

McCORMACK

**ACTIVE LINE DRIVE
ALD-1**

Preamplifier

WARNING
**TO REDUCE THE RISK OF FIRE OR
ELECTRIC SHOCK DO NOT
EXPOSE THIS APPLIANCE TO RAIN
OR MOISTURE.**

CAUTION

TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

Dear Customer.

Selecting fine audio equipment such as the unit you've just purchased is only the start of your musical enjoyment. Now it's time to consider how you can maximize the fun and excitement your equipment offers. This manufacturer and the Electronic Industries Association's Consumer Electronics Group want you to get the most out of your equipment by playing it at a safe level. One that lets the sound come through loud and clear without annoying blaring or distortion-and, most importantly, without affecting your sensitive hearing.

Sound can be deceiving. Over time your hearing "comfort level" adapts to higher volumes of sound. So what sounds "normal" can actually be loud and harmful to your hearing. Guard against this by setting your equipment at a safe level BEFORE your hearing adapts.

To establish a safe level:

- Start your volume control at a low setting.
- Slowly increase the sound until you can hear it comfortably and clearly, and without distortion.

Once you have established a comfortable sound level:

- Set the dial and leave it there.

Taking the time to do this now will help to prevent hearing damage or loss in the future. After all, we want you listening for a lifetime.

INTRODUCTION

Thank you for purchasing the Active Line Drive ALD-1. This preamplifier is hand-crafted with top quality, highly reliable components. We are confident that you will be well satisfied with its sonic performance and find pleasure in its functional beauty. Before you enjoy these experiences, however, please take a few minutes to read this Owner's Manual and acquaint yourself with the instructions for optimal operation. This will ensure your listening pleasure today, and for many years to come.

OPERATING INSTRUCTIONS

UNPACKING - Be sure to save the Active Line Drive's box and packing materials. Store them in a dry environment. It is best to use the original packaging should you need to transport or ship the Active Line Drive.

INSTALLATION - Place the Active Line Drive as closely as possible to its final installation location, while leaving yourself access to the rear panel. Choose a location with at least a few inches of ventilation space around the chassis.

> Make certain the AC switch is in the OFF position. This switch is located in the upper left corner of the rear panel, and is marked with an (O) indicating OFF, and an (-) indicating ON. Also check to be certain the VOLUME knob is turned all the way down, fully counter-clockwise.

> The Active Line Drive uses a removable 3-wire grounded AC power cord. Plug the AC power cord into the Active Line Drive, then plug the other end into an appropriate wall socket.

> Connect your line level sources (CD, DCC, Mini-Disc, VCR, tuner, cassette deck, phono preamplifier, etc.) to the input of your choice on the rear panel.

There are 5 standard inputs labeled CD, TUNER, VIDEO, TAPE, and AUX/PHONO for your convenience. In addition, the DIRECT INPUT allows you to bypass the input buffer and switching circuitry and run a source directly to the volume control.

If you have purchased the optional phono stage, then you will want to use the AUX/ PHONO connectors for your turntable. If not, then use this position for any line level source you choose.

NOTE - The Active Line Drive uses high-quality RCA phono jacks for input connections, and gives you the option of using XLR (balanced) or RCA (unbalanced) output connections. While this allows you great flexibility in configuring your system, please remember that selecting high quality cables for use with this revealing component will result in superior sonic performance from your system. Your McCormack dealer will guide you in making this important component choice.

> Be certain your power amplifier is turned OFF, then connect it to the Active Line Drive output of your choice.

> There are 4 separate outputs: XLR/balanced, RCA/normal polarity, RCA/inverted polarity, and RCA/passive. The passive output is connected directly to the volume control. The active outputs are driven by the line amplifier stage, and can be used simultaneously, so that more than one power amplifier can be connected.

> Install the mechanical grounding spike. (While this step is optional, we strongly recommend it because of the improved performance it produces.) This threaded spike screws into a hole located on the bottom of the chassis, near the center. Install it point down, so that the spike and the 4 feet contact the surface the Active Line Drive sits on. Thread the knurled lock nut over the ground spike until it locks against the chassis. You can use a coin under the spike to protect the surface beneath it, if you desire.

