

McIntosh C1000

PREAMPLIFIER SYSTEM

Michael Fremer

C1000T tube preamplifier. Tube complement: eight 12AX7. Frequency response: 10Hz–20kHz, +0/–0.5dB. THD: 0.08%, 20Hz–20kHz (no level quoted). Signal/noise ratios: high level: 93dB (no reference level given); phono, 80dB (no reference level given). Maximum output: 8V RMS single-ended, 16V RMS balanced. Output impedance: 220 ohms. Maximum input levels: 5V single-ended, 10V balanced, high level; 50mV (MM), 5mV (MC), phono. Sensitivity, high level, for 2.5V output: 450mV (high level), 4.5mV (MM), 0.45mV (MC).

SERIAL NUMBER OF UNIT REVIEWED
WG1060.

WEIGHT 34 lbs (15.4kg).

PRICE \$9000.

C1000P solid-state preamplifier. Frequency response: 10Hz–40kHz, +0/–0.5dB. THD: 0.002%, 20Hz–20kHz (no level quoted). Signal/noise ratios: high level: 100dB (no reference level given); phono, 88dB (no reference level given). Maximum output: 12V RMS single-ended, 25V RMS balanced. Output impedance: 220 ohms. Maximum input levels: 5V single-ended, 10V balanced, high level; 50mV (MM), 5mV (MC), phono. Sensitivity, high level, for 2.5V: 450mV, 4.5mV (MM), 0.45mV (MC).

SERIAL NUMBER OF UNIT REVIEWED
WH1057.

WEIGHT 33 lbs (15kg).

PRICE \$9000.

C1000C Configurable control unit and power supply for C1000T and C1000P.

SERIAL NUMBER OF UNIT REVIEWED
WF1095.

WEIGHT 39 lbs (17.7kg).

PRICE \$8000.

ALL THREE

DIMENSIONS 17.5" (445mm) W by 6" (152mm) H by 24" (610mm) D.

APPROXIMATE NUMBER OF DEALERS {TO COME.

MANUFACTURER McIntosh Laboratory, Inc., 2 Chambers Street, Binghamton, NY 13903-2699. Tel: (800) 538-6576, (607) 723-3512. Fax: (607) 724-0549. Web: www.mcintosh-labs.com.



cutline

Still burning in my bank of childhood memories are misty images of the glowing green lettering on the McIntosh tube preamps and tuners that populated the windows of the audio stores that once lined lower Manhattan's Cortlandt Street. Leonard's and most of those other retailers are long gone—as are most of the audio brands that shared their windows with McIntosh, and that once symbolized the might of American innovation and manufacturing. Even the World Trade Center, the controversial complex that replaced Cortlandt Street's "Radio Row," where the hi-fi industry was born, is tragically gone.

Yet McIntosh Laboratory, Inc., still based in Binghamton, New York, survives—as do the glowing green lettering behind glass and the mint-blue backlit meters that adorn most of their new components, all of which now look retro-cool. You have to love that.

Once owned by Clarion, a Japanese firm known for its inexpensive car stereos, McIntosh was acquired in 2003 by another Japanese company, D&M Holdings, which also owns Denon, Marantz, Boston Acoustics, and Snell. You and I collect audio components. These guys collect audio-component *companies*.

From the time I saw my first McIntosh preamp until I got to hear at home took 46 years. But who cares about the delay when my first Mac is the outrageous,

totally over-the-top bling-bling of the three-box C1000 preamplifier system? It's got *three* sets of glowing green lettering behind glass, *two* sets of meters—even a row of tubes glowing sexily in a “storefront” window complete with a ceiling mirror that doubles the visual drama. And it costs only \$26,000.

The three-box solution

Why argue over whether tubes or solid-state sounds better when you can have both? The C1000 consists of the C1000C controller/power supply and two separate, fully balanced preampli-

fiers, one solid-state, one tubed. One needn't buy both preamps to go with the C1000C controller, but I'd bet 100% of buyers plunking down \$17,000 for the controller (\$8000) and one module (\$9000) opt for both, for that total of \$26,000.

The C1000C controller has knobs for Volume, Balance (remember that?), Source selection, and the Record Out selector, and provides power and control signals to one or both preamplifiers via individual umbilical cords for each channel of each preamp.

Aside from the amplification

methodology, the C1000T (tube) and C1000P (transistor) preamps are identical, offering nine sources each, including both moving-coil (MC) and moving-magnet (MM) inputs. There are three sets of balanced inputs and four sets of unbalanced, not including the unbalanced MM/MC inputs. Three sets of balanced outputs allow for convenient triamping, if you're so inclined. Two unbalanced outputs allow for biamping in unbalanced mode. Because each preamp has its own inputs and outputs, double runs of cables are required for each amplifier

MEASUREMENTS

I performed full sets of measurements on both McIntosh preamplifiers, for both balanced and unbalanced operation, but the two units turned out to be electrically so similar that I've combined my comments on both into a single sidebar.

