



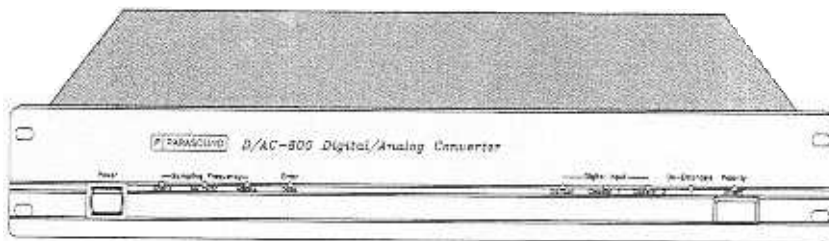
# PARASOUND

*affordable audio for the critical listener*

## *D/A C - 8 0 0 Digital/Analog Converter*

**Congratulations** on the purchase of your new Parasound D/AC-800 Digital-to-Analog Converter. It has been designed to extract greater musical detail from any digital source. If you are using it to upgrade your CD player, you will find the D/AC-800 makes a world of improvement. You will enjoy more of the warmth and depth that has previously been associated only with the finest analog sources.

Your D/AC-800 sets new performance standards at its modest price. Its high quality parts, double power supply, high current drive analog stages, plus hookup and operating flexibility are superior to even many far more expensive D-A converters. To assure fullest musical enjoyment, please take a few moments to read these instructions completely.



### Unpacking

Open the carton of your D/AC-800 carefully and inspect the unit for possible shipping damage. Now is the time to report any damage to your dealer. You will find the detachable AC line cord packed separately inside the carton. We do not recommend use of any other line cord.

Save the plastic bag, styrofoam inserts and carton. You may need these later for transporting the D/AC-800 or for shipment in the event it ever requires factory servicing. Record the serial number (on rear panel) here for reference in case your unit is stolen: \_\_\_\_\_.

### Placement

You should locate your D/AC-800 as close as possible to your digital source. Keep your unit out of direct sunlight, away from heat sources such as a hot air register or radiator and away from windows which might be left open to let in rain.

If you are stacking your components, you should avoid placing your D/AC-800 on top of heat-producing components, such as power amplifiers or tube-type preamps. You should keep it as far as possible from your tuner or receiver to avoid interference from its RF local oscillator circuits.

## Connecting Your D/AC-800

When you make connections, be careful to avoid tension on either wires or fiber optic cables which might cause damage to the connectors or cause them to pull loose later on. Do not attempt to bend either coaxial or optical digital cables at a sharp angle, as this may permanently damage them. It is safest to turn off the power of your preamp and power amp while making connections, not only for the connections you are making, but to avoid the chance of disturbing adjacent connections. As an additional safeguard, turn your preamp's volume control to minimum before making new connections.

### Digital Inputs

The D/AC-800 offers you three digital inputs with two different interface options:

- **Coaxial 1:** RCA jack - 75Ω standard
- **Coaxial 2:** RCA jack - 75Ω standard
- **Optical:** Fiber Optic - TOSlink

• **Coaxial output connections** are provided on most high quality CD players. You should use only a good quality cable which has been designed for digital data transmission. Cables designed for audio frequencies are not suitable and will not give you satisfactory results.

• **TOSlink fiber optic connections** are also popular and are found on most high quality video laser disc players as well as many CD players and CD transports. Your dealer can assist you to select an appropriate optical cable with TOSlink connectors. According to the TOSlink standard, you are restricted to TOSlink cable lengths from 0.2m (~8") to 10m (~30').

For most serious music, we believe you will obtain superior results with a high quality coaxial digital input cable, rather than the optical TOSlink input. You may find careful extended listening required in order to hear the subtle differences between the two different interface technologies accommodated by the D/AC-800.

### Outputs

Connect the **Analog Output jacks** to any line-level input on your preamplifier or even your power amplifier if it is equipped with level controls. Use only high quality hookups to preserve detail and clarity. Make sure your preamp is either turned off or its volume set to minimum when making these connections.

If you have a digital recorder (DAT, MiniDisc, DCC, CD-R), you may connect its record input to the D/AC-800's **Digital Output Record jack**. This RCA-type connector is a conduit for the digital data stream from your selected digital source, so use only digital quality cable.

### AC Power

Your D/AC-800 has an IEC standard detachable power cord which has been specially selected for its contribution to the sound quality of this unit. Try to connect only this cord directly to a nearby AC wall outlet and avoid extension cords or connection to accessory outlets on your preamp.

If you are considering an AC line conditioner, be advised that it may not have a positive influence on the sound of your D/AC-800.

