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"Good Sound, Good Music"

McIntosh C2200 Tube Stereo Preamp



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I HAVE NEARLY 40 YEARS of experience with McIntosh products, and it is hard to think of any manufacturer that has delivered such consistently high performance over so long a period. The McIntosh C2200 tube preamp is no exception. It looks like high-end gear, it sounds like high-end gear, and it is beautifully built. While it has its rivals, it delivers a unique mix of sound quality and features and does so with the kind of reliability and ease of operation that is normally associated only with the best solid-state gear. From a reviewer's perspective, the C2200 is a pleasure to listen to and a tragedy to have to return.

At \$4,600, it is an expensive unit, but McIntosh has never been an

economy line. The C2200 also has quite a heritage. McIntosh notes that it was initially designed to match McIntosh's MC2000 50th year commemorative amplifier that sold for a cool \$15,000, and had matching gold-plated knobs, face plate, and trim pieces. You will get it with traditional McIntosh knobs and trim that matches all of their current amplifiers, but seem as a partner to a \$15,000 product, a cost of \$4,600 seems almost affordable.

More is involved in its heritage, however, than being designed as a matching assault on the state of the art. McIntosh and Marantz defined high-end tube electronics in the classic days of mono and stereo. My first real high-end product was a

McIntosh mono tube preamp. (To be honest, I could never have bought it; I talked my father into buying it as an upgrade to his system that somehow gradually became mine.). My first actual investment was in a C22 – a stereo preamp I kicked myself for selling for years afterwards as I listened to the inferior solid-state designs of that day.

McIntosh too "went transistor," but returned to tube design in the early 1990s, with the C22C. The C22C was largely a modern version of my earlier C22, dating from the 1960s. It used modern higher quality controls and switches, tighter tolerance parts, polypropylene capacitors, etc. However, it still operated

like a 1960s design. It had a S/N ratio of 90 dB, some switching pops and clicks, a need for a long warm-up period, and all of the “joys” most audiophiles associate with tube pre-amps.

The C2200, in contrast, has been designed from scratch, and has virtually every modern feature you can hope for in a modern preamp. The C2200 is rated as having a 93 dB S/N ratio, but McIntosh notes this rating is very conservative, and that production units can measure 110 dB at 2 volts output, close to the 112 db at 2 volts output of its best solid-state unit.

Circuit and Features

The active circuitry uses two 12AX7A and two 12AT7A twin-triode tubes, tubes well known to most experienced audiophiles. The same tube compliment is duplicated for the moving-magnet phono section. It operates these in a conservative manner for long life and high performance. Tube management is enhanced by muting the outputs until delay circuits sense the tubes are stabilized, to prevent noise generated by other components being heard during warm up.

The C2200 is designed to work as well with solid-state amplifiers as with tube amplifiers – indeed to be largely insensitive to amplifier load. It also has a host of modern features lacking in most tube preamps. These include eight source selections for unbalanced inputs while four of the eight also have balanced inputs. Any of 12 standard names can be assigned to a source selection and the panel display can be customized to indicate only available sources. There are three balanced and three unbalanced outputs, one main and two switched from the front panel. There is also a tape recorder loop.

Switching and signal routing use digitally controlled electromagnetic switching devices. The switch contacts are isolated from environmental contamination inside inert gas-filled glass tubes. One, two or three power amps may be run at the same time either balanced or unbalanced and the C2200 will swing enough voltage to drive any combination of McIntosh amps to full power. The C2200 can be controlled from a remote area using an IR eye or McIntosh WK2 keypad. This allows two amps to be used in two zones



or one at a time from either area. The C2200 will go into a slave “pass-through mode” if so desired so as to be folded into a multi channel set up. All McIntosh HT controllers will work with the pass-through feature and the C2200 is at unity gain when in pass-through. For you interface freaks, there are component source data ports, and three programmable triggers for controlling other units.

All of the front panel controls “talk” to the microprocessor including the volume control, which is a digital encoder. The C2200 has the ability to have the source names changed to reflect the actual components used by a consumer. Six of the inputs can be renamed to any of the 12 on the handheld IR remote control. This feature, however, is a mixed blessing at best. You cannot transfer key names like phono, CD, and tuner to the balanced inputs.

The volume control uses an output attenuator that controls volume over 214 steps of 0.5 dB each with accuracy within 0.1dB. The volume versus rotation rate varies as preamplifier gain varies and attenuation changes occur at the zero crossings of the audio signal to prevent audi-

ble artifacts during adjustment. The 214 step ladder resistor grids have a dynamic range of 120 dB and are controlled by a digital microprocessor. This microprocessor allows the source levels to be offset +/- 6 dB for level matching, and controls programming of other features through the set up menus. The C2200 also uses post attenuation: A second set of volume controls tied to the main volume control to reduce the output amplifier gain to unity almost immediately as the volume is reduced. This sharply cuts low-level noise and allows the tubes to operate in what McIntosh says is their operational “sweet spot.”

