Product Review - McCormack Audio ALD-1 and TLC-1 solid state preamplifiers - January, 1995

John E. Johnson, Jr.

McCormack Active Line Drive ALD-1 Preamplifier

McCormack Line Drive TLC-1 Preamplifier

McCormack Active Line Drive ALD-1 Preamplifier -- Solid state preamplifier. Active and passive inputs. Active (balanced and unbalanced) and passive outputs. Maximum input to active circuits 5V rms. Maximum output from active circuits 10V rms. Input impedance 500 kOhms, output impedance 100 Ohms. Total Harmonic Distortion less than 0.05%. Size 4 3/8"H x 19"W x 11 1/2"D. Weight 12 pounds. $2,040 with external power supply. McCormack Audio Corporation, 5421 Avenida Encinas, Suite J, Carlsbad, California 92008; Phone 619-930-9550; Fax 619-930-9555.

McCormack Line Drive TLC-1 Preamplifier -- Solid state preamplifier. Passive inputs. Passive and buffered outputs (unity gain). Input impedance 13 kOhms. Output impedance 250 Ohms. Size 2 5/8"H x 19"W x 11 3/4"D. Weight 7 pounds. $1,290 with external power supply. McCormack Audio Corporation, 5421 Avenida Encinas, Suite J, Carlsbad, California 92008; Phone 619-930-9550; Fax 619-930-9555.

Years ago, before compact disc players and cassette decks, the only audio source available, besides the radio, was from phonograph cartridges. Moving magnet (MM) cartridges have outputs of about 5 mV, and moving coil cartridges (MC) usually less than 1 mV. The input stage to the amplifier section requires much more than this to drive the final output stage to full power. So, besides having tone controls, volume control, source selector, and on/off switch, the duty of the preamplifier section has been to bring the voltage of the phono input up to a level to satisfy the needs of the power amplifier section.

Although there are still many audiophiles who listen to phonograph recordings, most of us have converted to compact discs and tape cassettes. The outputs of these sources are usually more than 1

V. Thus, although we still need to switch sources and control the volume, the preamplifier section has changed. Audio purists feel, in general, that the shortest route to high quality sound is through as few electronic parts as possible. Thus, on most fine quality preamplifiers, not only are tone controls not there, but if you look inside, most of the chassis contains empty space. Enter the Line Drive preamplifier. Its lack of unnecessary parts results in a more direct route to the power amplifier section, and a more transparent sound, free of artifacts produced by the capacitors, resistors, and other parts that were once required. McCormack Audio has been producing line level preamplifiers for seven years now, and the ALD-1 as well as the TLC-1 represent state of the art design in this approach. In the present review, we report our findings on the sonic performance of these two preamplifiers, and compare an active unit that also has passive circuits (the ALD-1) with a dedicated passive unit (the TLC-1).

The ALD-1 has an optional external power supply, ($295.00) which we obtained with the unit. In this configuration, which lowers the noise floor, there is no on/off switch, and Dr. Joyce Fleming, President of McCormack Audio, informed us that their preamplifiers are designed to have the power remain on at all times. This increases the life of the circuitry, since the principle source of wear and tear is the voltage surge which occurs at power on.

The front panel has four control knobs, from left to right: source selector, tape monitor selector, normal/direct selector, and volume control. In the center is a set of switches for tape recording (dubbing) and signal muting. The ALD-1 is unusual in this regard, having two tape loops, where many preamplifiers only have one, or none at all. This allows the user to copy from one cassette tape deck to another, for example, from a DCC or DAT deck to analog cassette for playing the tape in your car. The switch also allows one to copy in either direction (tape deck 1 to deck 2 and deck 2 to deck 1). The tape buffer circuits can also be taken completely out of the signal path by the use of this switch. The mute switch automatically comes on for 20 seconds at power on, then turns off. For manual use, the switch turns off one channel, then the other, or both (when the phone rings, or when you want to check the sound coming from one channel). The rear panel has inputs (unbalanced) for CD, tuner, video, tape, and aux/phono (the phono module, MM or MC, is optional for this circuit at $345.00). There are two sets of tape in and tape out for use with the tape dubbing circuits. There is one set of direct in and passive out connectors where the signal is routed directly to the volume control and from there to the passive out. One set of balanced outputs, plus normal out and inverted out, complete the array of possible connections.

