



# McCORMACK AUDIO

BEYOND YOUR EXPECTATIONS, WITHIN YOUR REACH.

*Thank you for purchasing the Power Drive DNA-HT1. This amplifier was hand crafted with top quality, highly reliable components. Its three-channel feature allows it to be used either as a stereo amplifier in a dedicated audio system or as a component in a surround sound system. Either way 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 DNA-HT1'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 amplifier.

**INSTALLATION** -- Place your amplifier on a stable surface in a location which allows adequate ventilation. If it is sitting on a carpet use either a flat board or 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). 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.

1. Position the DNA-HT1 as close 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 DNA-HT1 uses a three-wire grounded AC power cord. Plug the AC power cord into the DNA-HT1, then plug the other end into an appropriate wall socket.

**CONNECTIONS** --The DNA-HT1 uses standard RCA phono jacks for input connectors and binding posts for output connectors. 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 an amplifier. This will prevent potential damage to the loudspeakers in case the power supply has not fully discharged.

1. Install interconnect cables from the main output of your preamplifier to the input RCA jacks located on the rear panel. Please note the channel designators and be certain the plugs are fully inserted, making a tight connection. When using the DNA-HT1 as a two channel amplifier use only the left and right input connectors; use the center input connector only for the center channel of a surround sound system.

2. Check again to be certain the DNA-HT1's power switch is turned off (push the surface of the switch marked "O").

3. Install suitable speaker cables from your speakers to the output connectors (binding posts) located on the rear panel. Note the channel and polarity designators. 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.) This spike screws into a threaded hole located on the bottom of the chassis near the center. Install it point down, so that it touches the surface the DNA-HT1 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.

5. Move the DNA-HT1 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 POWER and PROTECT indicators should both light. After twenty to thirty seconds the PROTECT indicator will turn off and your DNA-HT1 is ready for operation. If the PROTECT indicator does not turn off, refer to the trouble shooting guide at the end of this manual.

**POWER SWITCH**--This switch is located on the right side of the front panel.

**PROTECT, STANDBY AND POWER INDICATORS**--These LEDs are located above the power switch on the front panel. The POWER light is green when the DNA-HT1 is turned on. The PROTECT light is red when the amplifier is first turned on or when its sophisticated protection circuitry has been activated. When this happens, the DNA-HT1 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 STANDBY light turns on after about 15 minutes when there is no signal present. This reduces the bias idling point to less than 50%. As soon as the amplifier senses a signal in any of the channels, 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 amplifier and refer to the troubleshooting guide at the end of this manual.

**BREAK-IN AND WARMUP PERIODS** – Your DNA-HT1 has already been burned in at the factory. However, like all high quality components, it will still require a breakin period of approximately 50 hours before it will sound its best. The DNA-HT1 always is ready to play when turned on, but it will not settle into optimal operation for at least 30 minutes.

## **FUSES**

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**AC MAINS FUSE** -- You have easy access to this fuse. It is located on the rear panel in the lower section of the AC inlet module where the power cord connects. To replace the fuse, first remove the AC power cord from this module, then slide the tray out using a fingernail or a small screwdriver. The correct fuse type and value are indicated on the rear panel. Replace it only with the correct type and value. 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.

**POWER SUPPLY RAIL FUSES** -- These are four amp fast-blow fuses mounted on the output circuit boards inside the chassis. The fuse clips accommodate 5x20 mm type fuses. To replace these, first unplug the AC power cord from the DNA-HT1, then remove the ten screws holding the top cover in place and lift it off. The fuses are located at the top and bottom of the front edge and three quarters of the way back along each of the output stage circuit boards mounted on each heat sink. Replace these fuses only with four amp 5x20 mm fast-blow type fuses.

## **SPECIFICATIONS**

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Output Power: Left and right channels, 100 RMS watts per channel into 8 ohms and 250 RMS watts per channel into 4 ohms from 20 Hz to 20 kHz at less than 1 % THD. Center channel 150 RMS watts into 8 ohms, 250 watts into 4 ohms.  
Output Current: 25 amps peak per channel  
Input Impedance: 100 kohm  
Input Sensitivity: 0.870 Vrms  
Voltage Gain: 30.5 dB  
Frequency Response: 3dB ~ 5Hz, 200 kHz  
Signal to Noise: 100 dB, "A" weighted  
Signal Polarity ("absolute phase"): noninverting  
Power Requirements ~ 100-117 Vac/60 Hz:  
0.8 amps/100 Watts @ idle  
6.75 amps/700 Watts @ clipping (8 ohms)  
0.4 amps/50 Watts @ standby  
Dimensions: 17"W x 5 1/2"H x 15"D  
Shipping Weight: 31 lb

## **TROUBLESHOOTING GUIDE**

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*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. Note that a spare fuse has

been provided in the front section of the pullout fuse tray. Retest the 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 the POWER and PROTECT lights to come on and remain lit for twenty to thirty seconds after the DNA-HT1 is turned on. If they remain on longer, a fault condition is indicated. The STANDBY light normally comes on and remains on after about 15 minutes of signal absence.

Turn off the amplifier and disconnect the input and speaker cables. Turn on the amplifier. If the PROTECT indicator turns off after the twenty to thirty 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, 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 turning on the PROTECT and STANDBY lights.*

If the PROTECT and STANDBY LIGHTS continually cycle on and off, there is a persistent and possibly dangerous condition at the DNA-HT1'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 your volume control down 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. This may have been caused by short-circuiting the output of the DNA-HT1 while it is operating or by excessively high drive levels into a very low impedance load. Check the condition of the rail fuses and replace as necessary. If the fuses blow again, check the speaker connections for a persistent short-circuit condition. If you are unsure, disconnect the speaker cables from the amplifier. 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 amplifier restarts normally, there is still a persistent fault condition - possibly intermittent - in the speakers or in the speaker wiring. Correct this problem before continuing.

If you have any questions regarding the DNA-HT1 amplifier, please contact your McCormack Audio dealer.

