



hardware

manley

Impressions: The Manley Steelhead phono stage

as reviewed by David Robinson



The Manley Steelhead, Version 1.0 (photo courtesy of Manley Labs

(All photographs by David W. Robinson except as noted courtesy of Manley Labs; image processing by Robinson.)

The Manley Steelhead: A Brutus Award winner for 2003!

DAVID ROBINSON'S SYSTEM

LOUDSPEAKERS

Kharna Grande Ceramique loudspeakers, Nova Rendition II loudspeakers, Nova Ovation monitors.

ELECTRONICS

Linn Klimax power amps (1 pair), Meitner EMM Labs Switchman-3 (SWM3) 2/6 channel preamp, Balanced Audio Technology (BAT) 6200 2/6-channel reference amplifier, Linto phono amp.

SOURCES

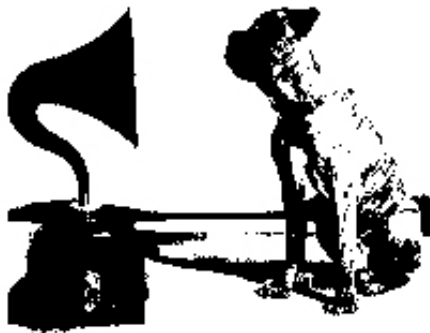
Meitner DAC6 2/6 channel DAC, Meitner-modified EMM Labs Philips SACD 1000 w/optical DSD output (2/6 channel), Linn CD-12 reference CD player, Linn LP-12 turntable, with the Akiva reference cartridge, Ekos tonearm, the new Lingo power supply, Cirkus subchassis, Linn reference silver phono cable, Revox B-77 Mk. II 15ips half-track reel-to-reel tape recorder, Pioneer RT-707 7.5 ips quarter track reel-to-reel tape recorder, Nakamichi Dragon cassette deck, Panasonic SV-3900 DAT player, Magnum Dynalab FT-101 tuner w/Audioprism 6500 internal antenna, Taddeo Digital Antidote II, Monarchy Digital Interface Processor (DIP) modded by JENA Labs

CABLES

Interconnects by JENA Labs, Cardas, and Kimber. Speaker cables by JENA Labs, Cardas and Kimber. Power cables by JENA Labs, Cardas, Kimber, FIM, and VansEvers.

ACCESSORIES

Vibraplane turntable isolation platform, Sistrum SP-101 amplifier stands, Black Diamond Racing "The Shelf" and cones, Extremephono VCS Platforms w/Black Diamond Racing cones under the Switchman-3, JENA Labs Fundamental Power (Washing Machine) 6.1 (line conditioning for primary sources), Shakti Stones and Shakti Onlines, Tice Signature III Power Block (line conditioning for secondary sources), VansEvers Clean Line, equipment racks by Michael Green and Target, VPI 17F LP cleaning system with the Record Research Lab LP cleaning system, Torumat TM-7XH Superfluid cleaner, and



The call of the turntable...

To say the word Romanticism is to say modern art—that is, intimacy, spirituality, color, aspiration towards the infinite, expressed by every means available to the arts.

[Charles Baudelaire](#)

Romance in fine audio is nowhere near dead—provided you have a turntable.
D.W. Robinson

LPs and the loss of sensibility

I have to confess that I've never owned an audio system that didn't have two sources in it: open reel tape, and a turntable. Mind you, they weren't always the world's finest... I started out with a BSR 810 direct-drive table that had an ungodly rumble (college student ignorance, that) and a Sony TC-630 tape recorder that was the best that I could afford after working for nearly a year when I was a junior in high school. (Most of my wastrel (!) friends saved their money to buy cars. I saved that vice for later in life.) Sure, it wasn't an Ampex or a Revox, but it gave me many years of good service, and allowed me to make a number of recordings that increased my appreciation for the audio arts early on.

The upgrade path followed in the later '80s, when I finally graduated to better components. That's when I first got to hear the Linn LP-12, which was such an amazing experience that I purchased one on the spot. The superiority of LP playback to CD playback was clear to me then, and so I made sure that I continued to have both LP and CD sources as I journeyed on into fine audio—and, unlike some, I didn't sell a single one of my LPs. (Those of you who did... bad move!)

And I still have every one of them.

The best of these, together with a small collection of 7 inch and 10.5 inch open reel tapes, acted as a constant reminder of what standard CDs were *not* delivering throughout the 1980's and 1990's: smooth, rich, non-fatiguing music without harshness, or that etched "CD sound" that made it the choice for extended listening. (Meanwhile, CD playback spent a lot of time drifting into the prime choice for "background music," or "what I play in my car." Ech.) If you didn't spend time with analog sources... if your experience was a constant diet of Red Book PCM digital... then it's *almost certain* that your sensibilities have not been trained to know how good audio can be.

