

McIntosh MC 2102

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The McIntosh 2102 is closely derived from the limited MC 2000 series which commemorates the 50th anniversary of the famous Binghamton manufacturer. It is a chassis (40 kg), a stereophonic tube amplifier (double parallel push-pull of 88 or 6550 KT) given for 2 x 100 W on the 2/4/8 ohms impedances (thanks to the no less famous output transformers).

Mr. Sidney A Coderman, chief engineer of the company since 1951 and the creator of the mythical MC 275, C22, and MR71 among others, sat himself at the "drawing board" to design the circuits of the MC 2000 whose output coupling features the patented two-wire cable transformer. The MC 2102 takes exactly the same configuration with slightly less power (2 x 100 W instead of 2 x 130 W), an essentially similar design, perhaps a less luxurious façade with its slightly smaller galvanometers. On the other hand, the price is clearly seen as the lowest, 67,000 francs for the MC 2102 instead of the 150,000 francs for the limited series MC 2000.

All this, insofar as our auditory memory does not betray us, is truly inconsequential on the extraordinary sound quality of the 2102, which is very close, indeed the same, as the 2000. In effect, we have once again found this wonderful sensation of power from extreme bass to extreme treble, this suppleness in facing the instantaneous peaks of level reminiscent of "the accelerations of the leopard in the savanna" in its movement. The perfect mastery of the double push-pull of the parallel channel KT 88s, perfectly driven by the 12AT7's (the gains and the phase difference being procured by the 12AT7's from the outset) brings a constant in the clarity of timbres, from a murmur to an explosion. The transparency is also omnipresent with a sense of acoustic integration in the area of recording, which responds well to the prompting of instruments and voice.

An Aesthetic, Timeless Impression

The MC 2102 commands respect for its quality of manufacturing, its size (45.5 cm wide, by 25.7 cm tall and nearly 41 cm deep), and its weight of 40 kg. The upper glass façade is accentuated by lateral golden bands (minus the large lateral handles of the MC 2000).

On the other hand, and with a very "theatrical" sense, you have an unimpeded view through a large transparent window into the black opaline of this façade on the reddening of the filaments in the eight tubes of KT 88 power and the top of the glass bulbs of 4 x 12AX7 and 4 x 12 AT7.

The combination of the power indicators with their background of blue-green

turquoise is a true delight when switched on, and undeniably prepares you for good listening.

As with McIntosh's other powerful amps with powerful galvanometers, the operating method can be chosen, either peak indicator, or standard of the strongest power attained over a certain amount of time.

The setting of the galvanometer is in relation to a circuit which accelerates the rising and lessens the speed of descent of the needle for a better readability (the scale goes from 0.01 W to 200 W, the 0 dB corresponding to 100 W).

The charged block switch does not activate any noise in the loudspeakers. One can also choose the drive function in the main supply of the MC 2102 through an exterior control center (such as the C2000C Controller). A small light on the façade reminds us of this position, and the connecting sockets transporting the signals of command between the instruments are in the back.

Many Possibilities of Operation

In the back of the MC 2102, vertically, on the chassis made of polished stainless steel, are aligned output terminals for loudspeakers (plugs of the WBT type, well isolated and marked out for each channel, common point, and 2/4/8 ohms impedances to choose from according to the average impedance module of the loudspeaker used), and plugs for input modulation, either in symmetric mode XLR (sensitivity of 5 V) or in asymmetric gold Cinch plates (2.5 V), with the communication carried out through a small switch.

The configuration of the MC 2102 also offers the possibility of functioning in mono, according to two modes, either by placing the two channels in parallel, in which case the impedance of the output terminals is 1/2/4 ohms, or by bridging them (invert the live input wire on one of the channels), the output impedance being 4/8/16 ohms with a power, in both cases, which extends to 200 W for all the impedances mentioned above.

A three position selector switches over the modes of stereo, parallel mono and bridged mono, which covers a functioning with an ideal interface for all types of loudspeakers, even complex impedance models.

An Achievement Based on a Proven Diagram

The MC 2012 is not identical in its input levels and drivers to the MC 2000, even if one finds the double push-pull output of the KT 88 equal, a link with the famous first double-wire output transformers.

Thus, with the 2102, one finds in entering through channels a first double triode 12AX7 as impedance adapter to raise the gain in order to attack a second 12AX7 rise in the phase shifter which each respective half drives a 12AT7 (double triode

risen in amplification of voltage to command the grids of the tubes of KT 88 power of the pentode variety under a considerable voltage, along the line of 170 V). The signals amplified by these tubes (raised in two parallel push-pulls), positive and negative section, are applied across two primary coils of the output transformer (one for the plates, the other for the cathodes). These two primary coils are wound together according to the two-thread technique (patented in 1949 by McIntosh), and require a thread of flawlessly enameled copper (for perfect insulation) with the coils very tight for a perfect coupling without a self-induction effect.

The secondary entails the multiple adapter coils corresponding to a common point and with impedances of 2/4/8 ohms.

The enormous supplying transformer (two independent ones on the MC 2000) furnish various bass parts and high voltage to the respective levels. After regulation, the continuous 12 V serve the heating filament of the input tubes, phase change and voltage amplification. The high voltage, a continuous 500 V, is obtained likewise by rectification, filtering and then circuiting to MosFets transistors.

On the MC 2102, adjustments in polarization are not provided for as with the MC 2000. This one is fixed. The working of the supplied tubes was tested beforehand, and then were heated up for 24 hours on the 2102 which outfitted it.

The bases of the tubes are made of steatite with ventilation channels to cool down the base of the KT 88 tubes. The assembly of these components is rigorous with an extreme care for the least details (even those which are not seen).

