

*Beyond  
Your  
Expectations  
Within  
Your Reach*

# **LD-2**

**Line-Drive Preamp**



**McCORMACK**  
AUDIO CORPORATION OF VIRGINIA

*Thank you* for purchasing a McCormack Audio LD-2 Line Drive. This preamplifier was hand crafted with top quality, highly reliable component parts. 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.

## **INSTALLATION**

We recommend that you save the box and packing materials. Store them in a dry environment. It is best to use the original package should you need to transport your LD-2 Line Drive.

Place your LD-2 Line Drive on a stable surface. Do not locate it in direct sunlight or expose it to extremely high temperatures (above 70 degrees centigrade/154 degrees Fahrenheit).

All LD-2 Line Drives sold in the United States are configured for operation on a 60Hz ac power line producing between 108 and 126 volts. Export versions of the LD-2 will have the correct operating voltage and frequency clearly marked on the back panel of the unit, near the ac power cord. In all cases, the actual line voltage should be within + 5/- 10% of the nominal rated voltage.

### ***Electromagnetic Interference (EMI)***

Considerable care has been taken in the design of the LD-2 to minimize its susceptibility to radio frequency interference and other forms of EMI. Choice of materials, physical layout, grounding practice, and power supply design have all been specified with a view to reducing the impact of electromagnetic fields on the performance of this unit. At the same time, however, our primary goal is the accurate reproduction of recorded music in the normal home environment, and we have elected not to compromise this objective by the application of heavy-handed RFI filters, or by using grounding practices that reduce RFI at the expense of degraded audio performance. We find that the approach we have taken has worked extremely well, resulting in only rare instances of EMI problems which could be treated locally as needed, rather than compromising the performance of our product in the 99.9% of installations where EMI is not a problem.

Care in installation can often avoid EMI induced problems. The following practices should generally be observed in any application, and will be especially important where EMI may be a problem.

Interconnect cables should be kept as short as possible (3 meters or less), and shielded cable should be used (cable which has two center conductors, and a separate external shield connected at only one end).

Physical location and cable "dress" can be an important factor in minimizing hum pickup. The installation should situate the preamplifier well away from the power amplifier, and power (ac mains) cords should be dressed to remain at least 4" (100mm) away from input/output cables.

## CONNECTIONS

The LD-2 Line Drive uses standard RCA phono jacks for input and output connectors. Please remember that selecting high quality cables for use with this revealing component will result in superior sonic performance from your system.

Position the LD-2 Line Drive as close as possible to its final installation location, while allowing access to the back panel connectors.

**LINE LEVEL SOURCES:** There are 5 line level inputs labeled CD, VIDEO, TUNER, TAPE, and PH/AUX for your convenience. If you have purchased the optional phono stage, then you will want to use the PH/AUX connectors for your turntable. If not, then use this input for any line level source you choose.

**TAPE RECORDER/PLAYER CONNECTIONS:** To use monitoring facilities built into a tape recorder, connect your tape deck (R-DAT, DCC, Mini-Disc, etc.) to the TAPE 2 inputs and outputs, as indicated on the rear panel. The TAPE 2 IN jacks receive the signal from the deck; the TAPE 2 OUT jacks send the signal chosen by the source selector to your deck.

**AMPLIFIER CONNECTION:** Be certain your power amplifier is turned OFF, then connect it to the LD-2 output of your choice. Two pairs of outputs are provided for special applications (e.g. connecting self-powered subwoofers). These are wired in parallel and are electrically identical.

The LD-2 uses a removable 3-wire grounded AC power cord. Plug the AC power cord into the LD-2, then plug the other end into an appropriate wall socket.

When all connections are made, move the LD-2 to its permanent location. Check again to be certain that all your plugs are fully inserted, making tight connections.

When first powered up, and with restoration of service after a power outage, the LD-2 starts in Standby Mode. Press the button labeled STANDBY to begin normal operation. The LD-2 will switch to its default settings, which are for CD input and -50 dB level settings.

Turn on your power amplifier.

## CONTROLS

All front panel and remote controls are "tactile" switches which operate by pressing and releasing.

**SOURCE (front panel only):** Pressing this switch steps sequentially through the five main inputs (CD, VIDEO, TUNER, TAPE, PH/AUX). An led illuminates to indicate the selected source.

**CD, VIDEO, TUNER, TAPE, PH/AUX (remote control only):** - On the remote control, the five main inputs may be directly accessed by pressing the associated button.

**THEATER (front panel and remote):** Theater Mode will only operate on the Video input. When Video is selected, this switch will toggle the unit in and out of Theater Mode. In Theater Mode, the LD-2 is set to unity gain, and volume and balance controls are disabled. Other functions (Select, Monitor, Mute, Standby) work as usual.

**MONITOR (front panel and remote):** Pressing the Monitor switch toggles between the selected main source and the TAPE 2 input.

**MUTE (front panel and remote):** - The MUTE circuit turns off the main outputs, but does not affect the TAPE outputs.

**VOLUME - + (front panel and remote):** Press these buttons to decrease or increase the level setting. The actual setting, expressed in dB of gain, appears for each channel in the display window. Negative numbers indicate dB of attenuation. NOTE the volume control is disabled when the LD-2 is in Theater mode.