You are what you listen to; what you *think* you know can hurt you.

Reference sources in fine audio

acoustical treatments by ASC,
VansEvers, and Michael Green.

To be blunt: currently there are only three true reference-level sources for fine audio, in my opinion. The first is **open reel tape**. Master tapes or first generation editions are preferred, with half track far superior to quarter track, and 15 inches per second (abbreviated ips, and very hard to find) and 30ips (only the pros have these) preferred to 7.5 or 3.75 ips. Handling equalization and biasing is a truly daunting task, well out of range for most folks. Ditto for cleaning and maintaining the heads, and servicing the drive mechanisms. Then there was the problem that most people had in dealing with the proper handling/threading/storage of tapes (which is why cassettes were so popular), and that open reel tapes couldn't be mass-produced satisfactorily. The combination of requirements made it pretty hopeless for just about everybody; there's really no mystery why open reel tape never really took off with most consumers.

The second option for superior audio reproduction is **well mastered and pressed LPs** that have been properly maintained and stored, and are being played back on a turntable system of real quality. We are actually in the midst of a "golden age" for LP playback, with the entire playback chain—tables, tonearms, cartridges, isolation platforms, accessories, power regulation/conditioning, cables, phono amps, and superior LP mastering/pressing technology—reaching unprecedented heights. This is pretty ironic; at the same time that LPs have receded to a small but robust niche in the audio marketplace, they are better than ever!

The third option for superior fine audio sources is **well mastered SACDs** in either mono, stereo or surround modes, depending on the source. The preference here is given to pure DSD recordings, with DSD mixing and mastering...no PCM in the chain. Of secondary preference are superior open reel master tapes done directly to DSD. I believe that the future of fine audio is in well executed surround sound from SACD or SACD II sources; properly done, pure DSD SACD is my choice for the closest to the original source...and yes, that includes LP playback.

(For those readers interested in DVD-A as a candidate source, my read is that what I've heard so far does not measure up to DSD/SACD. I have a very strong impression that PCM, even at higher sampling rates and larger dataword lengths, adds a sheen or edge to recordings that my ear picks up as "Aha! PCM digital nastiness." There are even PCM mastered SACDs that display this tendency. What is worse, DVD-A's do not have nearly the capacity to do a given recording at the preferred 192kHz/"24-bit" specification if they are including both stereo and surround tracks. Therefore, I do not classify DVD-A as a reference grade audio source at this time. I will re-visit the question in 2004, once our Linn UniDisk review project gets underway.)

Turntables: Ritual and Romance

Let's turn back to the second of our reference sources, turntables. If you're looking for the romantic in fine audio, this is where much of it is. (Almost all of the rest will be found in tubes, open reel tapes, and anachronisms like gramophones. It's too soon to say whether or not surround sound will ever transport us to the point of the truly holographic; if so, then there will be serious romance there, as well!)

So where does the romantic spirit in audio come from? Well, in the case of turntables, you have an audio gizmo that is bound up in preparations, care and maintenance—all the things that make for commitment and attention to the *act of listening*.

In other words, in audio romance is ritual.

Everything has to be *just* so with turntables, due to the nature of the beast.

People who are used to CDs and cassettes have to change their thing, or it won't swing.

I won't go into my ritual stream for LPs right now...it's time to go preamp chasing... but my impressions of any part of a turntable system are wrapped up in a gestaltic groove, just as surely a part of the art of listening as any component. (Might be worth a column someday, though—how do you get ready to dance the dance with LP?)

Speaking of which, I guess I should get to it, eh?

The Manley Steelhead



The Steelhead, Version 1.0, in place on the Target stand

This project was all Chad Kassem's fault. We were chatting about phono amps over the phone some time in 2002, and he asked me if I had heard the Manley Steelhead.

Nope.

"Dude! You really should check it out! It's amazin'!"

Well, Chad knows a thing or three about the subject, so I got in touch with 'Vanna, who is really one helpful and savvy person. It took some months...Manley Labs was really busy...but she finally bounced a unit my way in the early spring of 2003.

This would be my first tubed phono amp in quite some time; most of the phono

amps that I've listened to have been solid state. Up to this point in time, my reference for tubed phono stages was the stellar phono stage in Scott Frankland's remarkable MFA MC Reference preamp. (Only 15 of those were ever made, as far as I know. I've had the privilege of hearing two of the 15 in what are still a couple my best listening experiences ever.) It was truly unreal...really smashing. I was curious to see how the Steelhead would stack up against my memories of the MC Ref.