The phono stages, of course, are unbalanced only; I examined their behavior at each preamp's Processor Out jacks. The MM stages of the C1000P and C1000T are non-inverting and offered a voltage gain of 40.1 dB and an input impedance of 47k ohms across most of the audioband, the latter dropping inconsequentially to 42.5k ohms at 20kHz. Both MC stages were also noninverting and offered 60.1 dB of voltage gain at 1kHz, with an input impedance of 30 ohms when set to “25” and 960 ohms when set to “1000.”

The C1000P's RIAA error (fig.1) showed a very slight excess of energy in the upper bass and above the audioband, but was otherwise flat. The C1000T's RIAA error (fig.2) was very similar at audible frequencies, but featured an increasingly positive error at ultrasonic frequencies. This suggests that the tube preamp's phono-stage gain asymptotically approaches unity with rising frequency rather than, as I prefer to see, continuing to decrease. This behavior will not in itself be audible, but the late John Linsley-Hood suggested a quarter century ago that it might increase the audibility of record clicks,

particularly with MC cartridges. Why would the two McIntosh preamps differ in this respect? I can surmise only that the more limited voltage gain available from tubes meant that a different circuit topology had to be used.

At normal levels, the phono-stages' THD+noise was around 0.017%, which is excellent. Both tubed and solid-state phono stages excelled in a potentially more important area: their immunity to overload. The MM and MC stages of both the C1000P and C1000T offered a superb 27dB or greater overload margin at all audio frequencies (ref. 5mV, MM, and 500µV, MC, both at 1kHz). The McIntosh preamps' phono stages are also extremely quiet—the unweighted audioband signal/noise ratios were 78.5dB (C1000P) and 69.4dB (C1000T) from the preamps' MM inputs, and only slightly lower from their MC inputs—meaning that, with their very high overload margins, they have commendably high dynamic range, especially the solid-state C1000P. One thing should be noted about the C1000T: When I was exploring the point at which its phono-stage output clipped at 20kHz, I experienced some latching; *ie*, once the circuit had clipped, it stayed clipped even after I'd reduced the input-signal level. However, as the output level was around 12V when this happened, it should have no practical consequences.

The C1000P's and C1000T's line stages offered a maximum of 15dB of voltage gain in both balanced and unbal-

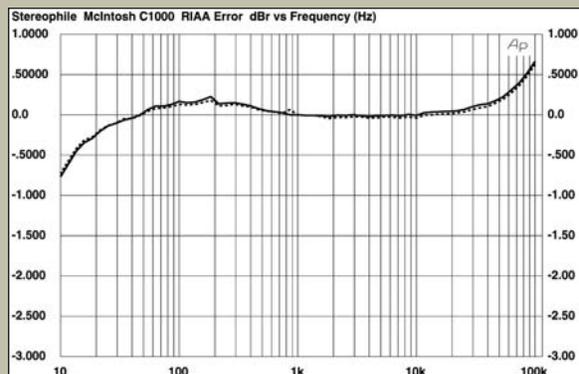


Fig.1 McIntosh C1000P, MM stage RIAA error (0.5dB/vertical div., right channel dashed).

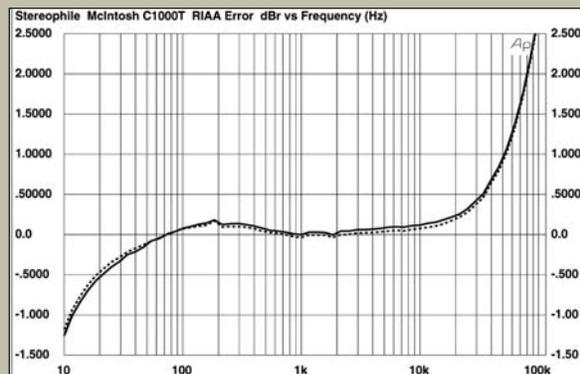


Fig.2 McIntosh C1000T, MM stage RIAA error (0.5dB/vertical div., right channel dashed).

CO. NAME & PRODUCT NAME

channel, for a total of four for a conventionally amplified system, or *twelve* cables for a balanced triamplified stereo system. Both preamps convert unbalanced signals to balanced, and vice versa. Each preamp has a headphone jack mounted in the center of its front panel.