The bass and treble controls are the only analog pots, and their turnover points and rate of adjustment are well chosen to both boost the deep bass and roll off excessive treble energy without deadening the sound. Others include a double-shielded power transformer; high-quality caps, low-noise 1-per cent metal film resistors; an IR remote control; and a front panel headphone jack.

Unlike all too many modern preamps, the C2200 also has a balance control. I find this feature to be

NOTES

McIntosh C2200 Tube Stereo Preamplifier, \$4,600.00. McIntosh Laboratory, Inc., 2 Chambers St., Binghamton, NY 13903-2699; phones 607/723-3512 or 800/538-6576, fax 607/724-0549, e-mail sgoff@mcintoshlabs.com, web site www.mcintoshlabs.com.

Associated Equipment

Van den Hul Black Beauty, Sumiko Celebration, and Koetsu Onyx phono cartridges; VPI TNT HRX-X turntable and HWJr 12.5 tone arm; Pioneer Elite DV-47A SACD/DVD player; Meridian G08 CD player; Pass Xono phono and Tact 2.2X preamps; Pass X0.2 stereo preamp; Pass XA160 power amplifiers; TAD Model 1 and Thiel 7.2 speakers, and Kimber Select, Transparent Audio Reference XL, and Wireworld Super Eclipse and Eclipse interconnects and digital cables.

essential to get exactly the right left-right spread to expand the sound stage and clean up the imaging. Given the recurrent lack of exact balance in recordings and front end electronics, and room-speaker interactions, I find that a balance control actually becomes the "sound stage fine-tuning control." The added circuitry for such a control may add some traces of coloration, but relying on fixed balance is a near certain way to degrade one of the most important single aspects of sound quality. I really would not buy a preamp without a balance control. I should note, however, that you cannot adjust the balance using the remote control, a seriously unfortunate thing.

Finally, it has illuminated output level meters. These are more decorative than functional, but their presence on one of the best-designed front panels in the high end make the C2200 an extraordinarily attractive design. Combined with the imposing size of the unit, this is one high-end product that makes a clear visual statement. Like a Bentley or Lamborghini, you only have to see it to know its top of the

line. You don't need to use the bragging rights that you get with a C2200, it brags for itself!

Sound Character

Turning to sound character, there also is a lot more for the C2200 to brag about than its appearance,

Mac's C2200 is a true top-contender, expensive but not outrageous.

technology, and features. In fact, one reason that I have spent so much time describing other aspects of the C2200 is because it is so neutral. There simply isn't that much sonic character to talk about.

One of the key tests of a preamp is to insert it into the tape loop of another preamp, adjust levels to be exactly the same, and hear the resulting increase in coloration. You can tell in seconds how colored the device is, even though it can take days and weeks and listening to describe exactly why. By that test,

the colorations in the C2200 come about as close to being inaudible under these conditions as anything around. Moreover, this is true right out of the box and without extensive warm up. It may have gotten slightly better with time, but too slightly for me to be certain.

Almost inevitably, the C2200 opens up when it is listened to on its own. There is no way to daisy chain two preamps without *some* sonic effect. The resulting improvement makes it even clearer, however, that this is an accurate unit and not the kind of tube preamp that acts as some kind of equaliz-

er. Switch the tone controls off, and there is almost no change in timbre, either with music or pink noise. There is no increase warmth or leaning out of the sound. You can hear all of the problems in the source units, amp, and speaker without the C2200 making them better or worse. If you want accuracy, the C2200 is excellent. If you want a euphonic cure for the rest of your system's problems, forget it.

The deep bass is good on test tones and organ as any solid-state unit. I ran all of the usual Telarc and Reference Recordings bass drum spectaculars through it, the new Chesky demonstration disk (*Dr. Chesky's 5.1 Surround Show by Dr. Chesky & His Band of Maniacs* – which is just as much fun in stereo as in surround and comes in CD, DVD-A, and SACD).

I listened and measured using the deep bass test tones for the Infinity Rabos system, and I went through a range of music organ music, bass viol, etc, etc. If you can find some area where this unit restricts deep bass definition and transients or is "warm," please send me an e-mail. I suggest, however, that the fault, dear Brutus, lies in the rest of your system, and not in rather your stars or the C2200.