The TLC-1, which we also obtained with the optional external power supply, is strictly a passive unit. The front panel has, from left to right, an input selector, a selector which allows the monitoring of the output of two tape decks (two tape loops) during a recording session and also allows the left or right channel to be turned off, a balance control, and a volume control. Switches in the center are used for taking the tape circuits out of the signal path and muting the signal altogether.

The rear panel of the TLC-1 has the same inputs as the ALD-1, but there are no balanced outputs, or inverted outputs. The choice of outputs (besides the tape loops) consists of passive or buffered. All inputs are connected to the volume control and from there, go to the passive output jacks as well as the buffered output jacks. So, while the ALD-1 has one set of such connections ("Direct In" - "Passive Out"), the TLC-1 can be used to direct all of its input signals to bypass the output buffers. The

function of the input buffers on the ALD-1 is to balance the sound quality of the source components to a high input impedance. The function of the output buffers on the TLC-1 is to provide a low output impedance if so desired.

The chassis of both units is a very attractive and subtle gray, which is unobtrusive, and yet, elegant. The selector knobs are large, which is very appealing, as they are easy to grasp and turn to various modes. The switches on the ALD-1 are spring loaded, always returning to a center position, with green and red LEDs indicating their status of operation.

The sound quality of the ALD-1 and TLC-1 is spectacular, being on a par with what one would expect from units costing a great deal more. Some of us who auditioned these preamplifiers are used to having more knobs to fiddle with, including tone controls and the like. However, if there ever were components designed to turn listeners into purists, it is these two which will do it. The active buffered circuits provide a nice warm sound quality, without glare or audible distortion of any kind. Excellent accuracy and sound stage are obvious. The direct in/out circuits, on the other hand, produce a sound with a little more crispness, and the difference between these circuits and the active and/or buffered ones will depend on the output impedance of the source as well as the input impedance of the power amplifier (again, the function of the buffers is to stabilize this phenomenon). We tested the units with a very discerning amplifier, namely a Pure Class A, single ended triode. The results were astounding, with and without buffered outputs. The volume control had to be turned only a little bit more with the direct route, to produce equal loudness compared to the active circuits. We pushed the system to its limits by inputting a 15 kHz sine wave, and turning the volume all the way up, using the direct route. The resulting tone sounded as pure as we could possibly imagine. Problems with hum were reduced when the balanced outputs of the ALD-1 were used with a balanced input power amplifier.

The choice of either the ALD-1 or TLC-1 depends on your needs, as we could detect no sound quality differences between the direct signal paths of the two units. If you do a lot of tape dubbing, or if you use an LP turntable, then the ALD-1 is the proper choice, since the phono module is not available for the TLC-1. If on the other hand, you prefer the crisp sound of short route connections, with no amplification, and have no need of phono connections, then the TLC-1 is a best bet.

Both the ALD-1 and TLC-1 can be used for Home Theater applications. This is accomplished by routing one of the tape loops through a surround sound processor (this will still leave one tape loop for recording and monitoring tape sessions). By switching the tape monitor on, the stereo signal from, say a surround encoded laser disc or CD, will be routed to the surround sound processor, and the decoded left/right front stereo surround sound output will be fed to the ALD-1 or TLC-1. The remaining center channel and rear surround channel outputs would be taken from the surround sound processor, and fed to additional power amplifiers and speakers. This would provide an extremely high definition audio system for conventional stereo sources and surround sound as well, for complete home entertainment.

In sum, the ALD-1 and TLC-1 are sonic pieces of art. They are highly recommended.

John E. Johnson Jr.

Editor-in-Chief

Other related articles

- McCormack Audio Digital Drive SST-1