My first take on the Steelhead as I unpacked it was that it was *really* built. A beefy separate power supply, with hefty dedicated connector, and a main control unit that looks like a full-blown preamp. Which, as it turns out, it can be. EveAnna says the name came from a combination of "steel" from their unique transformer, and "head" as in "head amp"... all maintaining the fishy theme that 'Vanna and company seem to be fond of.



The Manley Steelhead Power Supply...cowabunga!

I placed the main control box on the middle shelf of my trusty-rusty Target turntable stand and the power supply on a separate Michael Green floor stand. The power supply was plugged to my Tice Signature III Line Conditioner via a "Cardas Blue" (you see it in the photo below). My Linn LP-12 was tethered via its new Linn silver reference cables (the smaller grayish input leads on either side of the power connector below), while Cardas Golden Cross interconnects (the larger golden brown cables) ran to the preamp.



Rear view of the Steelhead fully cabled; note the dedicated power cable in the middle of the chassis

The gizzards 'n such

Once the unit was in place and warming up, I settled down to check out the controls and research the internals of the Steelhead. The unit I had been sent was a Version 1.0, which has since been superseded by the 2.0. EveAnna told me that there was no particular difference in the sound of the two, but that the 2.0 had some significant changes in how it handled I/O. More on that later.

Version 2.0 of the Steelhead (photo courtesy of Manley Labs)



The front controls of the Steelhead Version 1.0:

- Gain dB (50, 55, 60, 65)
- Input (MM, MC1, MC2)
- 2 sets of 2 (L/R) Load Cap(acitance) pF: on left, x 100 (0-10); on right, x 10 (0-10)
- Load Z (Ohms): MM = 25, 50, 100, 200, 47K, MC = 25, 50, 100, 200, 400
- Blue LED/buttons for Mute, Line (input), Sum (mono), and Standby
- Big Volume knob to the right for variable output

If you take a look at the photo of the Version 2.0 above, and compare it with the photo of the Version 1.0 at the beginning of this article, you'll notice that there is one additional LED button to the right, by the volume knob. This is the new DIM(inish) function in 2.0, which allows 2.0 users to "quasi-mute" the Steelhead while dropping the needle in the haystack. Better than fiddling with volume or popping in and out of mute, this allows you to hear what you're "doin' during the cuein'"—very good thing! Wish I'd had it on the unit that I reviewed....

The rear I/O include:

- Right RCA output (vari, fixed)
- Ground (chassis, circuit, with default strap between them)
- Right RCA inputs (MM, MC-1)
- L/R RCA Line inputs
- MC-2 DIN input (older configuration; since replaced in Version 2.0 with MC-2 RCA)
- Dedicated power input (proprietary, non-IEC)
- Left RCA inputs (MM, MC-1)
- Chassis ground
- Left RCA outputs (vari, fixed)



Overall, I adjudged the control layout and I/O to be exceptional. New users can master the capabilities of the Steelhead with some reading and study; experienced users will delight in the flexibility and ease of use that the Manley provides. Multiple tables are supported, and if you don't want to use a separate preamp, the Manley will drive your amplification directly via its variable output option.

Turntable junkies will definitely appreciate the variable impedance loading/capacitance loading done right at the front end. No more climbing around inside a phono amp to set DIP switches! You have two MC (moving coil) inputs selectable from 25-400 Ohms, and an MM (moving magnet) input that goes from 25-47K Ohms. Capacitance is selectable from 0-1100 in increments of 10 pf. This can all be done on the fly, due to the fact that the clever Mitch Margolis Munchkins have come out with some trick tranny action that allows you to do this without blowing speakers or powering off. Me hat's off to the folks involved—*excellent!*

The fixed vs. variable output option makes the Steelhead *very* different from most phono amps. If you want to run the Manley via a separate active preamp as I did, you simply use the fixed outputs and run them into any available line input on your pre. But if you want to try running the Manley directly to your amps then you can dispense with an active preamp. Just output via the variable output RCA jacks and pump it directly. You'll control volume by the honkin' large and very smooth Noble-style pot on the right front of the Steelhead. You can do a couple of turntables pretty easily this way (especially with Version 2.0), and you can also run and control a single line level input (e.g., your SACD player) quite comfortably.

Also very helpful to those who are listening to mono albums is the SUM button, which pours all the signal into one bucket before output. Mono purists generally agree that this is better than running on "mono via stereo" that many phono amps leave you with.