A superb piece of electronic equipment at the height of the image of the McIntosh brand name with truly guaranteed performance even in the worst operating conditions.

Listening Conditions and Subjective Analysis

How can one not be impressed by this superb unity of stereophonic power, with its tall glass façade which reveals the reddening filaments of the KT 88 above the turquoise blue background of the power galvanometers. The magic of this timeless design is always at work, and one must recognize that keeping a cool head and "coming back down to earth" for an impartial analysis of the musical performance of this amplifier is less easy than when faced with the cold industrial design of other high range electronics.

However, in all lucidity, one must say that this MC 2012 is a highly musical "holy animal," with this sort of feline suppleness in its rhythmic consistency, this surge of well-mastered power from one end of the spectrum to the other, this

extraordinary crystal transparency which reveals its subtleties, in treble and extreme treble, in relation to the level of harmonic richness which one could not even imagine coming from a piece of electronic equipment with tubes. In effect, the MC 2102 is not only totally silent (absolutely no detectable noise from the tweeter to the compression chamber) but is capable of a power of analysis and differentiation of levels of very close timbres which give another perception of the spectrum's height, standing out with the most spellbinding natural clarity.

In the same way as the Quatuor with Rosamonde cords, the flow of notes in the high medium treble range, and in the intertwining of notes played by the first and second violin, the "ethereal" notes are not blurred. On the contrary, the fluidity of the intertwining of notes is a pure wonder without any rupture in harmonious structure between the high medium and treble with a total absence of "grainy" character. The flow of the melodic play becomes totally natural, "instinctive," even for complex compositions (such as the quartet Opus 121 by Gabriel Fauré).

Faced with complex formations such as the Berlin philharmonic directed by Herbert Von Karajan, the MC 2102 proves a sovereign ease of coherently analyzing the groups of instruments, all the while not erasing the connection between them nor the relationships of the direct and reflected sounds. The impression of subjective power is formidable, without common measurement with those measured. In effect, the loudspeaker systems appear totally controlled in their offsetting, in a surprising way, the sensation that their diagram of directivity is much more open, with a surface of radiance which seems tripled, indeed, quadrupled! From this fact, the amplification experiences is strictly beside the point with a transistor amplifier of 100 W for example; the double push-pull of the channel KT 88 and the output transformer which maintains an ideal interface with the loudspeaker provide this sonorous plentitude, based also on a notion of relief which perfectly "clings" to the capture of sound.

Thus, in the Marche au Supplice from the Symphonie Fantastique, the double-bass, string, and percussion sections are laid out in deep tiers with truly defined, clear backgrounds, all giving the impression of the size of a concert hall. Through experience, we know that the KT 88's (particularly those created especially for McIntosh) provide this notion of true, more pronounced depth than the 6550's which seem more "dry" in the deep bass range, the backgrounds more forward.

With the 2102 and its selected well driven KT 88's and the exceptional quality of its output transformers, its handling of bass and extreme bass levels is impressive, without false warmth and rounded sides, indeed mellower than other ancient fixtures with these pentodes. On the album Nature by Ahmad Jamal, the double-bass is perfectly clean in the attacks on the strings, not bombastic or cottony. The power of the piano harmony is magnificent, it sounds like a true concert piano and not some vulgar upright. Rare is the amplifier to make you feel all the resonance of the instrument with such mastery of decrease in sound over time. The particular sonority of the steel drum which accompanies Jamal emerge

with clarity, contrasting with those of the piano in a totally coherent acoustic universe.

On *Birdland* by the group Weather Report, the MC 2102 makes the difference by a power of analysis which does not "undo" the spontaneity of the synthesizer attacks that extend in successive layers without ever turning into general confusion. This can be very, very strong in the right order.

On the album *My People* by Joe Zainwul, the MC (with the power needles close to the "peg") provides a notion of phenomenal acoustic power. It perfectly transcribes the differences in level of acoustic and synthetic percussion timbres with a true sense, according to impact, of the displacement of air you would feel physically. Contrary to most tube amplifiers, one does not notice the effect of intermodulation in the course of solicitations as important in the bass range as the other parts of the spectrum, nor the effect of masking in the medium bass range, and the intelligibility of the other instruments remains perfect.

On the jazz techno "So flute" by the group St. Germain, from their album *Tourist*, the MC 2102 provides a sort of pulsation without weakening in the rhythm section, all the time revealing its "cuisine" in the grasp of its multitracks and its continuity, while the differentiation of levels is extreme.

As for the transcription of voices, there is the consistency, mastery, warm character that one would notice in reality. On *Credo*, the Mass in E flat major by Franz Schubert, the two tenors seem more expressive in their phrasing, more "moving" in their diction, with their timbres "chestier." The soprano takes the libretto in the time interval, not with head voice, but is rather more "steady," "more "fleshy."

In Luciano Pavarotti's interpretation of the opera "L'elisir d'amore" by Donizetti, the voice of the tenor stands out on the MC 2102 as warmer, more present, "chesty" and with better defined variations of height in their dramatic aspects. The natural is extreme without hampering the strengths through a narrowing of the sonorous field, on the other hand, a notion of plentitude remains which nothing will alter.

The MC 2102 is an incontestable reference to the cradle of prestigious electronics as well as to transistors with tubes, because it marks out with a clarity of timbres a transparency like no other. There is no equal to its fluidity of reproduction or its ability to level perfectly the three-dimensional sonorous fields.

In all cases, an unforgettable listening experience which once again fixes a landmark in the coming of true sonority without artifice.