McIntosh's balanced power amplifiers, intended for use with the C1000, have two balanced inputs. McIntosh supplies combiner modules for single-input balanced amps. These also allow as two balanced inputs to be converted to three, allowing for a long pair of balanced cables for each channel to be run from the preamplifiers, and, for each channel, short runs from the modules to the three amplifiers of a triamped system.

Once you've got the C1000 talking to your amplifier, it's time to connect

your balanced and unbalanced source components, which can be used simultaneously. Which to connect to the tubed preamp and which to the solid-state? Your choice. The only way to find out which you prefer is to try both. However, thanks to a balanced recording link, you can get the recorded signal (balanced and/or single-ended) from either preamp's Record Out jacks.

With everything connected, it was time to power up. The C1000 is mighty handsome even when turned off, but oh my—nothing in my experience has looked any cooler or more elegantly blinged-out than these three boxes with their lights on and mine off.

What's inside

Aside from its dual-mono power supplies, the C1000C controls the signal

routing and source selection for the preamplifier modules. When other McIntosh components are connected to the C1000's data ports, basic control functions are automatically handled by the remote control; turning the C1000 on or off with the remote turns *all* connected McIntosh gear on or off.

The C1000C's volume control is a digital optical encoder: as the knob is rotated, two internally mounted sensors receive a beam of infrared light as a series of digital pulses. A microprocessor counts the number of pulses to control a McIntosh-designed electronic attenuator that provides 213 steps in 0.5dB increments while maintaining channel balance to within 0.1dB.

While most preamplifiers use a single volume control placed ahead of the gain stage, McIntosh says that while this results in wide dynamic range and

measurements, continued

anced operation, with 0dB on the meters (which come after the volume control) indicating when the preamp is reaching the limit of its dynamic range capability. The input impedance of both preamps was 16.5k ohms across most of the audioband for the unbalanced inputs, 25k ohms for the balanced, these decreasing slightly but inconsequentially at 20kHz. All inputs preserved absolute polarity (*ie*, were noninverting), the XLRs being wired with pin 2 hot.

Both preamplifier line stages offered the identical wide frequency response into 100k ohms (fig.3, top pair of traces), with a slightly early rolloff of low-bass frequencies into the punishing 600 ohm load (fig.3, bottom traces). The response was identical from both the balanced and unbalanced jacks and at all volume-control settings. Any crosstalk was buried under the noise (fig.4 shows the channel separation for the C1000T) and the noise floor was very low in level—particularly for the C1000P, which,

with its input shorted but its volume's control set to its maximum, gave an unweighted, wideband S/N ratio (ref.1V

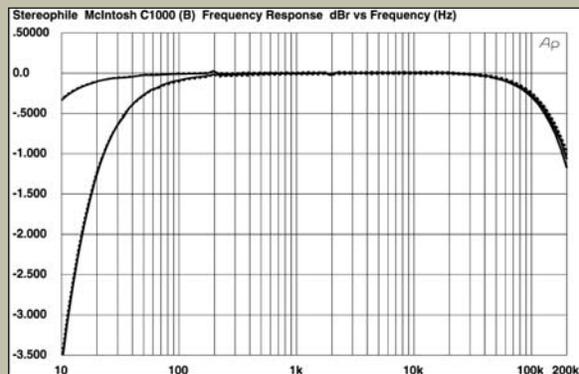


Fig.3 McIntosh C1000P, balanced frequency response at 1V into 100k ohms (top below 200Hz) and 600 ohms with volume control at "100" (0.5dB/vertical div, right channel dashed).

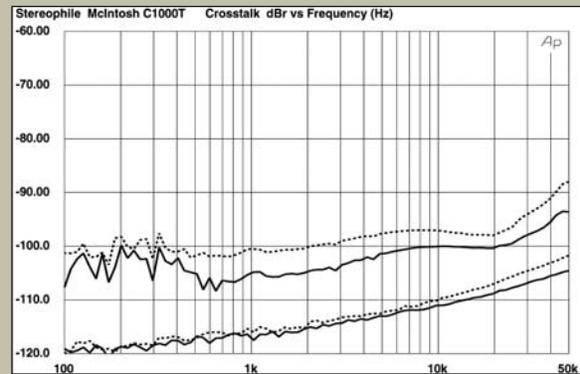


Fig.4 McIntosh C1000T, channel separation, balanced operation (bottom) and unbalanced (top). (10dB/vertical div, R-L dashed.)

