended, are provided at the rear of each of the signal carrying modules. The Placette's two-inch height, solid black color, and chrome toggle switch (for relatively large changes in volume), give the Passive Linestage a look resembling Levinson gear dating back to when there was really a Mark behind the

marque. Of the same era, although of questionable use and aesthetics in today's music rooms, are the ears and holes at the ends of the faceplate for mounting the unit in a pro-style rack-mount.

The front panel of the center module contains three vertically-stacked LEDs to indicate input source and which, though function-

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## **Don't think that there are sonic differences between passive units? Think again!**

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ally identical, are labeled CD, Phono, and Tuner. There's also a row of seven LEDs representing relative volume level in binary code (!); that is, combinations of these lights lit and unlit represent, by simple arithmetic, volume levels 0 through 127 (which last delivers unattenuated or "unity" gain). While this requires more mental gymnastics than I care to do while enjoying music, it's really of little consequence to know you're listening at level 16, 43, 78, or 101, since these numbers are all relative and heavily dependent on your other equipment, the recording, and personal variables. This, of course, means one can't presume equivalent volume levels at a given Passive Line Stage setting when making comparisons of different source equipment. I listened to CDs at levels between 1 and 40 (more often at the lower end) and LPs between 80 and 120 depending on the recorded level, type of music, time of day, my mood, and both upstream and downstream equipment used. Unless you're going to document and then replicate all the relevant conditions that contribute to the perfect binary-coded listening level for a given musical track, you'll probably just use the Placette-supplied Sony universal remote to quickly raise or lower the volume unit-by-unit to achieve the aural ideal for that track on that occasion.

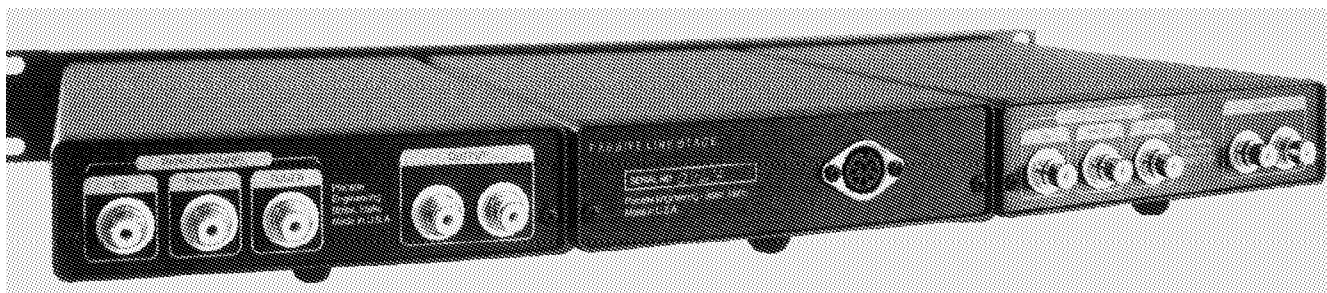
With 127 discrete volume levels from which to select, I quickly found using the remote controlled Passive Line Stage to be very much like getting your back scratched: "A little left. Now up. Higher. Higher.

Now down just a bit. Ahhhh!" Once you have the ability to control volume as finely as Placette's Passive Line Stage permits, you'll quickly discover and rejoice in the fact that most recordings do have an optimal playback level. Like you, I've often read such contentions, but the Classé's 32-position pot permitted me to only occasionally hit the volume bull's-eye dead center. I suspect that, once experienced, you'll be reluctant to relinquish the fine degree of volume control and resulting musical satisfaction the Placette offers.

Units built to date are 6.5 inches deep, but future pieces will extend an additional 2.5 inches, providing more interior real estate to accommodate various custom options, of which there are plenty. You say you're a proponent of, or locked into, true differential circuits and XLR connectors? Coming right up! You find a balance control necessary? Got it right here! A mono switch? You betcha! You want oxygen-free copper jacks? Can do! It's worth noting, however, that Guy finds none of these items improve sonic performance, so he's left them off the standard package, including my review unit.

A potentially useful modification is an alteration of volume scaling. For high efficiency systems, step 1 of stock units can be bit too loud for late night listening, and the volume differences between each of the first few steps too great for fine ("Ahhhh!") control, though this is not true between steps at higher volumes. Again, with Placette, No problem! If you need it, or simply just want it, they'll build it; of course with reasonable additions to the \$1400 base price. Finally, a reconfigured mute function (provided at no additional cost) may prove necessary for owners of some Classé, McCormack, or other amps which aren't agreeable to open input circuits, which is how Mute is implemented by the Passive Line Stage, so as to preclude the resulting faint buzz we experienced when the unit is muted.

