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Halo JC 2 preamplifier – A preamp for all seasons

as reviewed by Max Duidious



All images courtesy of Parasound

Those of you who read my columns regularly know by now that I'm partial to gear that goes through a series of refinements by re-iteration. I tend to like those kind of pieces more than the "startling new breakthrough" kind of things. If the road to Hell is paved with "good intentions," then the road to bankruptcy is paved with "amazing new breakthroughs that will revolutionize audio." It's like my father used

to say: "Never buy a new car in the first year of production. Give the manufacturer a few years to get the bugs out." The history of automotive "recalls" gives ample support to his strategy. For John Curl, the JC in JC 2, and the legendary designer of this preamp, the Halo JC 2 represents the tenth iteration, or so, of the basic design that first surfaced in 1975 as the Mark Levinson JC 2 preamp. It is the same, only different. And much, much better. You would expect that of a very smart man who has been on the job, reading books and articles, painstakingly developing new pieces, for 32 years. This may be his masterpiece for the masses.

I believe in John Curl, though we've met only once, at an Audio Engineers' Society in 1981 or 1982. I believe in John Curl because of his methods. He subscribes to the system of progress by incremental improvement, of reiteration on a basic circuit to bring it closer and closer to the ideal. Our relationship is a telephone friendship. I sometimes phone him up for lectures on problems I'm having trying to understand some circuits. He's been helpful to me on occasion. But, we are not partners in some joint venture. Nor do we hang out. I think in fairness, I ought to put that up front. He is an advisor of mine. I think we share some of the same approaches to audio methods. He is a methodological buddy.



Curl's Credentials

Curl, (He says "Curl here" when he phones me up and identifies himself.) in an exclusive telephone interview with your advance audio scout, is somewhat more forthcoming in telling of his work history. As someone famous once said, "The past is prelude." Who was that? I can't find it in my Dictionary of Quotations, nor online by Asking Jeeves. [I'd like to thank David Ryerson for pointing out William Shakespeare's *The Tempest*, act II, scene i, lines 253-54. Antonio is speaking. "Whereof what's past is prologue, what to come in yours and my discharge." And Curl's. Most misplaced quotes turn out to be either from Shakespeare or *The Bible*. Should'a known.] Curl did tell me that the Halo JC 2 followed on the heels of lots of other work, most of which resulted in new products being presented to the public, and some of which that did not; but it follows the same block diagram and fundamental circuit he developed at the request of The Grateful Dead a

generation ago. Everything he's done has led to this product, the Halo JC 2. Here is his pertinent work history, his career, in condensed form:

1975: The Levinson JC 2; by today's standards a pretty bare-bones version, but good sounding, line stage preamp. With some tweaking, a good low-budget unit for CD reproduction. Needs a free standing phono stage.

1977: Curl worked for Harmon-Kardon where he experimented with (then) new wrinkles in preamp design; symmetry in parts layout that avoids cross talk by field interactions. Parts layout proved very important, and to this day Parasound gear features these developments.

1980: Curl was interviewed by The Absolute Sound and gained more credit for his work and recognition for his innovations. Which led to –

1981: Curl began work for Denneson, a firm then specializing in Electro-Static loudspeakers. He worked on a preamp that had, among other features, an open loop design, a two-stage phono section, relay controlled (rather than wafer-style) contact switches, servo-controls, absolute polarity controls, etc. He was getting more and more sophisticated.

1983: He set up shop to build his Vendetta (phono preamp) on demand, "By appointment only." This was a very fine piece that incorporated all he had learned up to that point in the past seven or ten years. It was so good that it led to –

1985: Curl was approached by The Lineage Group, Saul Marantz as titular President. Curl designed an all-FET (Field-Effect-Transistor, as opposed to bipolar transistor) preamp for them. This piece reached the public and got mixed reviews (great sound, bad ergonomics), at a time when the country went into an economic slide.