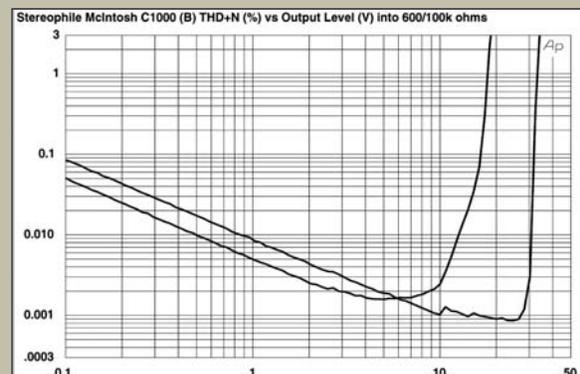


Fig.5 McIntosh C1000P, balanced distortion (%) vs 1kHz output level into (from bottom to top at 1V): 100k and 600 ohms.

MCINTOSH C1000

freedom from overload, noise increases as the volume is lowered. Lower background noise can be achieved by placing the volume control after the gain stage, but at the expense of dynamic range and the ability to prevent input overload. McIntosh's solution is to use two volume controls, one before the gain stage and one after; they claim that this results in wide dynamic range, freedom from input overload, and an impressively low noise floor of -118dB. The two volume controls are linked together and controlled by what McIntosh calls a Dynamic Control Multiplexer.

There is a separate Mute button; when you mute the C1000, the sound stops suddenly and completely, though it ramps up pleasantly when you want to listen again. I liked that feature.

For the C1000, McIntosh's engi-

neers developed a new, fully shielded, low-noise MM/MC phono preamplifier that can handle medium-low-output (0.45mV) MC cartridges without needing a step-up transformer. Ultralow noise is claimed, thanks to the shielding and a dedicated double-filtered power supply. Both the tubed (four 12AX7s) and solid-state phono preamps are specced equally in terms of MM/MC input sensitivity, though the solid-state model's signal/noise ratio is 88dB to the tubed version's 80dB. Both offer the same loading facilities: for MM, 47k ohms, with 50–750pF in steps of 50pF; for MC, 25, 50, 100, 200, 400, or 1000 ohms, in parallel with 100pF.

Setup and programming

The C1000C controller's Setup mode (push the Setup button) will confound

audiophiles used to straightforward plug-and-play preamplifiers. (Thank goodness I've set up and programmed home-theater receivers.) While you can operate the C1000 with its factory default settings, it makes more sense to take advantage of its flexible configurability. In fact, for certain functions, you'll have to. Within Setup mode, the Listen, Balance, and Record buttons assume fresh identities that can be confusing if you're not careful. It's easy to get lost in the maze of possibilities, and once you've made a change, it's easy to forget what you did, and damned difficult to figure out how to get back to where you once were.

At one point, I auditioned the latest version of Merlin's VSM loudspeaker for a Follow-Up review. Programming the C1000's processor loop so it would pass through the unit's electronic BAM

output) of 116dB! The C1000T was not in that class but was still good, with the same measurement giving 76dB, which improved to 88dB when A-weighted.

The C1000P and C1000T could both swing very high output voltages. Figs.5 and 6 show how the percentage of THD+noise present in the balanced outputs of the 'P and 'T, respectively, changed with output voltage into 100k ohms and 600 ohms. The solid-state preamp clipped (1% THD+N) at 32.5V into the higher impedance and at 18V into the low load, with the maximum unbalanced output half these figures, as expected. The tube preamp clipped a little earlier, at 20V into 100k ohms and 11.3V into 600 ohms, but the difference is academic—any power amplifier will be driven well into overload at these levels.

The downward slope below 10V of the traces in figs.5 and 6 suggests that actual distortion is buried under the already low noise at normal signal levels. To examine how the THD+N percentage changes with frequency, I therefore chose a high output level: 10V for the C1000P (fig.7)

and 5V for the C1000T (fig.8). Into high impedances, the THD+N remains constant with frequency in the

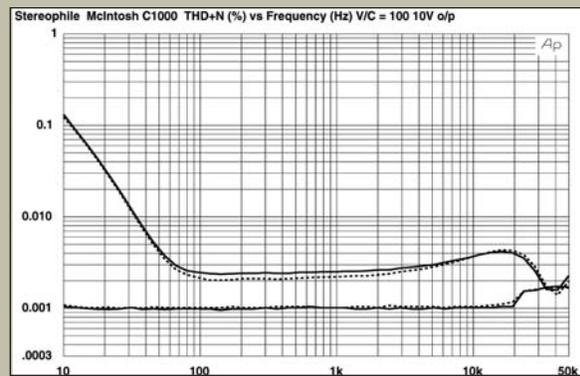


Fig.7 McIntosh C1000P, balanced THD+N (%) vs frequency at 1V into (from bottom to top): 100k and 600 ohms (right channel dashed).