As with other first-rate audio components, it's very hard to characterize or perhaps even discern, the Passive Line Stage's sonic signature. The overriding aural impression I got, both on initial listening



and throughout every change in supporting components, was that I'd swapped out our dynamic Dunlavy SC IIIA speakers for a pair of electrostatic Martin-Logan CLSs. For me, an enthusiastic 'stat devotee, this was an unexpected delight. This sonic recollection was so strong I eventually dug out some old reviews of the CLSs and was not at all surprised to find many of the same descriptions I'd used in my listening notes for the Placette: Spatially large, low distortion, superb clarity, much low-level resolution and, yes, great transparency. As detailed below, the one difference — and it is significant — is that the Passive Line Stage doesn't lighten or thin out the low frequencies the way the CLS can. While it may be stretching the point a bit to say that the CLS is to speakers as the "PLS" is to preamps, I hope the analogy is useful in conveying how the PLS fit into our system.

The Placette Passive Line Stage can be likened to an all-star center fielder or Pro Bowl middle linebacker who gracefully accomplishes routine and challenging plays alike with seeming ease, and whose performance improves the play of surrounding teammates. Our Classé Six's phono performance appeared significantly enhanced by running its buffered *Tape* output into the Placette, bypassing the preamp's volume and other controls, and providing remote control capability to boot. The tinge of "darkness" associated with some early Classé gear was gone, replaced with an airier, better-balanced tonal presentation, as evidenced by Jim Hall's *Live in Tokyo* LP (Paddle Wheel GP 3217) among numerous examples. Transients were snappier, lost low level detail was re-found and, indeed, transparency greatly enhanced. In his long ago review of the Six, Tony Cordesman said "This is one hell of a clean and neutral phono stage." Little did he (or I) know what additional potential lay awaiting release by the PLS.

Such "release" as well as the aforementioned sense of "graceful ease" were recurring perceptions with the Placette, whether using phono or line sources. Instruments and, especially, vocals seemed to flow effortlessly from the speakers at any volume in a way that repeatedly brought a smile to my face. Clarity was at times astonishing throughout the frequency range (those Vishays at work again, I suppose) as, for example, with the walloping acoustic bass, rich female and male voices, and gloriously harmonic triangle that kick off Rickie Lee Jones' *It's Like This* (Artemis 751 057-2). The sense of "life" here was palpable and the soundstage blossomed from our speakers as if to fill a cathedral. While images were not as substantial or 3-D as I've experienced with this recording, they were quite good by any standard.

Please don't misinterpret "flow effortlessly" to mean absence of impact. Through the Placette, Danny Thompson's opening bass lines on The Blind Boys of Alabama's *Spirit of the Century* (Real World, 7243 8 50918 2 7) are as aurally impactful and pleasurable as any I've heard. But they're not concussive or tiring, owing (I suspect Guy Hammel would contend) to the absence of distortion. This is true as well at the other end of the spectrum as evidenced on Jimmy Cobb's master class in cymbal work on *Only for the Pure of Heart* (Fable/Lightyear 54264-2). Miles Davis' former percussionist coaxes more nuance from his ride cymbal than I'd previously ever experienced, and the Passive Line Stage conveys all of this, along with Cobb's occasional *crash* punctuations, with verve.

Among my favorite types of musical offerings are early-career releases of artists who later go on to become Big Stars. Usually issued on retrospectives, such recordings contain the blockbuster hits and often some relatively unknown gems. Near the top of this list is Tom

Waits' *The Early Years, Vol. 2* (Manifesto PT3 40602) which contains many of his later hits done in "basement tape" fashion, with Waits assuming a troubadour rather than barroom-boozier persona. The power here is more one of expressed emotion than instrumental energy; for example, "Every time I hear that melody something breaks inside" or "I wish to God you'd leave me, and I wish to God you'd stay." These are simple, quiet, personal songs delivered untempered by the Placette, and are quite able to touch the listener. This "touching" alone is, to me, worth the price of admission to high-end audio, especially when it's made possible by such modestly priced equipment as the Passive Linestage.

But be forewarned, while the Placette may give you one hand — for example, improved phono stage performance — it may take away with the other. It immediately highlighted the deficiencies of our ancient and inexpensive CD player, causing me to mournfully (heh, heh!) recite that old audiophile refrain, "Honey, we've got to buy a new piece of gear." [Editor's Lament: Uh, hey there, Dan, are you hinting about what you'd like to review next? — Gene Pitts]

In order to better test and understand the Placette's capabilities, I borrowed a couple of very fine Linn CD players from the gracious folks at *A Sound Look* here in Santa Fe. On loan were the \$1900 Genki and \$3600 Ikemi single-box units. I couldn't summon the nerve to ask Leonard for the \$20,000 Sondek, and couldn't afford the round-the-clock guard I'd have to hire if I had. [Editor's Further Lament: Neither can TAV. — Gene] Each of these offered much our old player didn't: Air, delicacy, robust images, and considerable warmth. Because this is not a review of the Linn players, I won't go into more detail here. However, the differences among the three units were clearly evident, with the excellent performance of

the Linns effectively and thoroughly conveyed by the Passive Linestage. More importantly, other than the aforementioned electrostatic speaker-like clarity, transparency, and speed, I couldn't discern any sonic attributes common to all line sources and, therefore, directly attributable to the Placette.

