



Larry—if I'd told you 10 years ago that McIntosh would be heavily into tubes in the 21st century, what would you have said?"

"I'd have said you were crazy."

I was talking with Larry Fish, McIntosh Laboratory's vice president of product planning. Larry's a solid-state man himself: more watts for the dollar, lower measured distortion. It's been fun watching him warm to tubes.

McIntosh Lab's first foray back into tube-amp production was the reissue of the MC275 power amplifier, in 1995. (The original version was produced from 1961 to 1973.) The reissue was Sidney A. Corderman's homage to the late Gordon Gow, company co-founder and president of McIntosh from 1977 to 1989. Also in 1995, McIntosh revived the C22, last of the company's tube preamplifiers.

A couple of years into the MC275's revival, I asked Fish if the company might come out with some new tube gear. Only, he told me, if they found a source of output tubes—6550s or KT88s—whose measurements were as good as those used 30 and 40 years ago.

"I've got Svetlana 6550s in my own Mac 275 reissue. Got them straight from one of the Russkies—Vladimir somebody-or-other. They look well-made and they sound good."

McIntosh got in some of the Svetlana tubes and found they were among the best they had ever measured. Naturally, they started using them in the MC275 reissue. They then asked Svetlana if they could produce KT88 output tubes. The answer from St. Petersburg was "Da, kamyedna." Yes, of course.

That clinched it. In 1999, to mark the company's 50th anniversary, McIntosh gave Corderman the go-ahead to design an entirely new tube amp—not a reissue. That amp was the MC2000 Com-

memorative Edition, and if you want one, you can't have one.

Not from McIntosh, anyway. McIntosh took orders for 559 MC2000s before the announced cutoff date for orders, and made exactly that number—not one more. More than half of them went overseas, the vast majority of these being snapped up by collectors in Asia. At \$15,000 each.

The MC2000 was a huge amp: 135

Corderman, who hadn't come out of retirement to design new solid-state stuff. He must be a tube guy at heart.

"No one around here knows tubes like Sidney," said Larry.

It's amazing when you think about it. Corderman joined the company in 1949, when Frank McIntosh and Gordon Gow founded it. His 52-year career with McIntosh is probably the longest association of any individual with any one company in the industry—except for Paul Klipsch's nearly six decades with the company that bears his name.

Sidney Corderman is a living link to McIntosh's origins. He was there when Frank McIntosh and Gordon Gow invented the unity-coupled output circuit—the famous circuit that put the company on the map.

Now Corderman has designed yet another new tube amp—a Son of Big Mac. The MC2102 stereo power amp is the first in a new series that will stay in production for as long as enough people continue to buy them. It will be followed early next year by the C2200, McIntosh's first tubed preamp since the C2, which was in production from 1965 to 1968.

Exciting news—especially when you consider that this new Mac tube gear will be keenly priced, to compete against anything else on the high-end market. The MC2102 retails for \$6000, less than half the price of the MC2000.

"Sidney built this amp himself," said Larry when he delivered me the first MC2102. "It's the first one."

I treated it with kid gloves.

Cloth gloves, actually. You don't want to get fingerprints on the tubes, or on the stainless-steel chassis. As I inserted each tube in its socket, I felt myself in the presence of history, just as I had with the MC2000 Millennium: 50 years of tube-amp tradition.



McIntosh MC2102 power amplifier

McIntosh found the Svetlana tubes were among the best they had ever measured.

lbs, with a massive power supply and two power-supply transformers. The titanium-clad chassis was a "killer," according to Larry. Titanium has the look of gold but is more durable as well as being very much lighter in weight. More expensive, too.

But by December 2000, when *Stereophile* named the MC2000 its "Amplification Component of the Year," any units that had been on dealers' shelves were long gone.

"We were amazed at how many we sold," Larry told me.

I wasn't. Nor, I suspect, was Sidney A.

My friend Lars Fredell mistook the MC2102 for the Big Mac.

"Well, I see you decided to buy an MC2000 after all," said the Swede, who had reviewed the MC2000 for *Ultimate Audio*.

"No, Lars, it's the MC2102. And it's less than half the price."

"Had me fooled for a minute. I see that the meters are smaller and the entire unit is smaller, too. It's a beautiful amp."

Indeed it is—even without the titanium-clad chassis.

Another manufacturer visited me a few days after I'd taken delivery of the MC2102.

"Gosh, I love those McIntosh amps. Look at that stainless-steel chassis. I don't know how they do it."

The stainless steel has a silvery, mirror-smooth finish that reminds me of the Proof Sets I used to collect as a kid from the US Mint. Did I miss the MC2000's titanium? Nah, not much.