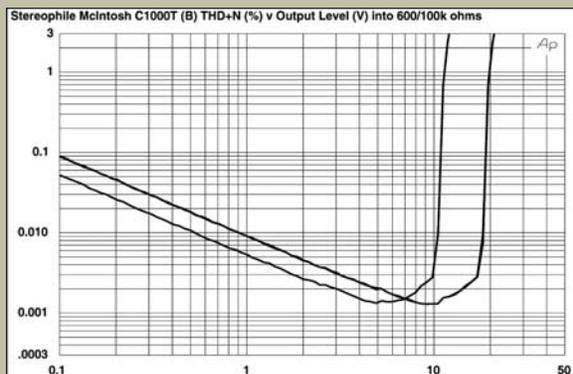


Fig.6 McIntosh C1000T, balanced distortion (%) vs 1kHz output level into (from bottom to top) at 1V: 100k and 600 ohms.

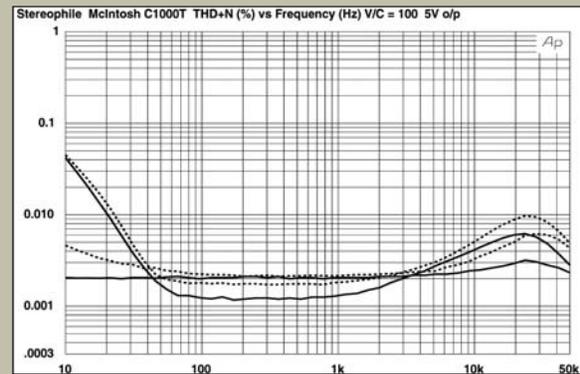


Fig.8 McIntosh C1000T, balanced THD+N (%) vs frequency at 5V into (from bottom to top): 100k and 600 ohms (right channel dashed).

bass equalizer was a nerve-racking experience requiring the combined brain power of three not-stupid individuals. The instructions try to be explicit, but too few examples are provided—and if you don't get it right, you get no sound.

Among the Setup features are input-level trim, so that the volume doesn't "jump" between inputs; a Pass Thru mode for use in a multichannel sound or home theater system; adjustments for the fluorescent display and meter brightness; input title reassignment (for instance, if you have a DVD player plugged into the Aux input, you can change that input's label to read "DVD"). And, of course, in Setup mode you can change MM capacitance and MC resistive loading. You can even set the C1000 for mono operation, via the Setup menu or the remote control. Actually, there are two remote controls: a plastic, full-function, A/V receiver type that can control other McIntosh products, and a hefty model of extruded, anodized aluminum that controls basic functionality. The latter is the one you'll use most of the time, especially when you show off your C1000 to friends.

Using the C1000

When you have both the C1000P solid-state and C1000T tube preamps

connected, the C1000C will recognize the fact and double your input-selection options. Scrolling through these options can be tedious, especially when

for which you'll end up using for each source, that will take some experimenting—one preamp or the other will surely be more complementary to each

THE **C1000P** SOLID-STATE PREAMP DELIVERED A BLOOM USUALLY **ASSOCIATED** WITH TUBED GEAR, WHILE THE TUBED C1000T PRODUCED THE EVEN-HANDED TONAL **BALANCE** AND NEUTRALITY ONE USUALLY ASSOCIATES WITH **SOLID-STATE**.

you're not using all of them: CD1, D/A, PH/MM1, PH/MC1, DVD2, Aux2, Tuner2, Srvr2, CDR2, CD2, PH/MM2, PH/MC2, CD3, Srvr3, CDR3, Srvr1, CDR1. Early on I re-assigned one input but can't remember now what I did. I kept forgetting what was where, and often did a lot of hunting to find the input I wanted, but it was hardly painful. Otherwise, once everything's up and running and programmed to your liking (a big otherwise), using the C1000 is easy.

The C1000C switched between the tubed and solid-state preamps seamlessly, the meters on each are activated only when that preamp is selected. As

source. That said, the tubed and solid-state preamps sounded more alike than not, which is how it should be.

A sonic delicacy

While the C1000 outputs single-ended signals, I felt it important also to listen in balanced mode, so I borrowed a pair of mbl 9007 balanced monoblock power amplifiers (review in the works). I also auditioned the C1000 using my reference Musical Fidelity kW single-ended monoblocks.

The C1000's sound remained consistent run either balanced or single-ended. The C1000P solid-state preamp delivered a bloom usually associated

measurements, continued

audioband for both the 'P and 'T, the former offering a very low 0.001% or less compared with the latter's still-low 0.016%. Into 600 ohms, however, these graphs show that the actual THD rises at both very low and very high frequencies, though not to any extent that might even begin to be audible.