The Genki, with its provision of both fixed and variable (by internal volume control) outputs, provided another opportunity for direct comparison with the Placette. And, again, Hammel's Vishays won hands down and in all respects. Please note, this is no criticism of the Genki's volume control; both it and the player it serves are quite good, but no one should expect the performance of a \$1400 volume attenuator in a \$1900 CD player. In my experience, you'll need to plan on spending at least three or four times the Placette's price to get an active linestage that can begin to compare. (And, although I haven't yet heard it, one might reasonably start the search with Placette's \$4,000 active linestage that employs the same volume attenuator as this passive unit.)

So, now that I've convinced you how good the Placette Passive Line Stage is, or at least convinced you to take advantage of their "30-day no-risk trial period," it's time to return to the issue of compatibility. And fear not, Pilgrim: One needn't solve the mysteries of the universe or be the seventh son of the seventh son to have the Placette propel — or, rather, allow (this is, after all, a *passive* unit!) — your system to reach great sonic heights.

Generally speaking, the two biggest bugaboos for passive attenuators are insufficient output from the signal source and too high an input sensitivity of the amplifier, though high interconnect capacitance and mismatches of impedance between components can be problems, too. John Dunlavy has written extensively and emphatically that interconnects should *always* be of low capacitance preferably less than 100 pF for the total length of the cable, to avoid distortions, including rolled-off high-frequency response.

Shorter cables are obviously preferred, so if your current interconnects aren't as short as possible, your system may already be per-

forming sub-optimally. Although insertion of a passive attenuator may make the sonic consequences more evident, it shouldn't take the heat because you've fallen prey to ad hype for exotic cable materials or configurations. Placette, by the way, will soon be offering (at \$200 per meter pair) an ultra low capacitance interconnect that Guy has used with the Passive Line Stage in lengths up to 20 feet without deleterious effect. He sent a couple of

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## It turns out that "nothing" is what Placette's Passive Line Stage does best.

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one-meter prototypes that I used for this review and which, although I did not make comprehensive comparisons, I found indistinguishable from my pricier Tara Decade cables.

Impedance matching, which manufacturers and reviewers of other passive attenuators discuss at length and prescribe in detail, is largely a non-issue with the Placette Passive Line Stage, and almost certainly that will be so if you're using a solid-state source and amplifier. What *is* important is that the source be sufficiently powerful to drive your amplifier, if not to full output, at least to adequate level to be musically satisfying in your room. With two volts pretty well *the* standard source output level, and with amplifier sensitivities typically being

in the 0.5 to 1.25 volt range for full output — again, at least for solid-state units — Guy sees his Passive Line Stage as the likely winner in the great majority of existing systems if cable capacitances are appropriate. It sure was a winner in my system, even when using a borrowed Creek phono preamp that had a pretty low 0.25-volt output and my amp which has a 1.6-volt input sensitivity.

I'd anticipated that because the Passive Line Stage really doesn't *do* much, there'd be little to say in this review. However, it turns out that the *nothing* this Passive Line Stage does — no gain, no distortion, no difficult impedance loads presented to your source equipment, etc — can improve even a reasonably good performing system, and that's certainly worth extensive discussion. The Pet Rock and Seinfeld proved that *nothing* can be the basis of tremendous success, and I encourage you call Placette and find out if the Passive Line Stage's *nothing* can successfully enhance your system's performance and musical satisfaction the way it did ours.

Guy Hammel is available via a toll free number, quite cordial, and exceptionally informative. (He even coached me through a fault detection regimen to diagnose a problem we had with our amp!) And while you're doing that, I'll head to the music room, fire up the Placette Passive Line Stage and (heh, heh!) our new SACD player. Ahhhh!

## NOTES

**Placette Passive Line Stage**, \$1400.00 base, various options additional. Placette Audio, 682 Granite Way, Boise, ID 83712, phone 208/342-6141, fax 208/333-0138, website [www.placetteaudio.com](http://www.placetteaudio.com), e-mail [placete@aol.com](mailto:placete@aol.com).

### Associated Equipment

Immedia RPM turntable and RPM-2 arm, Grado TLZ cartridge, Sony DVP-S9000ES SACD/CD player, Classé Six preamplifier and Twenty-five amp, Dunlavy SC-III A speakers, tonearm cable by Yamamura, Tara Decade used as digital interconnect, Audiotruth Lapis x3 balanced interconnect, Meitner 25-2-24 speaker cable, Classé reference power cord (on preamp), Marigo Gen 3 power cord (on amp), and Monster HTS 2000 surge protector/RF filter. Quad 34 and 405-2 amplification and custom-built 2-way stand mounted speakers are used in the satellite-based video system, which also incorporates a Sony CDP-550 CD player.