Information and Operation Manual

Thank You.

*All of us at Wadia would like to offer thanks and congratulations
to you for purchasing the Wadia 830 Compact Disc Player.
We sincerely believe that your Wadia 830 is an intelligent
purchase decision that will bring you many years
of musical pleasure and satisfaction.*

*While every new owner is anxious to begin listening,
we encourage you to take a few minutes to read this manual
and familiarize yourself with the full capabilities of the
Wadia 830 Compact Disc Player.*

*If you are in a hurry to listen, please read the sections of this
manual where the symbol at left is shown.*

Table of Contents

Wadia DIGITAL

Wadia Digital Corporation was founded in **1988,** making it one of the oldest digital audio companies in existence. Wadia was formed by a group of engineers from the Minneapolis-based 3M Corporation (Minnesota Mining and Manufacturing) who had compiled many years of experience in advanced digital and telecommunications research and development.

In the early 1980's, this group had become intrigued by the emerging CD technology. Disappointed by the sound of early CD players, they examined the designs and found them to be unsophisticated compared with the technology available in other areas of digital design. In response, they founded Wadia Digital – a company based on the philosophy of applying advanced technology to improve the performance of digital home entertainment equipment.

Wadia's first product, the Wadia 2000 Decoding Computer, was a breakthrough. For many listeners, it proved the viability of Compact Disc as a musically involving format. Ever since, Wadia has continued to develop on the original technology – refining, listening and improving along the way. Since the Wadia 2000, new generations of even higher performance designs have been introduced. Each step of the way, Wadia has raised the standard for performance of CD playback.

Here is an abbreviated list of the technological innovations the Wadia engineers have pioneered over the past 10 years:

- First outboard Digital-to-Analog converter
- DigiMaster patented algorithm (filter optimized for reproducing music)
- First company to apply glass fiber-optics to home audio
- First company to recognize jitter as a source of audible distortion
- First to perfect digital volume control
- First high-end CD player competitive with expensive separates
- Clocklink proprietary jitter reduction technology

Although Wadia's digital expertise and track record exceed those of any audio company, technology alone does not guarantee musical performance. Wadia designs are born of a delicate balance of technology shaped by a passion for music.

Now past our tenth year, Wadia continues to redefine the limits of digital music playback. We are proud to introduce the Wadia 830 – a breakthrough in sonic performance and a strong statement of our years of dedication to music.

Installation

UNPACKING

After carefully unpacking your Wadia 830 Compact Disc Player, inspect it for any shipping damage and call your dealer immediately if any is found.

Da **not plug your** Wadia 830 Compact Disc Player into any **out/et if you** find shipping damage.

Please save all packing materials so the unit can be easily and safely shipped if the need arises.

THE ACCESSORY KIT

Included in the carton, you will find an accessory kit that contains the following:
- AC power cord
- Remote Control
- Two type-AAA batteries

INSTALLING BATTERIES IN REMOTE CONTROL

The Wadia 830 remote control requires two batteries, which you will find in the accessory kit. To install the batteries, gently pry open the battery cover on the back of the remote. Insert the batteries as indicated on the battery holders, and replace the cover.

CONNECTING TO AC POWER
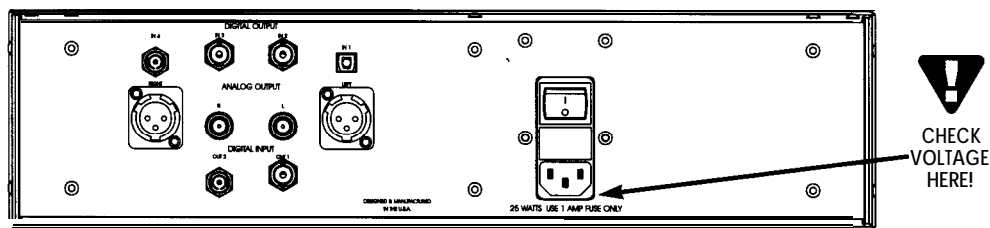
CHECK
VOLTAGE
HERE!