> Lift the Active Line Drive to its permanent location. Be careful and do not slide it into position with the spike installed. Check again to be certain that all your plugs are fully inserted, making a tight connection. Make sure that the VOLUME knob is turned fully counter-clockwise, all the way down.

> Flip the AC switch to the ON (-) position. MUTE is automatically engaged (both mute LEDs red) for approximately 20 seconds, and the POWER indicator on the front panel will illuminate amber during this period. MUTE will disengage (both LEDs off) at the end of this period, and the POWER LED will turn green, indicating normal operation.

> Turn on your power amplifier.

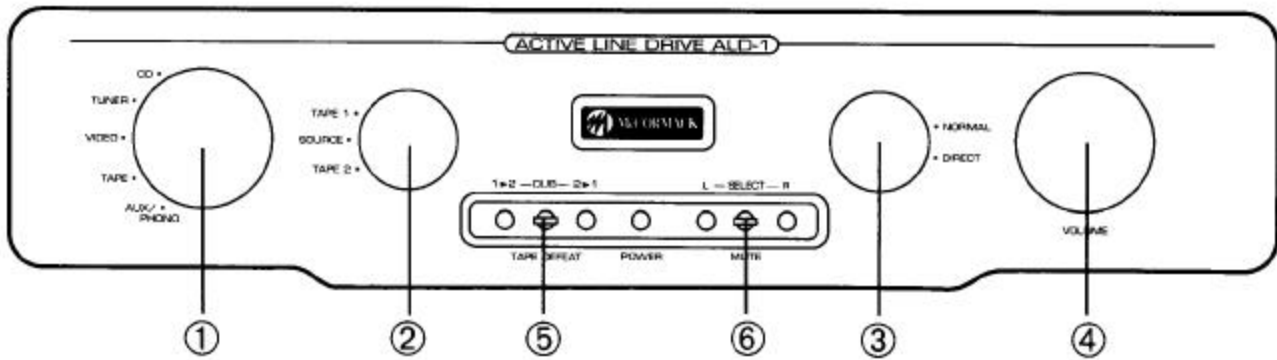
BREAK-IN PERIOD

Your Active Line Drive has already been burned in at the factory. However, like all high quality components, it will still require a break-in period of approximately 100 hours before it will sound its best. Your Active Line Drive is designed to be left on all the time, but be certain to turn down your VOLUME control all the way and engage the MUTE switch between listening sessions.

LISTENING

- > rotate the input selector control to the desired input,
- > set the tape monitor control to the SOURCE position,
- > select the NORMAL input mode, or the DIRECT mode if you have connected a source to the DIRECT IN jacks and wish to listen to it. The DIRECT mode overrides all other inputs, including TAPE, when listening.
- > slowly turn the VOLUME knob clockwise until you reach the desired listening level.

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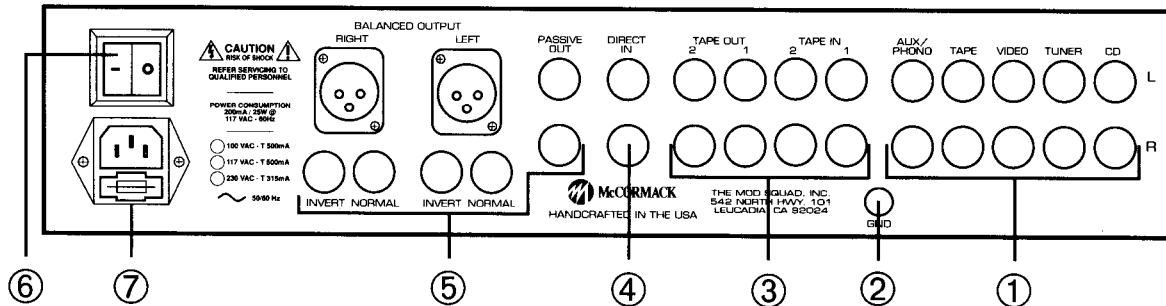
FRONT PANEL

SELECTION CONTROLS

- 1) INPUT SELECTOR - Use this 5-position control to choose the source you wish to use.
- 2) SOURCE/TAPE SELECTOR - Use this 3-position control to listen to one tape machine (called TAPE 1), to a second tape machine (called TAPE 2), or to the source indicated by the input selector control.
- 3) NORMAL/DIRECT SELECTOR - Use this 2-position control to choose the NORMAL input path or the DIRECT INPUT, which bypasses the main input switching and buffer amplifier.
- 4) VOLUME KNOB - Use this continuous control to adjust the sound level.