The MC2102 weighs 88 lbs and measures 17" wide by 10" high by 17" deep. It's small enough that I can set it atop one of my record cabinets. This is one amplifier you want to look straight in the eye.

As in the MC2000, the KT88 output tubes show through a clear window (the faceplate is glass). As Lars noted, the power-level meters are smaller, but have the same blue illumination, a Mac tradition. (You can turn off the blue lights, but why would you?) Missing are the massive gold-plated rack-mount handles, replaced by a simpler but elegant metallic trim. The difference in weight is mainly accounted for by the single, shared power-supply transformer.

The speaker output terminals are WBT—one common, negative connector per channel, plus positive transformer taps for 8, 4, and 2 ohms (in regular stereo mode). There are balanced XLR inputs and gold-plated unbalanced

RCA inputs. The tube sockets are ceramic with gold-plated pins.

As on the MC2000, inverted cups cover the bases of the eight KT88 output tubes, to promote convection cooling.

"The tube chimneys are a Sidney Corderman touch," Larry Fish pointed out. The heat goes straight up. To keep the tubes running as cool as possible, I left the cage unattached.

"Some people prefer tubes," Larry Fish admitted. "As long as they do, McIntosh will offer tube equipment."

Only six years ago, with the MC275 reissue, McIntosh was saying that they were producing tube gear only for commemorative purposes—their real business was the solid-state stuff. How times have changed! I couldn't resist teasing Larry, who loves his transistors.

"Some people prefer tubes," he admitted. "As long as they do, McIntosh will offer tube equipment."

Hallelujah!

Larry caught sight of the 3.5Wpc Sun Audio SV2A3 single-ended triode amplifier in my listening room.

"If the McIntosh circuit sounds so good," said Fish, "it's probably because it's very close to the triode circuits you seem to like so much."

"Oh?"

Larry seemed to be warming to tubes. A little.

"In most conventional tube amplifiers," he continued, "you take power only from the plates of the output tubes. In the McIntosh circuit, you take half the power from the plates and half from the cathodes, drawing power from both sides of the tube."

"Easier on the tubes?"

"Yes, it seems to extend their useful life. But the big thing is that we get high power with low distortion."

The patent on the McIntosh circuit has long expired, so other manufacturers are free to copy it. But they'd also have to copy the specially wound output transformers—not so easy.

McIntosh winds its transformers in-house. This is unusual, if not unique, even during the "golden age" of tube

amps, the 1950s and '60s. To implement the Mac circuit, not the usual two, but three transformer windings are required: two primaries (one for the plates, one for the cathodes) and a secondary. The two primaries are spun bifilar (ie, two strands wound together) for a close, turn-by-turn coupling. Hence the name: unity-coupled output circuit. The cathode winding provides near-instantaneous local feedback, which, according to Larry, reduces distortion at the frequency extremes.

"So that's the reason for the lack of soggy bass and soft highs?"

"There you go with your adjectives," Larry laughed. "But yes, I guess so. Feedback correctly applied."

He likes to needle me on the topic of feedback.

The three windings enclose a 4½-square-inch core of laminated, grain-oriented steel. McIntosh claims that the transformer design allows full power output down to 17Hz. Subjectively, this translates into the tight bass that has been the hallmark of McIntosh tube amps.

As did the MC2000, the MC2102 uses four KT88 output tubes per channel, the tubes made for McIntosh by Svetlana, of St. Petersburg, Russia, Marina's home town. (I've never been inside, but the exterior of the huge, sprawling, Stalinesque factory looks like a prison.) The MC2102 is rated at 100Wpc into 8, 4, or 2 ohms, compared to 135Wpc for the MC2000.

"You can substitute 6550s with no measurable change in performance," said Larry. "The 6550s do not give you any less power."

Rectification is solid-state. Thermistors cushion the output tubes from the shock of turn-on. Bias is set by the factory—no user adjustments are needed, even when changing output tubes, according to Larry.

Based on what McIntosh has told me about some of the output tubes they've measured, I'd be cautious about tube rolling. I'd order any replacements directly from McIntosh. Nice to know, though, that you're not limited to KT88s. (McIntosh had nice things to say about the Sovtek KT88s they measured, too.)

When you run "balanced" from pre-amp to power amp, an extra input stage receives the balanced signal. One section of a 12AX7A tube is a cathode follower that passes the positive-phase signal; the other section inverts the negative phase signal. The two outputs are summed and fed to the input/phase-inverter stage. McIntosh claims common-mode noise rejection of greater

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than 60dB at mid-frequencies.

Because their new C2200 tube preamp won't be ready until the first quarter of 2002, McIntosh provided their solid-state C42 preamp for my listening tests. This was the same model I'd used when evaluating the MC2000 Commemorative Edition (*Stereophile*, November 1999). I also used my Purest Sound Systems Model 500 passive preamp.