⚠ *Check to make sure your Wadia 830 Compact Disc Player has been manufactured for operation at your AC line voltage. Attempting to use your Wadia 830 Compact Disc Player at any voltage other than specified on the rear of the unit may cause damage which is not covered by Wadia's warranty If the voltage specified is different from your AC voltage,* **contact your** *Wadia* **dealer.**

USING AC LINE CONDITIONERS

In most cases, best performance is obtained when the Wadia 830 is plugged directly into the wall outlet using the AC power cord provided. The Wadia 830 employs extensive power-line filtering and noise suppression technology. It should not be necessary to use power conditioners or after-market power cords. If you wish to experiment with any of these devices, work closely with your dealer and most of all, trust your own ears.

USING A "SURGE PROTECTOR"

Although the Wadia 830 will resist significant voltage spikes, it can still be damaged by extreme voltage overload such as a lightening strike. Such damage is not covered by the warranty.
In some circumstances, a "surge protector" can help prevent this type of damage. However, surge protectors often degrade sound quality. Each Wadia owner must weigh the protection offered by a surge protector against the sonic degradation.

Connections _____

Avoid allowing static shocks to be applied to the inputs or outputs. To prevent static shocks, touch any grounded surface, such as the Wadia 830 chassis, before connecting or removing a cable. It is unlike/y that a static shock will damage the unit, but it may cause the Wadia 830 Compact Disc Player circuifry to "lock-up" (see lock-Up under Trouble Shooting in Appendices)

Inputs and otputs can be safely connected to the Wadia 830 Compact Disc Player:
1. When the AC power is switched off
               –OR–
2. When the unit is in Relay-Mute mode (See Mute in Operation)

CONNECTING DIRECTLY TO AN AMPLIFIER

We strongly recommend that you connect your Wadia 830 Compact Disc Player directly to your power amplifier. Even if you purchased your Wadia 830 with the intention of connecting it through a preamplifier, we suggest that you experiment with direct connection to your amplifier. Many listeners are surprised by the improvement in performance over even the most expensive preamplifiers. If you would like more information about getting best performance from a system without a preamplifier, contact your Wadia dealer.

To connect your Wadia 830 to a power amplifier, ensure that your power amplifier is turned off, then connect your analog interconnects from the Wadia 830 balanced or unbalanced analog outputs to the amplifier's inputs.

CONNECTING TO A PREAMPLIFIER

While the Wadia 830 Compact Disc Player was designed to be used without a preamplifier, it will provide excellent operation in a conventional system with a preamplifier. Simply connect the analog outputs from the Wadia 830 to a pair of line-level inputs on the preamplifier.

When using a preamplifier, bypass the Wadia 830 volume control by setting it to its maximum volume. When set to the maximum volume level, only the top LED will be illuminated. In this setting, the volume control is completely bypassed.

OPTIMIZING THE ANALOG OUTPUT LEVEL

Best performance is obtained when the Wadia Digital Volume Control is operated in the top one-third of its range. If you find that your critical listening occurs with the volume indicator showing fewer than seven LED's, then it may be advantageous to attenuate the output. This is done by manipulating a set of internal switches. If you would like to change the output level, consult your dealer.

The Wadia 830 output level is factory set at 4.2 volts which will accommodate the most common range of system sensitivity without needing adiustment.

SHOULD I USE A BALANCED OR UNBALANCED CONNECTION?

We recommend using the balanced analog output from your Wadia 830 Compact Disc Player connected to a true balanced input. All things being equal, properly implemented balanced (also called differential) circuitry sounds better than unbalanced circuitry. The Wadia 830 is a true balanced design. It generates the inverted signal in the digital domain and all subsequent processing is done in balanced mode.

Your Wadia 830 is designed to maintain many of the advantages of true balanced design when using the unbalanced outputs. In addition, the Wadia 830 output stage is capable of driving both types of outputs simultaneously.