Internally, the Steelhead has a complement of six tubes to do its magic. Two 6922's and four 7044's do the main lifting...no special surprise there. (Tube rollers should note that one of my friends in the industry says that the Steelhead responds well to tube upgrades. Make sure that you check with Manley Labs or a tube expert for recommendations before doing anything on that front, unless you know *exactly* what you are doing.) The Manley uses standard RIAA, though this is intelligently dropped in ahead of line input and variable gain in Version 2.0. What is surprising is the "autoformer" transformer magic that Mitch Margolis of Manley has come up with to provide all the front panel control flexibility without powering off or tossing internal switches. Think of it as **"gain without pain."** Manley Labs deserves a big "thank ye

kindly!" for some serious audio creativity here!

The Sound

As noted, I ran the Steelhead exclusively with **Cardas Golden Cross interconnects and power cabling**; the synergy between the two is very good. I gave the Steelhead several days to warm up. During that time, I tested variable vs. fixed operation (I went with fixed) and swatted a minor hum problem by floating the phono/chassis ground. I have to watch RFI on the hilltop where I live, which meant that I played with cable placement. Apparently Version 2.0 of the Steelhead has enhanced RFI rejection capabilities, which would be a *very* welcome thing in my setting. Once everything was set, I had only a very faint white noise out of my speakers, a very fine result.

For Linn's new reference cartridge, the Akiva, I set loading to 100 Ohms. The Akiva is relatively low output, so I dialed the gain to 65dB. This worked fine for me; your mileage will probably vary, so test by ear in your local system. I am also using the new version of the Linn Lingo power supply. (By the way: if you are an LP-12 user and don't have this new Lingo, you really *must* upgrade; it is a noticeable improvement over the original Lingo... and both slaughter an LP-12 with standard power supply. Enough said.)

Most of the listening was done with the Linn's new reference stereo preamp, the **Kontrol**, a Brutus Award winner for 2003 (see [Brutus Awards](#)). Amplification throughout the review period was provided by the exceptional **WAVAC HE-833 SET monoblocks**, with the **Kharma Grande Ceramique** loudspeakers fed by **JENA Labs Pathfinder** speaker cables (another Brutus Award winner) at the far end. (For more about my ravin' experience with the HE-833's see [WAVAC 833](#); the Brutus Awards for 2003 garnered by WAVAC, Kharma and JENA Labs is listed at [Brutus Awards](#)). Isolation was accomplished with my Vibraplane platform; record cleaning was done using the VPI 17F machine and Record Research Lab's terrific Vinyl Wash solution.

A variety of LPs from my library were used, mostly some newer titles from Chad Kassem's APO, Steve Hoffman's DCC LPs, some vintage MoFi (especially my treasured Beatles box set), some Simply Vinyl, some Classic Records, and so on. Favorites like Greg Brown's *Poet Game*, the Decca reissue of John Mayall and the Blues Breakers, Sting's *Mercury Falling* on 180 gram, lots of the Classic Records Crosby/Stills/Nash/Young, piles of Leonard Cohen—you know, wheelbarrows of the good stuff!

The first thing that I noticed was that the Steelhead has a remarkable sense of ease and naturalness in presentation. One of the first LPs that I played with an old favorite of mine, the Classic Records reissue of David Crosby's *If I Could Only Remember My Name*. (By the way, if you don't have this LP... you should! Wish they would issue it on SACD...) The Steelhead brought the dreaminess of this album out in a fine way. Properly done, there's a sense of roundness in space and well integrated harmony that leaves me in a reverie, even if I'm in my *PFO* office down the hall. *In* the room, an excellent presentation of the vinyl leaves me with eyes wide shut, and the wine glass in my hand in peril of hitting the floor.

The Steelhead passed *that* test with flying colors!

Another thing that I look for in a fine phono amp is its ability to place surface noise into its proper listening plane, just like a great reel-to-reel playback system will do with good tapes. There is inherent noise in LP playback; quite apart from obvious

obnoxiousities like ticks 'n pops, rumble, and inner groove distortions, a stylus in a clean groove of a fine pressing produces a white noise hiss all of its own, a layer above that of the underlying tape hiss of the reel used to produce the master stamper. There's no way to eliminate this; direct-to-disk recordings can eliminate the master tape (at the cost of not being able to edit the recording), but you're still going to have some level of groove noise.

What you want to do is to minimize the noise via the best table, tonearm, cartridge, isolation devices and cleaning accessories that you can afford, go with LPs that are the best you can source, and then make sure that your phono amp does a good job with the inherent sound of the good grooves. If this is the case—if you have a superior phono amp—you'll *not* notice the sound that good grooves make; like the white noise of analog tape on a great deck, it will simply be a part of the "presence," the atmosphere of LP playback.

