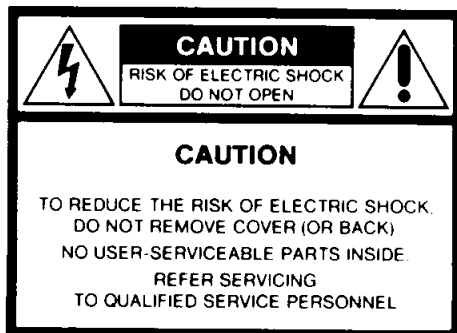


WARNING
TO REDUCE THE RISK OF
FIRE OR ELECTRIC SHOCK,
DO NOT EXPOSE THIS APPLIANCE
TO RAIN OR MOISTURE.



This symbol is intended to alert the user of the presence of uninsulated "dangerous voltage" within the product's enclosure, that may be of sufficient magnitude to constitute a risk of electric shock to persons



This symbol is intended to alert the user of the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance



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 Power Drive DNA-2. This amplifier was 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 Power Drive's box and packing materials. Store them in a dry environment. It is best to use the original package should you need to transport the Power Drive. Because of the DNA-2's weight, it is recommended that two people remove it from the box. When moving the DNA-2, do not lift the unit solely by the slotted grills on each side which cover the heat sinks. They are formed from heat conductive aluminum and could be bent by the weight of the amplifier. Lift the unit only by the corners, using the faceplate in the front and the chassis corners at the rear.

INSTALLATION—Place your Power Drive on a stable surface in a location which allows adequate ventilation. If it is sitting on a carpet, use a flat board and Tiptoes underneath to keep the ventilation slots unobstructed. Do not locate it in direct sunlight or expose it to extremely high temperatures (above 70 degrees centigrade or 154 degrees Fahrenheit). Allow at least four inches of open space on each side, and six inches of open space both above and behind. In a stack of components, place it only at the top or the bottom. Do not block the ventilation slots on the top or bottom, or the heat sinks on each side which sit inside the slotted panels.

- 1.) Position the Power Drive as closely as possible to its final installation location, while allowing access to the back panel connectors.
- 2.) Check to be certain the power switch on the front panel is turned off, and that your system's volume control is turned down all the way.

- 3.) The Power Drive uses a three-wire grounded AC power cord and an oversized, high-current AC receptacle. This power cord is chosen for optimal sound and cannot be replaced with other standard-size cords. Plug the AC power cord into the Power Drive, then plug the other end into an appropriate wall socket. Minimum hum is achieved in most systems when only the amplifier is grounded since it is the least sensitive component and has the largest ground current. If your system produces audible hum, try installing two-prong adapters on any components with three-prong plugs, except the amplifier, to float their grounds.

CONNECTIONS—The Power Drive uses standard RCA phono jacks and XLR connectors for input connections and two pairs of binding posts for output connections; on the *Limited Anniversary Edition*, there is a single pair of custom output connectors. While this allows you great flexibility in choosing cables, please remember that selecting high quality cables for use with this revealing component will result in superior sonic performance from your system.

IMPORTANT! Always install the interconnect cables first when connecting an amplifier, and remove them last when disconnecting it. This will prevent potential damage to the loudspeaker in case the power supply has not fully discharged.

- 1.) Install interconnect cables from the main output of your preamplifier to the input connectors located along the lower section of the rear panel. Please note the channel designators, and be certain the plugs are inserted fully, making a tight connection. The DNA-a has both single-ended and balanced inputs, connected via RCA jacks and XLR connectors respectively. A small green LED beside each connector indicates which one is active. Each DNA-2 is set for single-ended operation at the factory. To change to balanced operation, unplug the AC power cord from the Power Drive, remove the 14 screws holding the top cover in place, and lift it off. Move the jumper on each circuit board from the "RCA" position to the "BAL" position. (See diagram on next page.)

- 2.) Check again to be certain the Power Drive's power switch is turned off.

- 3.) Install speaker cables from your speaker's input connectors to the output connectors located on either side of the rear panel. Note the channel and polarity designators.