FUNCTION SWITCHES

- 5) TAPE SWITCH - This 3-position spring-loaded switch controls operation of the tape circuitry. The sequence of positions is:
 - press down to defeat or engage the tape circuitry, as described in the TAPE SWITCH OPERATION section.
 - lift up to select tape-to-tape dubbing modes, as described in the TAPE-TO-TAPE DUBBING section.
- 6) MUTE SWITCH - This 3-position spring-loaded switch controls the muting of either or both channels during listening. The sequence of positions is:
 - press down to mute or unmute both channels;
 - lift up to selectively mute either channel, as described above in the LEFT/ RIGHT SELECTIVE MUTE section.



BACK PANEL

- 1) NORMAL INPUT GROUP - You may connect 5 line level sources, such as a CD player, a tuner, DCC, Mini-Disc, tape deck, or the audio signal from your VCR.

NOTE: While 1 pair is labeled AUX/PHONO, it will be appropriate for a phono cartridge only if you have installed the Active Line Drive's optional phono stage, or are using an external phono preamplifier.

- 2) CHASSIS GROUND LUG(GND) - Use this for the grounding wire from your turntable, or for any other similar function.
- 3) TAPE GROUP - 2 tape decks are accommodated by these input and output jacks.
- 4) DIRECT IN - This input sends its signal directly to the NORMAL/DIRECT selector, bypassing the input buffer circuits.
- 5) MAIN OUTPUTS - There are 3 active outputs and 1 passive output on your Active Line Drive.

- The BALANCED OUTPUT pair uses XLR connectors and allows you to send a balanced signal to a power amplifier which has balanced input.

- The NORMAL pair uses RCA phono connectors and allows you to send a normal polarity signal to your power amplifier.
 - The INVERT pair uses RCA phono connectors and allows you to send a polarity inverted signal to your power amplifier. This enables you to correct the polarity if it has been inverted by your sources.
 - The PASSIVE OUT pair used RCA phono connectors and allows you to take the output directly off the volume control.
- 6) POWER SWITCH - This switch is located in the upper left corner and turns the Active Line Drive on and off.

- 7) AC POWER/FUSE MODULE - This assembly is located in the lower left corner. The top section accepts a 3-prong power cord plug. Below that is a small tray which is divided into two sections, front and back. The back section holds the active AC line fuse; the front section holds a spare fuse.

To open this tray, remove the power cord plug, insert a small screwdriver in the slot at the top of the drawer and pull out. The correct fuse value for each voltage standard is listed directly to the right of this module.

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MUTE OPERATION

The MUTE circuit turns off the main active outputs, but does not affect the PASSIVE or TAPE outputs.

MUTE is indicated by both left and right LEDs illuminating red. Unmute (listen) is both LEDs off.

MUTE is automatically engaged for 20 seconds when power is switched on. MUTE also engages automatically when power is turned off.

The MUTE switch is a spring-loaded, return-to-center type. Press down once to engage the mute function; press down again to listen. Press and release the switch immediately; do not hold it down.

LEFT/RIGHT SELECTIVE MUTE

For diagnostic purposes, it is possible to mute left and right channels independently. From the listen position (both LEDs off), lift the MUTE switch up and release. One channel will mute and the other will operate.

The switch logic from the listen setting is:

- UP once = right operate (green LED) / left mute (red LED)
- UP again = listen (both LEDs off)
- UP again = left operate (green LED) / right mute (red LED)
- UP again = listen (both LEDs off)

TAPING

The Active Line Drive provides monitoring and dubbing facilities for 2 tape decks. The tape outputs are independently fed by active buffer amplifiers which provide the constant, low impedance drive and a high degree of isolation between the taping and preamplifier circuitry that are essential for best performance. The switching arrangement allows you to monitor either source or tape deck while taping, or dub tape-to-tape while listening to another source.