## Operating your D/AC-800

### Power On/Off

Push the upper section of the button to turn on; lower section for off.

### Sampling Frequency LEDs

Your D/AC-800 will recognize the digital signal of whatever type of digital source you connect and will switch to the correct sampling rate automatically. The 44.1kHz sampling rate is standard for compact discs, while 32kHz is for future FM digital broadcasts and 48kHz is for DAT.

### Error/Data LED

In case there is an interruption of data from the digital source or a malfunction of the digital source or connection, the Error/Data LED will illuminate. This shows you that your D/AC-800 is not receiving correct digital data to process and convert to analog. In this case, a muting circuit will prevent an unwanted "garbage" signal passed to Analog Out or the Digital Out Record jacks.

### Input Select and LEDs

The three Input Select LEDs correspond to the different input connectors on the rear panel: Coaxial 1, Coaxial 2 and Optical. Your D/AC-800 will automatically select inputs with first priority to Optical, second selection priority to Coaxial 1, third selection priority to Coaxial 3.

Since input switching for listening and recording is determined by this order of priorities, you must turn off any digital sources you don't want to hear or record. There is another very good reason to switch off other digital sources:

RF radiations from unselected digital sources may "contaminate" the datastream of the selected input source you wish to hear. If you have more than one digital source, make sure you turn off the power of each unused source until you are ready to listen to it.

### Polarity Invert Button and LED

This button allows you to select between 0° normal operation and 180° inverted polarity. Even if you know if your preamplifier and power amplifier are inverting or non-inverting designs, you have no way to know which of your CD's may have been recorded with inverted absolute polarity.

- Absolute polarity is not the same as Left-Right loudspeaker phasing. Absolute polarity means the + and - of both channels are reproduced so the compression wave of an initial musical attack correlates to the compression wave (+) from outgoing speaker diaphragm motion rather than rarefaction (-) of ingoing speaker diaphragm motion.

Your choice of 0° or 180° polarity will be strictly a matter of taste. It may be easier to detect differences between 0° and 180° polarity with some recordings than with others. Don't be discouraged if you cannot hear the difference - not everyone can identify absolute polarity.

### De-Emphasis LED

Some digital recordings are encoded with pre-emphasis contouring. Your D/AC-800 automatically recognizes and processes them. An LED illuminates as a beacon for visual confirmation.

## **"Burning-in" your D/AC-800**

Like most other great audio components, your D/AC-800 needs to operate for at least 72 hours before it will start sounding its best. This allows the materials of various internal parts to "form" so they can better process the complexities of musical waveforms. While your unit will sound spectacular right out of its carton, you'll find it worthwhile to listen again after a few days. You'll discover details in your music you wouldn't have guessed were there.

## **Maintaining your D/AC-800**

Your D/AC-800 needs no routine maintenance. We do recommend that you remove and twist the various RCA connections once a year to remove any corrosion buildup on plugs and jacks. Make sure the power is turned off before attempting this. It is not a bad idea to do this for each of your other components while you're at it.

Never use any commercial cleaners or abrasives on the front panel or top cover - they will likely scratch or disfigure them. Use only a soft cloth, if necessary slightly damp to remove fingerprints.

## **In Case of Trouble**

If you suspect a problem with your unit, first recheck all your connections. If one channel is inoperative, the trouble may be caused by another component or even a defective hookup cable. If only one channel remains inoperative, try reversing the Left and Right cables to your preamplifier (turn it off before moving wires). If the same channel stays out, it indicates trouble could be other than your D/A converter itself. We suggest you contact your authorized Parasound dealer or call Parasound Technical Service if you suspect a problem. We will suggest other diagnostic tests you can easily perform and which will save you a lot of trouble.

If we determine that your D/AC-800 should be returned to Parasound for inspection and possible servicing, you must first obtain a Return Authorization number from Parasound. You will be asked to re-pack the unit in its original carton and cardboard packing *plus* an additional outer box over its own box for proper protection in transit. The Return Authorization number must be clearly marked on the outer carton only. You should ship the unit by UPS with adequate insurance specified. You must include a copy of your purchase receipt to validate your ownership.

Units that arrive without your specific Return Authorization number, without a suitable shipping carton or evidence of improper internal packing or collect will be refused. We do not accept collect shipments. After repair under warranty, the unit will be returned to you via prepaid UPS or RPS. If we found no problem with the unit, we will ship the unit by UPS or RPS collect for return shipping charges. In the case of an out of warranty repair, we will advise you repair charges before you ship the unit. The same packing requirements and RA requirement apply.