The balanced outputs use the standard audio pin configuration: pin 1 is ground, pin 2 is positive, and pin 3 is negative.

WHY SHOULD I BYPASS THE PREAMPLIFIER?

A preamplifier is unnecessary when using your Wadia 830 Compact Disc Player. The Wadia Direct Connect technology incorporated into the Wadia 830 provides all the necessary control functions of a preamp while the signal is still in the digital domain. This avoids the sonic degradation caused by analog circuitry, switches, and wire. The Wadia Direct-Connect output stage can drive any power amplifier and any interconnects, even very long lengths.

DOES THE WADIA DIGITAL VOLUME CONTROL COMPROMISE RESOLUTION?

The Wadia 830 Compact Disc Player uses the latest generation of Wadia's proprietary Digital Volume Control. The volume level is adjusted in the digital domain by means of mathematical manipulation of the signal, eliminating the distortion and noise that are inevitable with even the best analog volume controls. While conventional thinking indicates that reducing the volume digitally can sacrifice low-level resolution, Wadia has created an innovative solution. Wadia's patented DigiMaster digital filtering algorithm produces a 24-bit output rather than the 16 bits stored on the CD. This high-resolution signal is then used in the computations which in turn reduce the volume level. This new signal is fed directly to the DAC chips. Through this innovative method, the Wadia 830 maintains high resolution even at the lowest volume control settings.

CAN I BYPASS THE WADIA DIGITAL VOLUME CONTROL?

The Digital Volume Control can be bypassed by setting it to the maximum setting so that the front panel bar-graph display shows only the top LED illuminated. The Wadia Digital Volume Control operates in the digital domain; it is a computer program which performs calculations on the numeric values from the CD recording. If the Digital Volume Control is set to its maximum, this computer program is bypassed. There are no passive parts, switches contacts, resistors, or even circuit board traces associated with the digital volume control.

WHAT ABOUT ANALOG SOURCES?

To use analog sources in an otherwise digital system, Wadia has introduced the Wadia 17 Analog-to-Digital converter. Now it is possible to use analog sources, such as a tuner, tape deck, or even a turntable (in conjunction with a suitable phono stage) in your system without using a conventional analog preamplifier. Consult your dealer for more information on the Wadia 17 and other future Wadia Analog-to-Digital products.

SHOULD I LEAVE THE WADIA 830 WITH THE POWER ON?

The Wadia 830 is designed to be left with the power on with no harm or wear to the unit. All motors and laser circuitry turn off when the unit stops playing. Leaving the power on allows the circuitry to remain at a constant operating temperature, providing better performance and longer life. Careful listeners will notice that the sound of the Wadia 830 will improve steadily after the unit is powered-up. A new unit will undergo more dramatic changes when power is applied for the first time. If you turn off your Wadia 830 for more than an hour, you will find that the unit will undergo similar but less dramatic improvement once power is reapplied. Depending on the resolution of the system and the attentiveness of the listener, you may find that the sound continues to improve over the first several weeks of operation.

Modular Options _____

The Wadia 830 is a modular design.

It can be equipped with any combination of the following options:

- Digital Inputs
- Digital Outputs
- PHAST component interface control card

The standard version of the Wadia 830 is not equipped with these options, but any of them can be added – either at the time of purchase, or at a later date. If you are interested in adding any of these options, consult your dealer.

DIGITAL INPUTS

Digital Inputs allow you to decode other digital sources and receive all the benefits of Wadia's decoding performance. The Wadia 830 Digital Input card has the following inputs:

Input 1: Glass-fiber optical

Input 2: Coaxial with BNC connector

Input 3: Coaxial with BNC connector

Input 4: Plastic-optical TOSLINK

Any of the inputs will automatically adjust to the sampling rate, 32 KHz, 44.1 KHz or 48 KHz when connected to any standard digital audio output.