1987: Curl set himself up as an independent manufacturer with his Vendetta. Eventually, he produced his own, boutique-level Blowtorch, a full-featured preamp in the cost-no-object category. And this led to –

1989: Curl began to work for Parasound as its design engineer. There he developed over time (among many other things) three preamps: the PLD 1000, PLD 1500, and the PLD 2000, in increasing degrees of sophistication, bringing what he'd learned over the years in the atelier to mass production.

1990: Parasound marketed the first of a long line of Curl designs to the public. These, and his work on three or four Parasound power amps, led to –

2005: Curl developed his JC 1 FET monoblocks for Parasound's Halo product line, each a 400 watt amp that received much deserved recognition from the audio critics and public, as a sweet-sounding yet very powerful solid-state amplifier.

2007: Curl developed his Halo JC 2 preamp, the tenth iteration of (what he says is) his basic design that began with the Levinson JC 2. The Halo JC 2 is a very high performer at a price that makes it very accessible to the audiophile who appreciates very high quality at a manageable price. That is not to say it is cheap. But when one considers the price/performance ratio, or bang for the buck, and the princely prices of some of the competition, it is a first-tier bargain.

Halo JC 2 Features

You could say the Levinson JC 2, the Harmon-Kardon prototype, the Dennison JC-80, the Vendetta, the Lineage, the Blowtorch, and the three Parasound preamps, nine in all, were the past prelude that led up to the current Halo JC 2—the tenth iteration. For those of you who still think this is not an all-out onslaught on the designation, "Best in Class," here are the Parasound website's list of features.

- 6 pairs unbalanced RCA line-level audio input jacks
- 2 input pairs can be switched to XLR balanced connectors
- Independent balanced/unbalanced select for the L & R channel
- Each channel's input is switched by its own gold-on-silver contact relay
- 4 output jack pairs with specialized functions:
 - 1 Main output jack pair is balanced XLR, polarity is switched by remote
 - 1 Main output jack pair is unbalanced RCA, polarity is switched by remote
 - 1 output jack pair is unbalanced RCA, inverted polarity only
 - 1 output pair is unbalanced RCA, normal polarity, fixed level for recorders
- Dual-mono left & right channel circuit boards minimize crosstalk
- Hand-matched complementary FETs
- Direct DC servo-coupled, no capacitors in the signal path
- Premium 4-gang motor-driven analog master volume control
- Separate TKD brand analog gain controls for L & R channel
- 3/8" thick aluminum shielding around audio boards

- Shielding prevents noise from power supplies & control circuits
- Separate output jacks for simultaneous normal & non-inverting polarity
- Aluminum chassis rear panel
- Remote control polarity switching uses gold-on-silver contact relays
- Vampire brand 24k gold-plated RCA jacks
- Neutrik brand premium XLR connectors
- Canare brand internal wiring
- High capacity R-core audio power transformer & inductor
- Hyper-fast soft recovery audio bridge rectifiers diodes
- Independent power supply for controller, relay coils, triggers, LEDs
- Remote control handset controls all functions
- Discrete IR codes for remote control
- Four 12v trigger output jacks for power amp auto turn-on:
 - Two 12v trigger jacks are switched by the remote handset
 - Two 12v trigger jacks are live when the JC 2 is turned on
- Two-way RS-232 serial port connection
- Line level inputs only; no inputs for phono
- Audio mute is switched by independent L & R relays
- Rear panel IR repeater input & loop out jacks
- Premium detachable heavy gauge IEC AC cord
- 2 6' (2m) trigger wires included
- Remote handset also controls Parasound Halo T 3 Tuner
- 3u chassis, rack-mountable
- Parasound 10 year parts, 5 years labor warranty



This list signifies to me that very great care was taken in the design and execution of this piece. It impresses upon me the degree of design and engineering skill that must have gone into its development. Among the parts listed are: Vampire brand RCA jacks, Neutrik brand XLR connectors, Canare brand internal wiring. This list goes on in the interior parts as well, up to "hyper-fast, soft recovery audio bridge rectifier diodes" for but one example. It is a testament to John Curl's and (his associate) Carl Thompson's design capabilities, and Parasound's C.E.O. Richard Schram's equally sure handed administration and management, that this team was able to bring this piece in at such a low price (\$4K) as they have (with some competitively performing pre-amps selling for up to five and six times as much, and more), and still get such high, first tier performance. What about its performance? Well, a look at a few of its most important specifications might impress you. They impresses me.