At normal levels, spectral analysis reveals that the harmonic content is vanishingly low for both preamps: 0.0005% (true sum of the harmonics; fig.9, C1000P; fig.10, C1000T). The increase in THD at low frequencies and high levels into 600 ohms was due primarily to an increase in the subjectively innocuous third harmonic

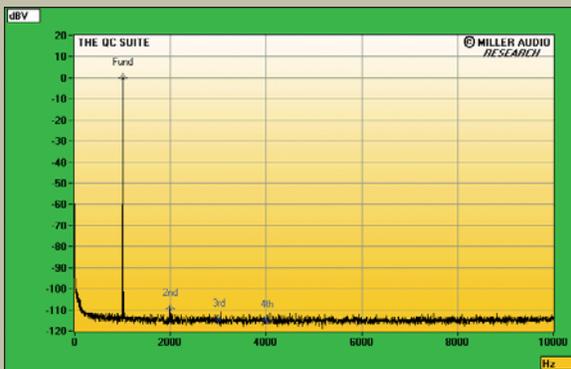


Fig.9 McIntosh C1000P, unbalanced spectrum of 1kHz sinewave, DC-10kHz, at 1V into 8k ohms (linear frequency scale).

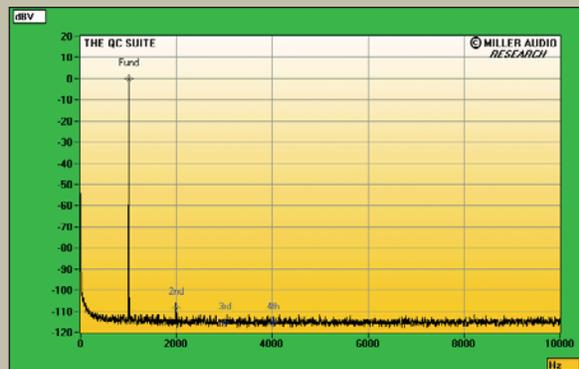


Fig.10 McIntosh C1000T, unbalanced spectrum of 1kHz sinewave, DC-10kHz, at 1V into 8k ohms (linear frequency scale).

with tubed gear, while the tubed C1000T produced the even-handed tonal balance and neutrality one usually associates with solid-state. While there were sonic differences to be heard running the Musical Fidelity kW SACD player through each preamp, the differences were minor: a bit more bloom, and slightly softer, riper bass in the case of the C1000T. But the kW has its own solid-state *and* tubed outputs. By switching those around, I could achieve the same sound using either McIntosh preamp. The kW's solid-state output into the tubed C1000T sounded very similar to the kW's tubed output into the solid-state C1000P. Running the tubed kW into the tubed McIntosh produced more warmth and bloom than I like, but your taste may differ.

Run through either pair of monoblocks, both the solid-state and tubed preamps sounded intoxicatingly liquid, with astonishing purity, delicacy, and transparency. While few good preamps in my experience present electronic "noise" as audible noise, the difference between the quietness of most preamps of my experience and the quietness of the C1000 was easy to hear—or, rather, not hear. I could sense the C1000's definition of *quietness* in the elegance of decays, the roundness and three-dimen-

sionality of images, and, especially, in the utter ease of the overall sound.

The C1000's overall freedom from mechanical artifacts, particularly on sibilants and transients, helped produce an entirely effortless sonic picture, yet with either preamp, the sound was never too soft or warm. While the C1000's ultralow noise floor produced mesmerizing, delicate microdynamic details, occasionally I felt that large-scale dynamic swings were not quite as thunderous and powerful as they can be—but once I'd gotten acclimated to the C1000's unusual ease and transparency, that proved to be an illusion.

While in Texas recently to hear Andrew Litton and the Dallas Symphony perform Mahler's Symphony 2, I picked up a superb-sounding Delos CD of Litton and the DSO in the same work, recorded by John Eargle in the same hall in which the concert took place: the gorgeous-sounding Eugene McDermott Concert Hall of the Morton H. Meyerson Symphony Center. This warm, intimate, coherent-sounding hall has ideal reverberant decay and among the best propagations of string and bass sound I've ever heard live. The construction of the stage included a carefully designed hollow under the cello section to allow their sound to

"breathe" with full expression. My hosts had told me that some listeners are skeptical of the hollow's success, but as the lower string players drew their bows across the strings, I found the overall richness, warmth, and textural expression almost overwhelming. Ironic, I thought, that this tubey-sounding space was funded by one of the three founders of semiconductor maker Texas Instruments, while the cold, sterile, analytical Avery Fisher Hall was endowed by a man who made his fortune producing tubed electronics.