For the Standard or Deluxe model, choose either of the binding post pairs, or use both, if desired, for bi-wiring. (These two output connectors are wired in parallel.)

The *Limited Anniversary Edition* is equipped with exclusive, custom-made output connectors that refine the sonic qualities and extend the dynamic range. Their conductive elements combine high purity brass, copper and 24-karat gold.

To use these connectors, insert the supplied Allen T-wrench into the set screws at the rear and turn counterclockwise two or three full rotations. Insert the speaker cable wire or lug into the rectangular slot from either the top or the bottom of the connector. For bi-wiring, insert one wire from the top and the other from the bottom. Insertion separates the contacts inside the connector so that full contact with the wire or lug is possible. Tighten the set screw with the Allen T-wrench until it is just snug. *Do not over tighten!* This is unnecessary and will only stress the connector parts. A small amount of pressure results in a very high pressure, high friction contact and yields the best possible sound. Repeat this process with each connection.

When finished, recheck all your connections to be certain they are correct and tight.

4.) Install the mechanical grounding spike. (While this step is optional, we strongly recommend it because of the improved performance it produces.) The threaded spike screws into a threaded hole located on the bottom of the chassis, in the center at the rear. Install it point down, so that it touches the surface the Power Drive sits on. Thread the knurled lock nut over the ground spike until it locks against the chassis. It is alright for the rear Soft Shoes (damping feet) to be raised slightly when the spike is down. You can use a coin under the spike to protect the surface beneath, if you desire.

5.) Move the Power Drive to its permanent location. Check again to be certain your system's volume control is turned down all the way. Turn on the front panel power switch. The PROTECT and POWER indicators should light. After 15 to 20 seconds, the PROTECT indicator should turn off and your Power Drive is ready for operation. If your PROTECT indicator does not turn off, refer to the troubleshooting guide at the end of this manual.

BREAK-IN AND WARM-UP PERIODS—Your Power 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. The Power Drive is always ready to play when turned

on, but it will not settle into optimal operation for at least 30 minutes. It is perfectly alright to leave your Power Drive on all the time, but always be certain to turn down your system's volume control all the way, and turn your mode selector to mute between listening sessions.