Key Specifications:

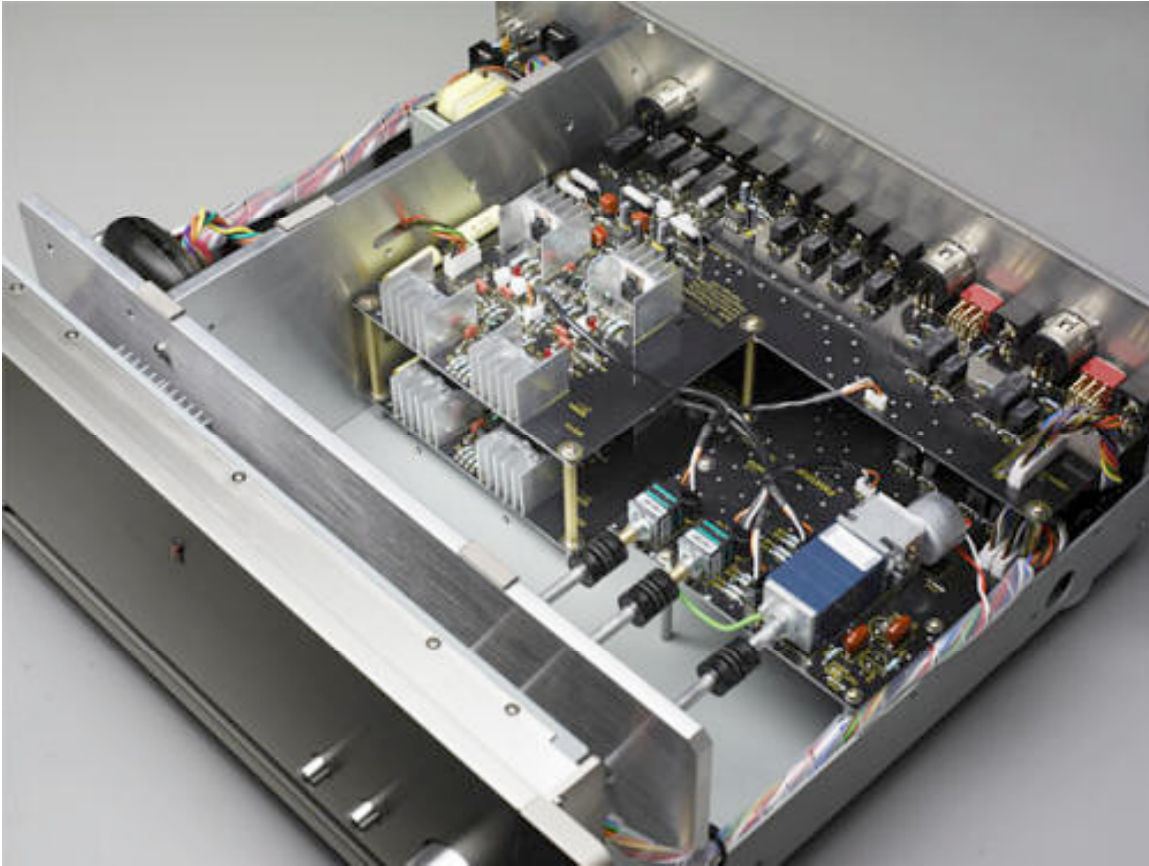
- *Frequency Response* : 5Hz - 100kHz, +0/-3dB
- *Distortion*: THD: < 0.003% at 100 Hz, THD: < 0.005% at 20kHz, IM: < 0.003%
- *S/N Ratio*: > 116dB, input shorted, IHF A-weighted, > 104dB, input shorted, unweighted
- *Crosstalk*: > 100dB at 10kHz, > 90dB at 20kHz
- *Gain*: 14dB, maximum, L, R Gain Control Range - 10dB