To select a different input, use the INPUT button on the remote control. The input select is a scrolling feature. For example, while listening to CD, pressing the input select button will switch to input 1. Pressing again will switch to input 2, and so on. After input 4, pressing again will switch back to CD.

DIGITAL OUTPUTS

The Wadia 830 can be equipped with the optional digital outputs to allow the internal CD transport to feed another component, such as a digital tape recorder. The configuration for the digital output card is as follows:

Output 1: Glass-fiber optical

Output 2: Coaxial with BNC connector

The digital output signal is active on both outputs when a CD is playing in the transport.

CHOOSING A DIGITAL CABLE

For maximum performance, we recommend using an ST glassoptical cable, which can be purchased from your Wadia dealer.

Wadia Digital was the first company to use glass fiber-optic data transmission in digital audio. We have continually improved this format and believe that it offers the best, most consistent performance of all the available options. Based on our experience, here is a list of digital interface methods in descending order of performance:

1. ST-type Glass optical (as implemented by Wadia, with high quality glass-optical cable)
2. AES/EBU using XLR connector
3. Coaxial S/PDIF cable using BNC connector
4. Coaxial S/PDIF cable using RCA connector
5. TOSLINK plastic-optical cable

The quality of any of these transmission methods depends on the quality of the cable and the sophistication of the transmitter and receiver. For example, a high-quality coaxial S/PDIF cable can out perform a low-quality AES/EBU cable. A high-quality AES/EBU cable may outperform a poorly-implemented glass-optical system

If you are using a coaxial S/PDIF connection we recommend having the cable terminated with a BNC connector. This will provide higher performance than an RCA connector. Your Wadia 830 input or output kit comes with an RCA/BNC adapter that can be used for experimentation between different types of coaxial S/PDIF cables.

Again, we highly recommend that you take advantage of your dealer's experience and, most importantly, trust your ears,

CONNECTING SOURCES TO THE DIGITAL INPUTS OR OUTPUTS

Using the digital cable of choice, connect the appropriate digital input or output to the outboard component.
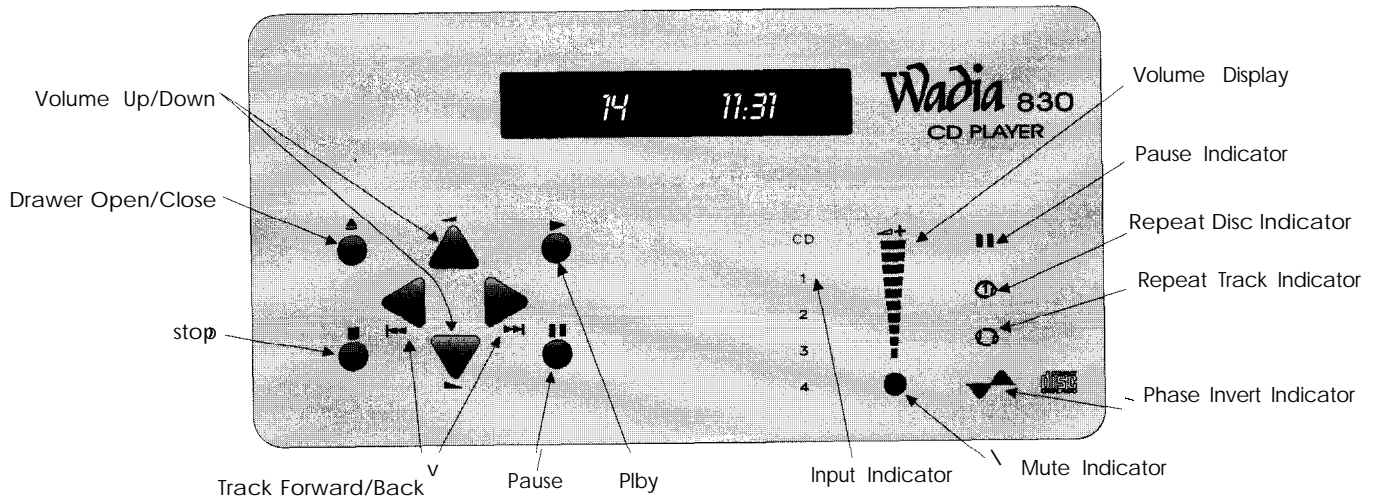
PHAST COMPONENT INTERFACE CONTROLLER CARD

The Wadia 830 can be equipped with this card to allow it to interface with the PHAST component control and home automation system. For more information on this remarkably powerful and flexible system, contact your Wadia dealer.