The tubed CD-player output into the C1000P solid-state preamp or the solid-state CD-player output into the C1000T tubed preamp came closest to duplicating the sound I heard at either of the seats I occupied in McDermott Hall (10th row center for the first half, dead center in the loge box for the second half). When I ran the Musical Fidelity kW's solid-state output into the solid-state C1000P, the sound was still impressive, but some of the richness I'd heard live was lost.

McIntosh claims 130dB of channel separation for this dual-mono, mirror-image design. Judging by the spaciousness of the sound, I'm sure John Atkinson's measurements will back up that claim.

measurements, continued

(fig.11), though at -88dB (0.006%) this won't bother any human listener. Intermodulation distortion was also essentially nonexistent at normal levels; I had to brutalize the preamps by driving them close to clipping into 600 ohms to get any significant evidence of high-order products (fig.12), and even then, the distortion products remained at or below 80dB (0.01%)!

The measured performance of these two McIntosh pre-

amplifiers reveals some superb audio engineering, with no compromise evident for the tubed version apart from some slightly higher but still low noise levels and that ultrasonic RIAA error. It is very satisfying to measure such products, and, as Mikey found, equally satisfying to listen to them.

—John Atkinson

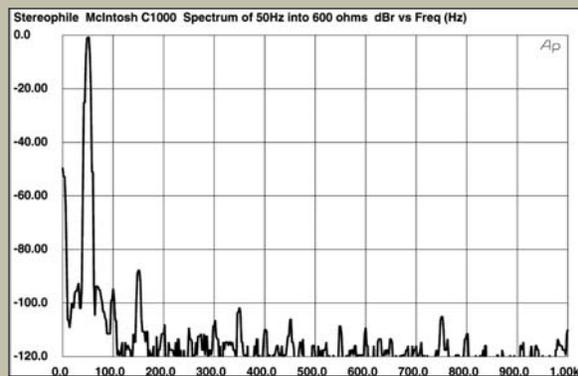


Fig.11 McIntosh C1000P, balanced spectrum of 50Hz sinewave, DC–1kHz, at 10V into 600 ohms (linear frequency scale).

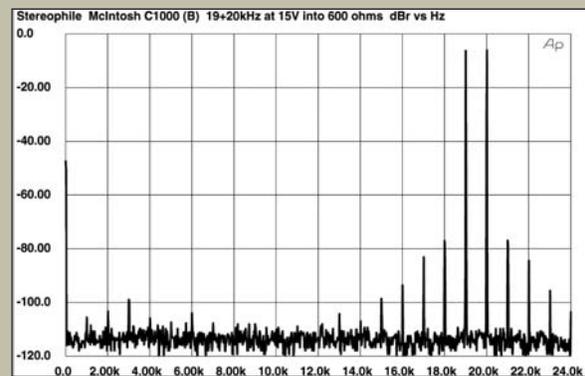


Fig.12 McIntosh C1000P, balanced HF intermodulation spectrum, DC–24kHz, 19+20kHz at 15V peak into 600 ohms (linear frequency scale).

Phono preamps: tube vs solid-state

With premium phono preamps costing as much as the C1000C controller plus one of the preamps, you might think that the C1000T's and C1000P's built-in phono stages are mere afterthoughts. That didn't prove to be the case. Both the solid-state and tubed phono preamps sounded exceptionally fine, and maintained the line sections' exceptional quiet, coherence, harmonic completeness, delicacy, and dimensionality.

However, only higher-output low-output MCs should be used. Fortunately, top-of-the-line cartridges with outputs of 0.45mV, such as the Lyra Titan *i*, are currently in vogue, as more and more manufacturers find ways to increase output without lowering resolution. The low noise floor of even the C1000T's tubed phono section permitted the use of lower-output cartridges without making the dynamics suffer. At least, that's what I found using the luscious-sounding Miyabi/47 Labs cartridge with either phono preamp. But I wouldn't go lower than the Miyabi's output of 0.3mV.

Joni Mitchell's *Blue* (LP, Reprise MS 2038)—which I've been playing a lot lately—proved the perfect foil for either preamp's phono section, with my nod going to the 12AX7-based C1000T for its extra touches of delicacy and suppleness. With a fine sense of studio acoustic, a real sense of hearing Mitchell before the microphone takes her voice, and a guitar utterly believable in both image and harmonics, I can't say I've heard this record sound more satisfying.

Each phono preamp delivered an inviting, delicate rendering of acoustic music without wimping out on amplified material. The tubed C1000T's phono preamp managed warmth without enveloping the lower midrange in a blanket, and the solid-state C1000P delivered detail without astringency.