There are lots more specifications, but reading lists gets tedious. If you feel you must, you can find all the specs online at www.parasound.com. I think the telling specs are the wide bandwidth of from 5Hz to 100kHz (+0/-3dB). That is pretty damn fine. It makes "earthquake frequencies," though my K-horn sub woofers only go to 16Hz, to "super-sonics" more than two octaves above human hearing, and only 3dB down at 100kHz. The signal to noise ratio of 116dB, input shorted, IHF A-weighted suggests the preamp ought to be dead silent, and it is through my speakers with the volume knob turned full on. I mean nearly dead silent. (I

can hear a faint rushing noise from my Halo JC 1 400-watt amplifiers, but I have to put my ear right up to the speaker to catch it.) Likewise, the crosstalk is about 100dB down at 10kHz, and about 90dB down at 20kHz. That speaks to the success of the isolation of the channels due to great care in the layout and assembly of the dual mono Printed Circuit (PC) boards. Carl Thompson, who did the PC layouts, seems to have the wisdom and the talent to find the "sweet spot" for each of the boards. It is a knack. And like many things audio, it is a mystery. Thank heaven Carl has it.



The total harmonic distortion (THD) is three thousandths of one percent at 10kHz, and rises to five thousandths of one percent at 20kHz. Curl said he might have tried to get these circuits to measure even better, but that would have meant complications that had no real purpose but to get the measured specs lower. It seems axiomatic to try to keep the circuits as simple as possible, because each complication adds more parts and more solder joints and these joints alone are audible, and ultimately measurable as noise or distortion. So this was the only compromise Curl made. There are some rival units that measure a tad better in this or that dimension, but overall the specs are pretty impressive. How inky can you get an inky black background? As our friend, John Atkinson likes to say, "Those specs are the kind that lead us to expect good performance." To that I'd add, those kind of parts, too. And the Halo JC 2 preamp delivers on its promise. It is the best sounding preamp I've yet had in my own system. There seems to be more there, there!



How Does It Sound?

Well, how does a pane of high quality window glass look? It shouldn't have any ripples or distortions. It should only pass the light through, and when freshly cleaned, it ought to be the closest thing to no glass at all. That's what this preamp sounds like—the closest thing to no preamp at all. It sounds like a direct feed from my Marantz 8260 SACD player. The same, only different.

The best way to think about the Halo JC 2 is to consider what it doesn't do. It doesn't boom (or hang over, or ring) on bass drum whacks. It doesn't tizz up the highs (with after images, or tracer bullet effects). It doesn't smear the moment of attack (by having higher frequencies out of phase with lower ones). It doesn't blur fast passages (by ringing as seen on an oscilloscope as ripple on tone bursts). It doesn't confuse spatial information (by some combination of the above). It doesn't metalicize female voices (by slightly emphasizing their presence). It doesn't make baritones more chesty (by slightly emphasizing the cello region). These unwanted characteristics are usually brought about by compromises in parts quality, in the circuit and power supply, as much as actual circuit design. That the JC 2 has nearly no perceptible anomalies testifies to its quality parts and hyper-fast power supply.

What it does well is: It brings solo instruments or singers to the fore out of the inkiest of inky black silences. It makes good, tight bass that retains its texture

down into the lowest octaves of a synth or pipe organ. It makes very clean high frequency fundamentals and overtones that are captured in SACD recordings of string quartets in a realistic, relaxed fashion. The midrange can be delicate, putting a convincingly realistic facsimile of Ray Charles and his rhythm section in your listening room ("Ray Lives"), or it can bowl you over with that big wall of sound the Count Basie Band can generate (Hear Ray Sings; Basie Swings: Telarc). It can capture a Bach harpsichord piece without sounding tinny, as it can capture a Vivaldi violin concerto with all the woodiness and guttiness of original instruments playing it. It can go from very soft to very loud without straining. With a good blues band it will rock you like your back ain't got no bone.