**BALANCE << >> (remote control only):** - Press these buttons to shift the balance to left or right. NOTE the balance control is disabled when the LD-2 is in Theater mode.

**STANDBY (front panel only):** - This button will toggle the LD-2 in and out of Standby Mode. In Standby Mode all displays are turned off except for the Standby led, which is lit. When switching out of standby mode, the LD-2 returns to the previously selected source and level settings.

## Questions

If you have questions about the installation or function of your LD-2 do not hesitate to call Customer Service at (703) 698-8581.

## **GETTING THE MOST FROM YOUR LD-2**

In a system of high quality components, the McCormack LD-2 Line Drive offers a remarkable level of sophistication and refinement in music reproduction. To get the best performance out of any audio system, there are a number of important details that must be attended to.

### ***Absolute Phase***

Musical notes are heard through the ear's response to waves of alternating rise and fall of air pressure. Musical transients are almost exclusively positive: that is, the initial effect is a rise in pressure. The ear is capable of distinguishing these positive transients from the musically unnatural alternative of a negative transient (an initial fall in air pressure). In your stereo system, these transients are created by your loudspeakers. If the speakers respond to musical transients by first moving out, they are creating a rise in pressure, and the system is said to be phase correct. If they respond by moving in, they create a fall in pressure and the system is said to be phase inverting. Each component in the stereo system either preserves the phase of the incoming signal, and is said to be phase correct, or inverts the phase and is said to be phase inverting. It is unimportant whether an individual component is phase correct or phase inverting, as long as the system as a whole is phase correct. This will be the case if the number of phase inversions is even (or zero).

The LD-2 is phase correct. If your system has an odd number of inversions, (for example, if you have a phase inverting preamplifier in your system) then you must add one phase inversion. This is conveniently done by reversing the positive and negative connections to your speakers (be sure to reverse both channels). If you are not sure about the phase of every piece in your system, you can establish correct absolute phase by careful listening. When the system is in correct phase, transients will be noticeably cleaner and more sharply defined. The effect is especially apparent on plucked string sounds. A final warning - not all recordings are phase correct (including some "audiophile" recordings), so listen to several before concluding your investigation of absolute phase.

### ***The Importance of Wires***

Interconnect and speaker wires are an important element in your stereo system. Interconnects are available which will permit a reference quality system to blossom and fulfill its promise of musical reality. Others will strangle the system to the point where it becomes little better than average. To complicate matters, our experience suggests that the choice of interconnects will be system dependent - those that are top ranked on one system may be a poor choice for a different system. Consult your McCormack Audio dealer for recommendations for your specific system.

## SPECIFICATIONS

### Line Amplifier Section

**Gain:** 21.5 dB

**Bandwidth:** 0.5Hz-300 kHz + 0,-3dB

**Maximum Output:** 8.0 Vrms

**Harmonic Distortion (THD):** less than .1% at 2.5 Vrms output

**Hum and Noise:** 100 dB below 2.5 Vrms output

**Signal Polarity ("Absolute Phase"):** Non-Inverting

**Output Impedance:** less than 100 Ohms

**Input Impedance:** 13.5 kOhms

### Optional Phono Stage

**MM Phono Sensitivity:** 5mv for 0.5v @ 1kHz

**MC Phono Sensitivity:** 0.9mv for 0.5v @1kHz

**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 relative to 10 mv input

**MC S/N:** -75dB relative to 100 mv input

### Mechanical

**Dimensions:** 19"W x 3 1/2"H x 11 1/4"D

**Weight:** 18 lbs.

## FUSES

AC MAINS FUSE - in a tray in the AC power cord receptacle, located in the lower left corner on the back of the chassis. 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 inner section holds the active AC line fuse; the outer 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. If the fuse has blown, replace it once with the correct replacement fuse. Use only the correct replacement fuse value and type. The correct fuses are:

For 100/120V ac mains – 20mm, T200MA (slow-blow)

For 220/240V ac mains – 20 mm, T100MA (slow-blow)

Replace this fuse only with the correct type and value. If the fuse blows again immediately or after a short time, do not continue replacing it, as a fault condition exists that must be corrected.

## Service

If your LD-2 requires service, repack it using the original box and packing material and ship to the Service Department address below. Boxes and packing materials can be purchased through our service department if you no longer have yours. Include with the unit a note describing the problem you are having in as much detail as possible. It is especially important for our technician to know if the problem is intermittent. If you want an estimate of cost for out of warranty service, be sure to request it in this note. Be aware that requesting an estimate will delay service to your unit, as we will have to contact you for approval before commencing service.

**Service Department  
McCormack Audio Corporation of Virginia  
2733 Merrilee Drive  
Fairfax, VA 22031**

The service department can also be reached by e-mail at [service@mccormackaudio.com](mailto:service@mccormackaudio.com) by phone at 703-573-9665, or by fax at 703-560-5360.