Speakers were the Triangle Antal XS, Verity Audio Parsifal Encore, B&W CDM9NT, Audio Physic Spark, and McIntosh's own new LS320 stand-mounted monitors. I used the Cary CD-303, Rega Planet, and Jupiter CD players (all 2000 versions). For analog, I relied on my trusty AR ES-1 turntable, SME 309 tonearm, Shure Ultra 500 cartridge, and AcousTech PH-1 phono stage.

If I'd been immediately impressed by the MC2000—the detail, the definition, the vividness of the sound, the dynamics—I was less impressed—less blown away, at first—by the MC2102. I heard a less powerful, less dramatic amplifier, even though there's only a slight drop in power from the MC2000—from 135Wpc to 100Wpc. Bass was tighter with the MC2000, if memory serves me right. There seemed to be more dynamic headroom. None of this was surprising, considering the MC2000's beefier power supply and two power-supply transformers. The bigger amp simply produced a bigger sound: a deeper, wider soundstage and better dynamics. But I began to warm to the gentler, less immediately impressive, possibly less insistent sound of the MC2102.

Okay, I no longer had the MC2000 for a comparison. But the MC2102 had a "tube magic" that the bigger amplifier hadn't quite had. For me. This remained true no matter what speakers I used.

The MC2102 produced a slightly softer, gentler sound—less dynamic, less dramatic, but easier on the ear. My ears, anyway. The MC2000's harmonic presentation was vivid—again, if memory serves me. The MC2102 seemed more relaxed, less brightly lit, less "Technicolor," as Jonathan Scull might say. I wasn't blown away, I was drawn in. Seduced.

I'm not suggesting that the MC2102 was rolled-off on the top end—it wasn't. Nor did I find its bass loose or soggy, in the manner of many tube amplifiers. The MC2102 gave me *McIntosh* bass: extended, tight, and above all, tuneful. The MC2102 transformed the Triangle Antal (slightly on the dry side of neutral, perhaps) into a warm, rich-sounding

speaker. I got a similar result with the similarly voiced Audio Physic Spark... as well as a killer soundstage.

The MC2102 was stunning, too, with the B&W CDM9NT, controlling it well in the bottom end and bringing out the innate midrange sweetness of this most worthy speaker from Worthing.

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Good bottom-end control with the Verity Audio Parsifals—speakers that need some power to deliver their full-range performance.

McIntosh says that you need at least 100Wpc these days, what with modern full-range speakers and digital sources. Maybe they're right. I know I got good results using the Triangle Antal with the Sun Audio SV2A3. But I found myself using all 100Wpc of the McIntosh MC2102, according to those beautiful blue power-level meters.

At first I thought something might be amiss. Could I be using all that power? Then I read J-10's review of the McIntosh MC1201 amplifier in the March 2001 issue. As he noted, Mac power-level meters are different from meters that measure only voltage. Mac meters measure voltage *and* current, multiply them, and display the product as the real output in watts. What's more, the meters have a peak-hold feature that enables you to see for sure just where you're peaking out.

Sure enough, I was peaking out at about 100W, even with the 92dB-sensitive Triangle Antals.

Now, it could be that I was getting such clean, clear sound from the MC2102 that I was tempted to push the volume a bit. I don't know. But I do know what the meters told me: I "needed" 100W.

Gosh, did I have enough power?

I hinted to Larry Fish that I'd heard a subjectively more powerful sound with the MC2000. The MC2102 has a smaller power supply, and its output tubes are run at lower voltages. The MC2000's plate-supply voltage was 500V, the MC2102's is 450V. Hence, 100Wpc instead of 135Wpc.

But if the sound was less powerful with the smaller amp, it was also slightly more soft and sweet.

"We're not running the tubes as hard," Larry observed. "It could be that the output tubes are operating more within their linear capabilities."

Ever heard KT88 or 6550 tubes sound hard, glassy, and glary? I sure have, but that's not how they sounded in the MC2101—or in the MC2000. Or in the MC275 reissue, for that matter.

Any other reason the two amps might sound different?

"Well, the MC2000 was a hybrid," Larry offered. "The MC2102 is an all-tube design. There are no transistors in the signal path."

"Oh? So you slipped in some transistors while Sidney wasn't looking?"

Larry was unflappable. "In the MC2000, there was an emitter follower between the driver tubes and the output stage. It consisted of four transistors per channel—two on the positive side, two on the negative. We could swing further with a given voltage that way. We wanted to increase the amount of drive to the output stage. That's how we got the MC2000 to 130W."

Could I be hearing the absence of transistors in the MC2102's signal path?