The Steelhead passed this test in exceptional fashion. All the LPs that I played had that fine sense of "air," of non-intrusive groove noise that they should have. Give the Steelhead an "A" here!

Tone and timbre were spot on. Greg Brown's "The Poet Game" is a heart-breaking song, filled with yearning and some great guitar playing. I look for the sense of fingers on string, of air through vocal cords; no problem. He's right there. The mellow sound of "Uncle John's Band" on the reissue of the classic Grateful Dead album *Workingman's Dead* arrived in vintage shape. Not "audiophile reference," that obsessive creature, but very pleasing nonetheless!

Another favorite set of albums for me are the Simply Vinyl reissues of Nick Drake. Achingly melancholy, haunting stuff this... if you don't have them, you are truly missing out. The SV reissues are problematic to my ears; some are good, and some sound a bit forward/dry compared with vintage LPs. The trick here is to have a phono amp that lets you hear what is happening with a given pressing/reissue. The Steelhead rates a "neutral, reference grade" for handling these recordings so well. In the case of Nick Drake, that means "gain delivers the pain."

Which is what Drake was all about, poor fellow.

Other vintage tapes, like the Creedence Clearwater series that Chad Kassem and Company reissued in such great pressings have the "sound of their times" without further discernable signature by the Steelhead. On the other hand, modern state-of-the-art recordings like Radiohead's *OK Computer* in the hefty Brit pressing showed that the Steelhead could handle complexity and dynamics with real aplomb.

The Steelhead showed excellent tonal extension, with excellent and delicate high frequencies and controlled bass. Midrange tonalities were correct; not nasal, not sucked-out. (The Kharmas would have smoked this out in a heartbeat.) The top-to-bottom coherence of LP reproduction was outstanding.

Imaging and soundstaging were also excellent. The Karma Grande Ceramiques are world-class champions when it comes to vanishing into a listening room and providing seamless, tonally correct audio reproduction. The Akiva/Linn Reference Silver phono cable combo provides the most detailed, extended, clear presentation of LPs ever done by Linn. (Me, I'd guess that folks at Linn have been listening to SACDs and DSD!) It makes it easier than ever to check for good image placement, as well as how wide, deep and high the music is. The performance of the Steelhead was exceptional in this regard; the dimensionality of the presentation was very satisfying, particularly with well-recorded titles.

I should note that the Steelhead proved to be absolutely reliable. No problems, no tube re-seating after shipment, no hassles with any front panel option. Not once in the months that the Steelhead was here was there a single problem. And them's the good kind of "bloody dull!"

What else can I say?

The Steelhead is a brilliant design, well-executed, with a bevy of very useful features for the turntable lover. I suppose that some might fault its "pro looks"; me, I find it to be very cool and attractive looking.

Where it counts—the *sound*—is where the Steelhead knocks it right out the ball park. To be useful, flexible, and exceptionally sounding...all at the same time...is one helluva achievement.

Then there's the old "subtractive test." When you remove a component and replace it with something else, how do you like it? Well, now that the Steelhead is gone, I *really* feel the loss. Less air; less extension; less presence, for sure. My Linn Linto phono amp is very good—but it is NOT a Steelhead.

Hey! EveAnna!

Conclusion

The thing that I found most outstanding about the Steelhead was the truly intelligent set of innovations and touches it featured, the combination of which produced a phono amp that was easy to use and absolutely wonderful to hear. It is clear that EveAnna, Mitch and Company designed the Steelhead with a great deal of thought, creative engineering, and produced a phono amp built for people who love LPs, and want to get the most out of them without undue hassle. It's a brilliant achievement... no less!

The Steelhead has the best sound of any tubed phono amp that I have heard since the days of Scott Frankland's MFA MC Reference, which is quite a compliment to the Manley design. ***I would therefore say that the Steelhead is one of the two best tubed phono amps that I have ever heard***—and the only one of the two currently in production. If you are looking for a phono amp that has both glorious sound and remarkably flexible controls, one that can double as an active preamp (which can help you justify the cost, no?), then I can do no better than tell you that the Manley Steelhead hereby receives ***Ye Olde Editor's "Very Highest Recommendation."***

If you are in the market for a "phono amp to retire with," you would do well to give very serious attention to the Steelhead.

It is for all these reasons that I awarded the Manley Steelhead the 2003 Positive Feedback Online Brutus Award for phono amps.

Manley Steelhead

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For more on the Steelhead specifically:
www.manleylabs.com/containerpages/STEELHEAD.html

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