The treble is very extended and does not veil life or air. My TAD-1s go well into the super tweeter level and again, I couldn't find a hint of treble roll off or loss of upper frequency information. It also passed the demanding young female audiophile test. One young lady who is exceedingly sensitive to, and critical of, any treble problems listened to me as we went through sweep tones and music with a heavy upper-

S P E C S

Frequency Response: +0, -0.5 dB from 20 Hz to 20 kHz.
 Total Harmonic Distortion: 0.08% maximum from 20 Hz to 20 kHz.
 Rated Output: 5 V rms at *Main* and *Switched 1* and 2 balanced outputs; 2.5 V rms at *Main* and *Switched 1* and 2 unbalanced outputs.
 Maximum Voltage Output: 16.0 V rms at *Main* and *Switched* balanced outputs; 8.0 V rms at *Main* and *Switched* unbalanced outputs.
 Input Impedance, Moving-Magnet Phono: 47K ohms, 65 pF; High Level: Balanced 44 kilohms; unbalanced 22 kilohms.
 Output Source Impedance: 500 ohms, balanced; 250 ohms, unbalanced.
 Sensitivity, Phono: 4.5 mV for 2.5 V out @ 1kHz; High Level: 450 mV for 2.5 V out
 Voltage Gain: MM Phono to Tape Out, 40 dB @ 1kHz; Phono to Main Out: 55 dB; High Level to Tape Out, 0 dB; High Level to Main Out, 15 dB.
 Power Requirements: 100, 120 or 230 V a.c., 50-60 Hz, 70 Watts
 Dimensions: Front panel, 17-1/2 inches (44.4 cm) wide by 7-5/8 inches (19.3 cm) high. Depth is 20 inches (50.8 cm) including clearance for connectors. Knob clearance in front of the mounting panel is 3/4 inches (1.9 cm).
 Weight: 26.75 pounds (12.1 kg) net; 47.75 pounds (21.7 kg) shipping weight
 Finish: Front panel is black glass with gold/teal, illuminated nomenclature. The chassis is totally enclosed.

octave content. Again, no euphony, but the kind of accuracy that is not "sexist" in the upper octaves.

The C2200 has a superb midrange that is particularly good in dealing with all kinds of voice, and with solo or small groups of acoustic instruments. There really isn't much to say here. The C2200 is simply too neutral.

It has equally exceptional life and air. It tests the quality of even the best LPs, SACDs, etc. to the limit in these areas. If you hear a problem, it is in the recording or the player or DAC, not in the C2200. There is no hint of the kind of compression that gives some tube units added midrange life at the cost of dynamics, and both micro dynamics and massive musical changes are reproduced about as accurately as I have ever heard.

The C2200 also emerges as one of the most detailed and transparent units ever made, but this is an area where it faces stiffer competition. My reference Pass X0.2 preamp does provide more apparent detail in terms of transient information in the upper octaves, although this may actually be more a matter of tube versus solid state than pure accuracy. The best solid-state units always seem to present a slightly crisper and more detailed sound. The best tube units seem slightly sweeter and more rounded. The differences, however, are comparatively minor and are more matters of taste than anything else. Both are equally valid in terms of reproducing the illusion of a live performance.

Talking only about tube units, I am tempted to say that Conrad-Johnson's ACT2 may provide more sheer detail at low levels, but my acoustic memory is scarcely good enough to compare the two and I have had no opportunity to make one on one comparisons. I also suspect that any such differences are very much a matter of how the nuances of the C2200 interact with a given front end, amp, and speaker – and the listener's musical taste – rather than accuracy.

The sound stage is equally neutral. You get well-balanced and accurate width, depth, and three-dimensional imaging. Imaging is also as stable and detailed as the recording permits with even the most complex and demanding chamber music. If I have to nitpick any aspect of the C2200's perfor-



mance in this area, some Conrad-Johnson and Krell units I have heard have more apparent depth and front-to-rear imaging detail, and the Pass X0.2 has slightly more overall imaging information. However, I cannot really say that they are revealing sound that is actually on the source material versus simply having slightly different sonic nuances. I may also be looking for more apparent depth and front-to-rear imaging detail simply because this mix of nuances sounds slightly better with most of today's recordings, far too many of which focus on sound stage width, left-right imaging, and bright "close miked" sound. Not every form of accuracy is desirable.

One last point: The phono section in the C2200 is not an add-on or afterthought. Everything I have said about the unit applies to its phono stage with moving-magnet or higher output moving coil cartridges designed for its load impedance. I have never gotten better sound with my collection of Grado and high-output moving-coil cartridges, and the signal-to-noise ratio is so good that the lack of any noise or hum may well offset any advantages that

the added detail of the best low output moving coils can provide. Take this phono section very seriously!

Summing Up

This is a true top contender. While it is expensive, it also is not outrageous given the level of performance, and McIntosh equipment has a proven history of lasting and performing year after year. I can't conceive of how you could not enjoy this unit or fail to rank it among the small handful of preamps that help define today's state of the art.

At the same time, I would give you the same advice regarding the McIntosh C2200 that I would give regarding any unit I review this favorably. Go out and listen to a range of top preamps and listen seriously. Nothing ruins my day more than having some audiophile come up and praise or damn one of my reviews, and then finding out that he or she really didn't listen to a range of products, or try out the unit in his or her system before buying. You are paying for nuances, system compatibility and synergy, and an end result that suits your ears, not mine.



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