The Halo JC 2 seems to generate a very large sound stage, perhaps the largest I've had in my system. It is wide with an illusion of musicians well beyond my speakers; deep too, suggesting some parts of the orchestra originate beyond the wall behind the speakers (on the porch of my beach shack); and there is something like a resolution of the clues that lead us to think of height, the distance from the performers to the ceiling of a symphony hall. That is pretty cool, to shut your eyes and feel you are in a much, much bigger venue. It seems to be able to do this with the various amplifiers I've run with it (a pair of Pooged Fisher 50A Williamson type triode amps, a pair of Pooged Marantz 8B Williamson type amps strapped to mono and run in triode, a pair of Parasound Halo JC 1 John Curl type amps with some minor tweaks). It is sensitive to interconnect cables, enough so that you can subtly voice the preamp according to the rest of your system.

A Preamp For All Seasons?

It can be a preamp for all seasons. By that I mean, you can get the Halo JC 2 to sound a tad bright (to make up for a dull room); or, you can get it to sound a tad mellow (to make up for a bright room) by careful selection of interconnects. It does an excellent job, and by that I mean it excels, at reproducing choral music from early European Church singing to modern Gospel: at reproducing classical music of string quartet scale to Mahler's Symphony No. 8 (The Symphony Of A Thousand): at reproducing small jazz ensembles from The Modern Jazz Quartet to Winton Marsalis's Lincoln Center Jazz Orchestra: at reproducing Bluegrass singers and bands of all types, as well as a cappella (from the chapel, or without instruments) doowop groups: at reproducing "Original Cast" Broadway Show albums (often displaying great spatiality): so whatever your taste, from any of the major types of music (Bach, Beethoven, Bruckner, Broadway, Bluegrass, Bebop, or Doowop), the Parasound Halo's JC 2 can reproduce it in fine style because this preamp is the tenth in a series of John Curl designed preamps. It stands to his past pre-amps as the current generation of computers stands to 1975 computers.

Iteration And Reiteration

There are certain types of audio pieces, and the Halo JC 2 is one such, that stand apart from the run of the mill, me too gear. They seem to be on the cusp of the next wave. For over twenty years, I have had in my major listening system a VPI HW-19 turntable that I have tweaked and updated as Harry Weisfeld (the HW in HW-19) has released the newest parts to me. It is not a solid suspension model, but a sprung suspension, because I have springy floors. You have to speak to Harry at a show to find out the difference between soft springs and hard springs and what each can do to your low frequency performance, or about different platter materials from aluminum to plexiglass to an Oreo sandwich of the two, or about the optimum use of conical metal vs. medium-soft rubber "feet" on a turntable. Then you can appreciate what an unreconstructed tweaker will go through in order to advance a design to the nth degree of performance.

The same is true of John Curl. He has fussed over, measured, listened to, and repeated the sequence on a series of devices from MOS-FETs and fast-settling diodes, to laser-cut conductor-injected vs. discrete-resistor stepped-attenuators. He has measured the performance of these parts and then tested these parts in situ. He can tell you just about what audible anomalies cross-index to what measurements, what parts need to be ahead of, and next in line to the part under test. And he has cherry picked all the best price/performance parts to include in his latest preamp. This used to be a joint process with Bob Crump and Carl Thompson. With Crump's passing, Curl has taken on a greater share of that load, incorporating Crump's teachings. So the current JC 2 is the beneficiary of the hours spent doing such parts evaluation by Curl, Carl Thompson, and the late Bob Crump.

Cost-No-Object vs. Bang-For-The-Buck

Any modestly talented design engineer can throw money at a design to bring it to a high level of performance in the "Cost No Object" category. It takes an extraordinary designer to bring in a high performing design at a price point that offers the best "Bang For The Buck." Sometimes, some best "Bang For The Buck" pieces of gear can compete with the "Cost No Object" gear, in the same way that some model mass-produced Corvettes can compete with the limited production Porsches and Ferrari's. Not all mass produced "sports cars," but some models. That is what I think the Parasound Halo JC 2 is—one of those mass-produced models (Well, semi-mass produced, or not-quite mass produced. The JC 2s are built on what is sort of a production line, except there is a lot of hand-work involved, such as matching FETs.) that can compete with the "boutique" models; at least that's my opinion based on listening to the big reputation systems at the shows I attend, and the best of the headphone amps, basically pre-amps, that I've heard. True, I've not yet systematically listened to the entire crop of elite preamps. I'll have to wait for John Atkinson to make his pronouncements. I wouldn't be surprised if he feels the way I do about this piece. We sometimes agree, J.A. and I.