TAPE CONNECTIONS

Connect your tape decks (or R-DAT, DCC, Mini-Disc, etc.) to TAPE 1 and TAPE 2 inputs and outputs as indicated on the rear panel. The TAPE IN jacks receive the signal from the deck; the TAPE OUT jacks send the signal you choose to your deck.

SOURCE SELECTION

Sources selected by the input selector control are automatically routed to both tape outputs when the TAPE DEFEAT switch is in the connect setting (see below). DIRECT IN signals are not available for taping.

LISTENING/MONITORING

Select either TAPE 1 or TAPE 2 position on the monitor control to listen to your tape decks, or to monitor during recording. You must also select the NORMAL position on the normal/direct control.

TAPE SWITCH OPERATION

CONNECT/DEFEAT- This switch operates much like the MUTE switch. It is also a spring-loaded, return-to-center design. Pressing it down once lights both tape LEDs red, and defeats the connection to the tape circuit. This isolates the tape circuitry so it cannot adversely affect the Active Line Drive's performance when it is not being used. Pressing the switch down again restores the connection, and turns off the LEDs. The connection must be engaged (both LEDs off) before a recording can be made.

TAPE-TO-TAPE DUBBING

This feature connects the output of one tape deck to the input of the other for making copies of a recording.

➤ From the connect setting (both LEDs off) lift the TAPE switch up to select the preferred dubbing mode i.e., 1 > 2, or 2 > 1. The selected mode is indicated by the green LED; the other LED turns red. Lifting the switch up again clears the dubbing mode and returns the tape circuit to the connect setting (both LEDs off).

The 1 > 2 mode means that the output of TAPE 1 is connected to the input of TAPE 2. The 2 > 1 mode connects the output of TAPE 2 to the input of TAPE 1.

➤ When you are using the dubbing feature, you may listen to either deck by selecting TAPE 1 or TAPE 2 on the monitor control. You may also select the SOURCE position and listen to a different source while dubbing proceeds.

TROUBLESHOOTING

If you experience loss of power, signal or indicator lights, check your cable connections and AC line cord carefully. Test your AC outlet to make sure it is supplying power. Check the AC line fuse located on the rear panel to make sure it is intact. You must first remove the AC line cord to gain access to the fuse tray. Slide it out using a medium blade screwdriver to open it. If the fuse has blown, replace it once with the correct replacement fuse as indicated on the rear panel. Check for proper operation. If it blows again STOP!

There are no user serviceable parts in the Active Line Drive other than the AC line fuse. Contact your McCormack Dealer for service options.

SPECIFICATIONS

Inputs: 5 line level (active buffer)
1 line level (direct/passive)
2 tape (active buffer)
Outputs: 1 pair balanced XLR connectors
1 pair unbalanced RCA connectors, non-inverting
1 pair unbalanced RCA connectors, inverting
1 pair unbalanced RCA connectors, passive
2 pair tape out (active buffer)

Line Amplifier Section
Gain: 13dB (4.5X) Bandwidth: 0.5Hz-300kHz+0,-3dB
Maximum Output: 10V RMS
THD: <0.05%
High Level Sensitivity: 225mV
Signal Polarity("Absolute Phase"): Non-inverting at NORMAL output; inverting outputs provided
Output Impedance: 100 ohms

Input Buffer
Gain: X1 (unity)
Bandwidth: DC-5MHz +0,-3dB
Input Impedance: 500K ohms

Tape Output Buffer
Gain: X1 unity
Bandwidth : DC-1 MHz +0,-3dB
Output Impedance: 250 ohms

Direct In
Input Impedance: 15k ohms

Dimensions: 19"W, 43/8"H, 11 1/2"D
Shipping Weight: 16 lbs.

OPTIONAL PLUG-IN PHONO MODULE (user installable)

MM Phono Sensitivity: 5mV for 0.5V @ 1 kHz
MC Phono Sensitivity: 0.9mV for 0.5V @1k Hz
MM & MC Phono Overload: 200mV
MM & MC Phono Input Capacitance: Adjustable (minimum =100pF)
MM & MC Input Load Resistance: Adjustable (maximum = 47.5k ohm)
MM S/N: -80dB "A" weighted re: 5mV
MC S/N: -75dB "A" weighted re: 0.5mV

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