Nah... more likely it was a matter of less power. (I don't think Sidney Corderman set out to design different-sounding amplifiers. But he couldn't include such a massive power supply in a \$6000 amp.)

The MC2102's lower power meant a loss of dynamics and dynamic headroom (subjectively, anyway). But it also might be what produced that gentler, more softly lit sound I found so beguiling. In any event, lower power was dictated by the MC2102's much lower price point: Not as much money for a massive power supply.

Some listeners might prefer the MC2000, and maybe I'm making too much of the sonic differences I heard—reviewers tend to do that. At any rate, you can't buy the MC2000 new, and even when you could, it sold for 15 fat ones. At \$6k, the MC2102 is a bargain by comparison.

So maybe you should consider buying two.

There's a three-position slide switch on the chassis next to the input connectors. The three positions are Stereo, Parallel Mono, and Bridged Mono. The MC2102 can be bridged to provide 200W mono into 16, 8, or 4 ohms, or the two channels can be run parallel to provide 200W into 4, 2, or 1 ohm.

"When you run mono bridged," Larry explained, "you insert a phase inverter in the input of one of the channels, so one channel is 180° out of phase. The speaker is connected between the two hot output terminals. The plus and minus leads from the speaker both go to separate positive terminals.

"Now you have a fully balanced 200W amplifier into 16, 8, or 4 ohms. You have two output transformers, physically, but they act like one center-tap output transformer."

If there was any doubt about the greatness of the McIntosh unity-coupled output circuit, the MC2102 and the MC2000 should settle the matter. For the first time, the Mac circuit has appeared in fully modern state-of-the-art designs, delivering clean, clear sound, natural harmonics, extended highs, and bass with balls. Why, the MC2102 sounds as good as a McIntosh solid-state amp!

Just teasing, Larry.

So I'm keeping the MC2102. It's almost as powerful as the MC2000, and I found it even better sounding in some respects — or perhaps I should say, more to my own personal tastes. It's almost as handsome, and a little less showy. The clincher, of course, is that the MC2102 sells for less than half the price of the MC2000.

I love turning on the amp at the end of the day as I start to prepare dinner, choosing music for the meal. (Our listening room adjoins the kitchen.) Let's see... What would most amuse Marina? Ukulele Ike or Bing Crosby? The Mills Brothers or the Boswell Sisters? Al Bowlly with Ray Noble or Sam Browne with Ambrose and His Orchestra?

Fremer favorites all. Life is sweet.

McIntosh produced the original MC275 for 12 years. This new Mac tube gear may have just as long a run. Only Sidney A. Corderman could have designed it. Only McIntosh could have built it.

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Rega Jupiter CD player

Last month I wrote up Rega's new Planet CD player, sometimes called (unofficially) the Planet 2000 to distinguish it from the original Planet.

Now comes the new Rega Jupiter CD player. Same chassis, same top-loading design, but twice the price: \$1895 for the Jupiter vs \$950 for the Planet. The main differences are that the Jupiter has seven separate power supplies compared to the Planet's three, and uses two IC40 DAC chips in a dual-differential mode. As I noted last month, the IC40 chip is made exclusively for Rega by Wolfson Microelectronics, Ltd., of Edinburgh, Scotland.

"The IC40 DAC was designed to work optimally in a dual-differential mode," said Steve Lauerma of Lauerma Audio Imports, Rega's US distributor.

Fortunately, I had the Planet for a side-by-side comparison. (I used the

Mac gear and the speakers mentioned above.)

Building on the strengths of the Planet, the Jupiter provided a more powerful, more dynamic sound. In terms of dynamics, I doubt you can do better at any price. Not surprisingly, the dual DACs delivered superior low-level resolution compared to the Planet. There was more detail, but it was presented in a relaxed, natural way. The Jupiter was harmonically rich — Rega's sonic signature.

Is the Jupiter worth twice the price of the Planet?

Best thing to do is audition them side by side and draw your own conclusions. If you're buying the Rega Mira integrated, the Planet might provide all the resolution you need. If you're choosing a player for a system of megabuck separates, then the Jupiter might be more appropriate.

An outboard processor with upsampling might give you more ambience, more sense of space, more of the distinctive acoustical environment of each recording. But the Rega Jupiter offers a simple, compact one-box solution. It had outstanding dynamics — power supplies matter! — plus a rightness to its harmonic presentation matched by few digital components at any price.

"You know the thing about Rega products," said a fellow scribe: "Roy Gandy and his design team know how they want their gear to sound."

Maybe \$1895 is more than you want to spend on a player. Maybe the Planet is the bigger bargain. But the Jupiter shines in its own right, by Jove; I'm not sure any other player for less than \$3000 can top its overall performance. ■



Rega Jupiter CD player