I also compared the C1000T and C1000P using the superb-sounding *Ataulfo Argenta Edition*, a boxed set of LPs collecting the recordings of the Spanish conductor, who died in 1958 at the age of 44 (Alhambra/Alto Analogue AA006, out of print). Don't listen to the carpers who say that only the original—and impossible to find—Spanish edition will do. If you find the Alto Analogue, don't pass it up. I

compared this set's edition of Argenta and guitarist Narciso Yepes' recording of Rodrigo's *Concierto de Aranjuez* with a London "Blueback" *ffss* edition (CS 6046), and while they were different, I could make a case for either one. The Alto offered greater transparency and a more forward perspective; the London had me sitting farther back in the hall.

In any case, the tubed C1000T gave Yepes' guitar a rich, delicate, and vibrant "golden" tonality, the solid-state C1000P a bit more transient fire—but this was only a change of seasoning, not a different entrée. That one seasoning was produced by eight 12AX7s and the other by transistors, and that both sounded so remarkably similar, especially in terms of harmonic structure, is a testament to McIntosh Laboratory's honest attempt in the C1000 to not "flavor" the sound to suit preconceived notions of what either technology should deliver.

ASSOCIATED EQUIPMENT

ANALOG SOURCES Continuum Audio Labs Caliburn turntable; Continuum Cobra, Graham Phantom tonearms; Lyra Titan (stereo & mono), Miyabi/47 Labs cartridges.

DIGITAL SOURCES Musical Fidelity kW SACD player, Alesis Masterlink BPT-modified hard-disk recorder.

PREAMPLIFICATION Manley Steelhead, Blue Amp 42, PS Audio GCPH, Oracle Temple phono preamplifiers.

POWER AMPLIFIERS Musical Fidelity kW, mbl 9007 monoblocks.

LOUDSPEAKERS Wilson MAXX 2, Merlin VSM.

CABLES Phono: CrystalConnect Piccolo. Interconnect: Acrolink 6100, Shunyata Research Antares, Transparent Audio Reference, Harmonic Technology Magic Link One balanced. Speaker: Shunyata Research Orion, Transparent Reference. AC: JPS, Shunyata Research.

ACCESSORIES Shunyata Research Hydra 2, Hydra 8 power conditioners; Halcyonics Micro 40 active isolator; Continuum Castellon magnetic isolation stand, Finite Element Pagode equipment stands; Audiodynia Cable Cooker; ASC Tube Traps, RPG BAD & Abffusor panels, Hallograph Sound Field Optimizers; VPI HW-17F, Loricraft PRC4 Deluxe record-cleaning machines.

—Michael Fremer

Conclusions

The McIntosh C1000 is a complex machine. Its flexibility is almost unlimited, and while some audiophiles believe that simplicity equals sonic purity, in the case of the C1000 you can have both. Chances are you'd never use all of its features, but that doesn't mean you'd be wasting your money. Combine the C1000C controller with either preamplifier and you have a full-function preamp of the highest order. You could always add the other preamp later; then, in addition to having sufficient inputs for your *and* your neighbor's stereos, you'd be able to season your system's components to perfection.

Configuring the C1000 was complicated and occasionally frustrating, but if you like puzzles, you'll enjoy playing with it. If you don't, make sure your dealer sets it up to your liking and is willing to visit as needed to reconfigure it. Given these prices, it's the least he should be willing to do.

The McIntosh C1000 combines ultralow noise and ultralow distortion with transparency, harmonic completeness, and, thanks to its ultralow noise floor, resolution of low-level microdynamics that is unprecedented in my experience. It delivered unrivaled image specificity without unnatural edge, layer on layer of detail, transient speed and purity without sounding hyper, and delicacy and suppleness without sounding soft and soupy. While the tubed C1000T's bass was slightly less well controlled (than the C1000P's?), it compensated with textural suppleness. While the solid-state C1000P's bass was not quite as supple as the C1000T's, it compensated with muscular control. Yet it wasn't the case that one was mushy and the other mechanical. The C1000 was like a great dish whose individual ingredients you can't taste—you just enjoy the final blend of flavors without wanting more or less of anything.

Aside from its exquisite sound, the C1000 is impeccably designed, engineered, and built. In terms of its day-to-day operation—turn-on, warmup, switching—the C1000 performed like the premium-priced luxury product it is (something that can't be said of all expensive audio gear). That it's made in the USA by a company founded more than 50 years ago, is a reassuring thought even for those who can't afford it. For you who can, it demands your attention. ■

CO. NAME & PRODUCT NAME

measurements, continued