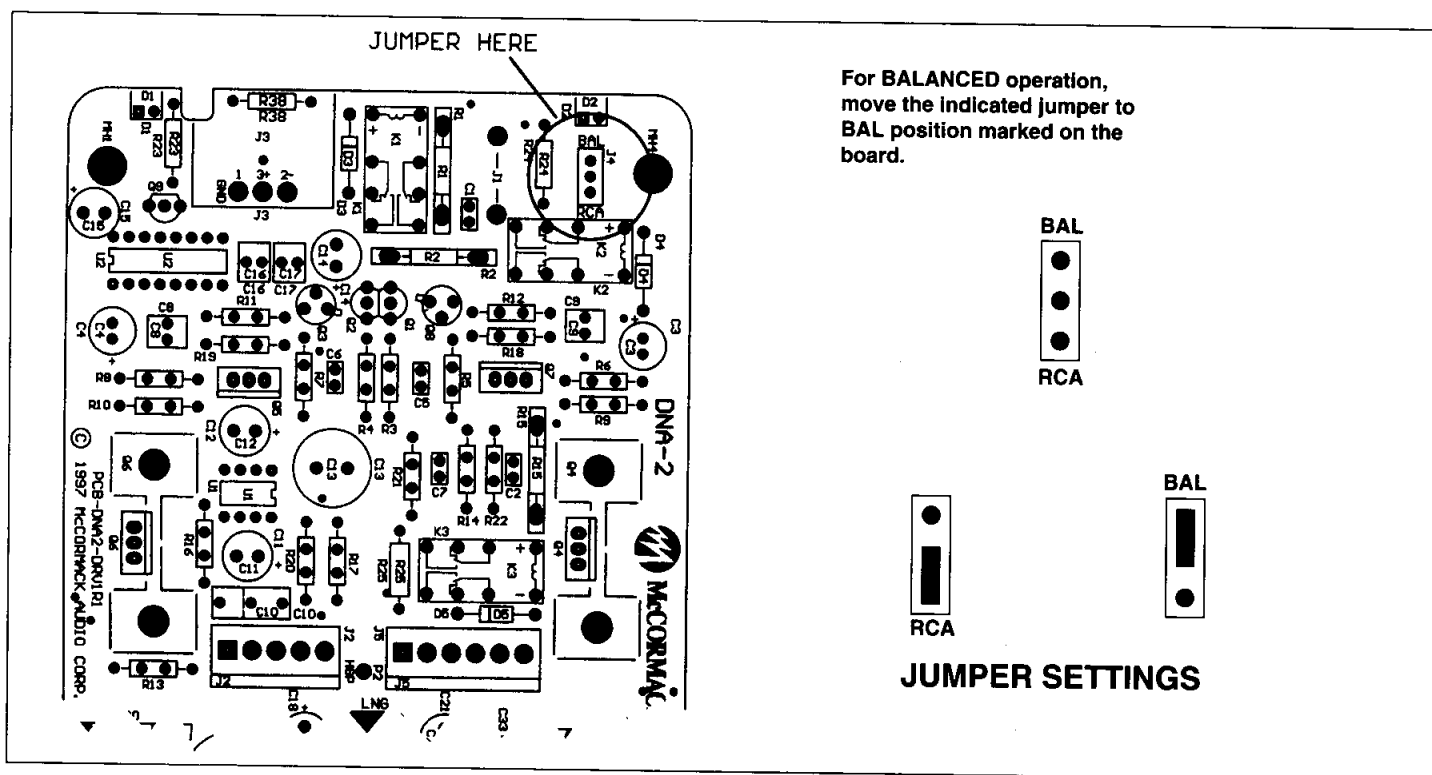
POWER SWITCH—The power switch is located on the right side of the front panel, below the three LEDs.

PROTECT, STANDBY AND POWER INDICATORS—These three LEDs are located above the power switch on the front panel. The POWER light glows (green for the Standard and Deluxe models, blue for the *Limited Anniversary Edition*) when the Power Drive is turned on. The PROTECT light is red when the Power Drive is first turned on or when its sophisticated protection circuitry has been activated. When this happens, the DNA-2 mutes and will not resume playing until the potentially dangerous condition has passed. Then the PROTECT light will turn off and the amplifier will resume operation. The amber STANDBY light turns on after about a 15-minute period when no signal is present. This reduces the bias idling point to less than 30%. As soon as the DNA-2 senses a signal, the normal bias setting is restored and the STANDBY light turns off. If the PROTECT light comes on while you are listening, turn off the Power Drive and refer to the troubleshooting guide at the end of this manual.

AC MAINS FUSE—You have easy access to this fuse. It is located on the rear panel, above the AC cord. The correct fuse type and value are indicated on the rear panel. Only replace it with the correct fuse type and value. A medium blade screwdriver is required to remove the fuse carrier. Be sure the POWER switch is off and the AC power cord is unplugged when replacing the fuse. If the fuse blows again immediately, or after a short period of time, do not continue replacing it. A fault condition exists which must be corrected.

B+/B- SUPPLY RAIL FUSES—These are 10-amp, fast-blow fuses mounted on the output circuit board inside the chassis. The fuse clips accommodate either the American 3AG type (1 1/4" x 1/4"), or the European 5X20 mm type. There are two fuses per channel. To replace these, first unplug the AC power cord from the Power Drive, then remove the 14 screws holding the top cover in place, and lift it off. The fuses are located at the front edge of the two output stage circuit boards mounted on the left and right heat sink assemblies. Replace these fuses only with 10-amp, fast-blow type fuses.

Other than the fuses, there are no user-serviceable parts in the Power Drive DNA-2. Contact your McCormack dealer for service options.



TROUBLESHOOTING GUIDE

Problem: Amplifier does not operate; PROTECT, STANDBY and POWER indicators do not light at all.