I guess what I'm getting at is this: sometimes mass-production can come up with a model that starts out as Bang-For-The-Buck and winds up competing note-for-note with the Cost-No-Object, limited production gear. This sometimes happens in the wine industry, too. A batch of wine, cured in stainless steel railroad tank cars, with oak chips tossed in for flavor, will come out as tasty and complex as a great boutique wine that is cured in oaken casks, aged until it is just right, and is adjudged ready to be circulated. Sometimes, though it defeats the folk-wisdom, a mass-produced wine can compete with the best of the boutique wines that use expensive, labor intensive techniques of the nineteenth century. Not always. But certain, say, \$10 bottles can rank up there with the \$40 bottles in blind taste tests. It does happen.

If Parasound's Halo division has been able to come up with such a preamp (the JC 2), and with such a monoblock power amp (the JC 1), and with such an FM-Tuner (the T 3), then I'd say these guys are on to something. The various talents of John Curl, Carl Thompson, and Richard Schram have piled up a terrific recent track record. All the reviewers may have to revise their thinking about the various categories we've all been thinking in, and start thinking outside the box. I think there are other large manufacturers that have been making such a track record, as well. More on that later.

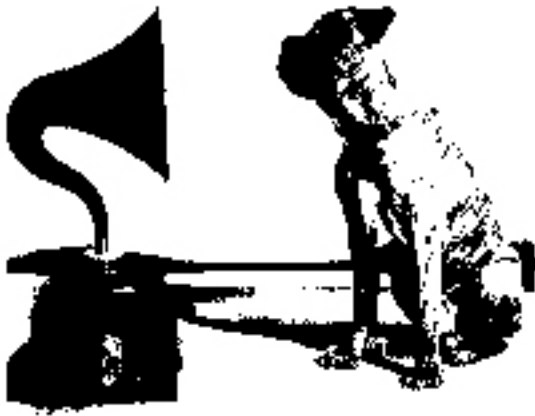
Summing Up:

The Parasound Halo JC 2 is a "semi-mass-produced" preamp that has the sound of small-production run "boutique" gear. It has a very impressive parts list, features list, and specifications list. It is truly exceptional in comparison with my, admittedly older, pre-amps. It delivers greater detail yet seems more relaxed, delivers larger sound-stage without forcing that on the listener; altogether it is more lifelike, and produces more "in the room" sound than I have yet experienced in my listening area, with my gear. It has many features, yet is ergonomically user-friendly and easy to use. It is flexible, and it can be run in either balanced or unbalanced mode. It is set up to trigger a pair of JC 1s, and I can testify that it sounds remarkably well suited to drive its big brother amplifiers. It also drives my tube amplifiers to new levels of resolution, which doesn't surprise me. It responds well to "voicing" with well chosen interconnect cables. With my gear, in my room, it seems to like the very neutral, very analytic Eclipse interconnects, by WireWorld. These, and their related loudspeaker cables are very good at picking up details "down in the mix," so you don't have to play the entire system as loudly to hear them. This is a very good preamp, excellent in most regards, that will deliver lots of detail without getting in your face, and retain its sweetness all the while. It likes all kinds of music. At \$4K MSRP, I find it a bargain for an upper tier piece. I may be a bit flowery, but I do believe it is a great all-purpose preamp, a preamp for all seasons.

This is a piece that is so good, I think you could buy it without hearing it, and that is as high praise as I can offer. But if you do buy this one as a present for your

wife, I think any reputable Parasound dealer will give you a trial run. It's hard for me to imagine an amp with which it won't be comfortable, or a CD player it won't be able to accommodate. This one's a keeper. And when you phone up to place your order, be sure to tell 'em that Max Dudioous sent ya'. *Ciao, Bambini.*

Max Dudioous



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