## D/AC-800 Specifications

<b>Frequency Response:</b>	5 Hz-20 kHz, $\pm 0.5$ dB
<b>Signal to Noise Ratio:</b>	> 100 dB, 105 dB typical
<b>Dynamic Range:</b>	> 108 dB
<b>Channel Separation:</b>	> 100 dB @ 1 kHz
<b>Total Harmonic Distortion:</b>	< 0.005% @ 1 kHz
<b>Amplitude Linearity:</b>	> 92 dB, 95 dB typical
<b>Phase Linearity:</b>	0.2° @ 20 kHz
<b>Maximum Jitter (HF):</b>	< 200 picoseconds RMS
<b>D-A Converter:</b>	Burr Brown PCM67, 1 bit-18 bit hybrid
<b>Oversampling Rate:</b>	8x (352.8 kHz)
<b>Digital Input:</b>	32 kHz, 44 kHz, 48 kHz; Consumer standard SPDIF
<b>Filters:</b>	NPC 8x interpolating digital filter two 2/3-order low-pass anti-imaging filters
<b>Absolute Polarity:</b>	0° or 180° switchable
<b>Digital Inputs:</b>	<ul style="list-style-type: none"><li>• Two Coaxial: 75 <math>\Omega</math> RCA each</li><li>• Toslink fiber optic: EIAJ Standard CP-340/RC-5720, 660 nm typical wavelength</li></ul>
<b>Outputs:</b>	<ul style="list-style-type: none"><li>• Analog Line Out: 2.5 V nominal, 600 <math>\Omega</math>, suitable load should be <math>\geq 10</math> k<math>\Omega</math></li><li>• Digital: 75 <math>\Omega</math> RCA coaxial, 0.5 V peak-to-peak</li></ul>
<b>Power Supplies:</b>	2 separate transformers for digital and each analog circuit
<b>Power Requirement:</b>	120V, 60 Hz, 15 W; may be re-wired for 220-240 V, 50 Hz
<b>Dimensions:</b>	19" W x 3 3/8" H x 12" D
<b>Net Weight:</b>	11 lb.

Specifications subject to change or improvement without notice.

## **Rewiring for 220-240V 50Hz Operation**

**Your D/AC-800 can be rewired for operation abroad. Please refer this conversion to a skilled electronics technician to avoid personal injury or possible harm to the unit. There are high voltages present inside the chassis even after the power is turned off.**

**The main power supply printed circuit board has two separate power transformers. Nearby the transformers you will find jumper wires which correspond to the various primary windings of each power transformer.**

**For 120V operation, a total of four jumper wires are connected to the circuit board: two jumpers are connected near each transformer, each jumper has "120V" printed alongside of it on the circuit board.**

**For 220-240V operation, only 2 jumpers are connected to the circuit board; one jumper is connected near each transformer, each jumper has "220V" printed alongside of it on the circuit board.**

**For 220-240V operation, you must also disconnect the four 120V jumpers.**

## **Parasound Limited Warranty (USA only)**

**Your Parasound D/AC-800 is covered by a limited warranty against defects in materials and workmanship for a period of two years from date of purchase. This warranty is provided by the Parasound dealer where the unit was purchased. Warranty repair will be performed only when your purchase receipt is presented to validate your ownership, date of purchase and authorized status of the selling dealer. Defective parts will be repaired or replaced without charge by your authorized dealer's store or the location designated by your dealer that is authorized to service Parasound equipment. Additional information is available by calling or writing to the Service Manager, Parasound Products, Inc. at the address below. Charges for unauthorized service and transportation costs are not reimbursable under this warranty.**

**This warranty becomes void if the product has been damaged by alteration, misuse, accident or neglect. Alteration includes any removal, obscuration or defacement of its serial number. This warranty becomes void if unit has been connected or operated contrary to printed instructions. The warrantor assumes no liability for property damage or any other incidental or consequential damage whatsoever which may result from the failure of this product. Any and all warranties of merchantability and fitness implied by law are limited to the duration of this expressed warranty.**

**Some states do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.**

**This warranty gives you specific legal rights and you may also have other rights which vary state by state.**

### **Please Stay in Touch**

**We'd like to hear from you about your experience with your Parasound D/AC-800. Of course we want to assist you with any questions you may have, but we'd also be thrilled to know how much you are enjoying the unit. You don't need to have a problem as an excuse to call.**

**Reviews on Parasound are coming in from all over the world and we continually have exciting new products in development. If you'd like us to keep you advised, just drop a line and ask to receive updates. We welcome your suggestions and look forward to hearing from you.**



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