► Check AC power cord connections, both ends. Check the AC outlet for power.

► If the AC connections are proper and the outlet is live, check the AC line fuse. Replace it if necessary. Retest amplifier. If the AC line fuse blows again, contact your dealer for servicing information.

Problem: Amplifier does not operate; PROTECT, STANDBY and POWER indicators come on and stay on.

NOTE: It is normal for POWER and PROTECT lights to come on and remain lit for 20 to 30 seconds after the Power Drive is turned on. If the PROTECT light remains on longer, a fault condition is indicated. The STANDBY light normally comes on and remains on after about 15 minutes of signal absence following normal operation.

► Turn off the amplifier and disconnect the input and the speaker cables. Turn on the amplifier. If the PROTECT indicator turns off after the 20 to 30 second turn-on period, the problem observed before is being caused by excessive DC voltage from the preamplifier or from a source component (CD player, tuner, etc.) You will need to correct this problem before continuing.

► If the PROTECT light remains on, turn off the amplifier and check the condition of the rail fuses. Replace any blown fuses. Turn on the amplifier. If the PROTECT light goes off after the initial stabilization period, the problem has been corrected. If it stays on and/or the rail fuses blow again, contact your dealer for servicing information.

Problem: Amplifier turns on normally, but no sound is produced.

► Check all connections carefully. Check the preamplifier's input, mute and volume settings.

Problem: The protection circuit activates during listening, muting the output and causing the PROTECT and STANDBY lights to come on.

► If the PROTECT and STANDBY lights continually cycle on and off, there is a persistent and possibly dangerous condition at the Power Drive's input coming from the preamplifier or a source component. This can be in the form of excessive DC voltage or high levels of infrasonic (very low frequency) noise, such as that caused by a badly warped record. The protection circuit will activate only when such information is potentially damaging to your speakers. Correcting the problem may be as simple as turning down your volume control or, in the case of excessive DC leakage, service may be required.

► If the PROTECT and STANDBY lights stay lit, the rail fuses may have blown. Their failure may have been caused by short-circuiting the output of the Power Drive while it was operating or by excessive drive levels into a very low impedance load. Check the condition of the rail fuses

and replace as necessary. If the rail fuses blow again, check the speaker connections for a persistent short-circuit condition. If you are not sure if such a condition exists, turn off the amplifier and disconnect the speaker cables from it. Install new fuses as necessary and try again. If the fuses blow again, contact your dealer for servicing information. If they do not blow and the Power Drive restarts normally, there is still a fault condition, possibly intermittent, in the speakers or in the speaker wiring. Correct this problem before continuing.

If you have any questions regarding the Power Drive DNA-2, please contact your McCormack dealer.

SPECIFICATIONS

Output Power,

RMS Watts per channel: 300 W / 8 ohms
600 W / 4 ohms
900 W / 2 ohms

Output Current: 100 Amps peak

Input Impedance: 100 kohms

Input Sensitivity: 1.5 Vrms single-ended; 0.75 Vrms balanced

Voltage Gain: 30 dB single-ended; 36 dB balanced

Frequency Response: -3 dB @ 0.5 Hz, 200 kHz

Risetime: <2 μ S

Signal-to-Noise: 90 dB, "A" weighted

Damping Factor (1 kHz, 8 ohm load): >150

Output Impedance: 0.05 ohm

DC Offset (servo-controlled): <5 mV

Signal Polarity ("absolute phase"): Non-inverting

Power Requirements @ 100-117 VAC Hz:

2.7 Amps/325 Watts @ idle
6.5 Amps/775 Watts @ clipping (8 ohms)
1.1 Amps/130 Watts @ standby

230 VAC/50 Hz:

1.4 Amps/235 Watts @ idle
3.3 Amps/775 Watts @ clipping (8 ohms)
0.6 Amps/130 Watts @ standby

Dimensions: 19" W, 9 1/4" H, 21" D

Shipping Weight: 80 lbs.



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