Operation

FRONT PANEL CONTROLS AND DISPLAY

Volume Up/Down

Drawer Open/Close

stop

Track Forward/Back

Pause

Plby

Volume Display

Pause Indicator

Repeat Disc Indicator

Repeat Track Indicator

Phase Invert Indicator

Mute Indicator

Input Indicator

Wadia 830
CD PLAYER

14   11:31

REMOTE CONTROL

Repeat

Drawer Open/Close

stop

Next Track/Previous Track

Search Back

Phase Invert

Input Select

Play

Pause

Volume Up/Down

Search Forward
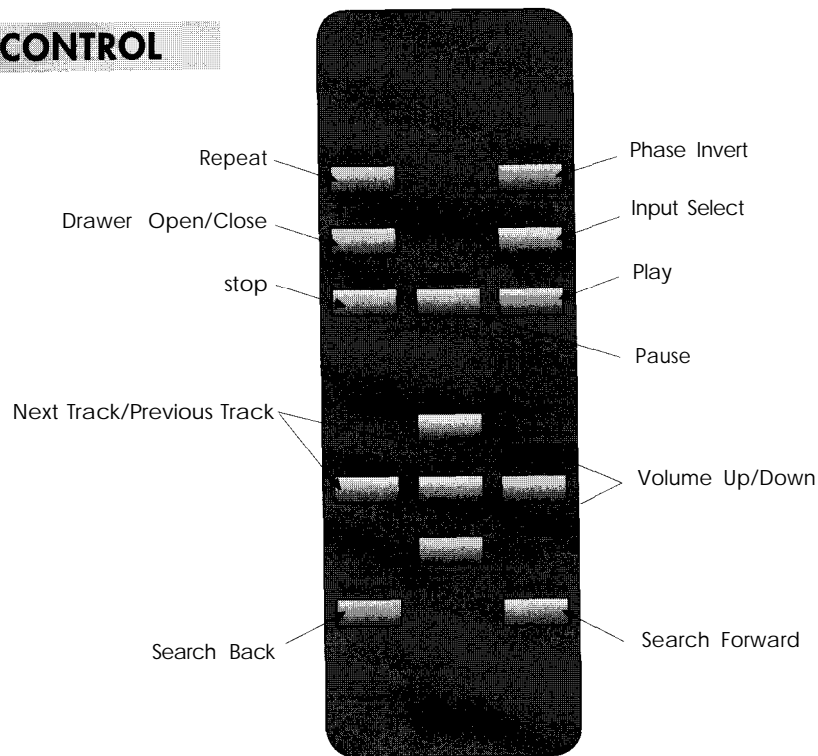
CONTROL FUNCTIONS

PLAY: Pressing play causes the unit to begin playing. If the drawer was opened, the unit will close the drawer, and then begin playing.

STOP: Pressing stop causes the disc to stop playing.

PAUSE: Pressing pause suspends playing until play is pressed, or until pause is pressed again

VOLUME UP and VOLUME DOWN: Pressing these increases or decreases volume by 0.5 dB. The LED bar graph on the front panel indicates the volume level, with one light illuminating for every 5 dB increase in volume. At the maximum volume level, only the top volume light is illuminated.

NEXT TRACK/PREVIOUS TRACK: Pressing these keys skips to the next, or previous track.

DRAWER OPEN/CLOSE (O/C): Opens and closes the CD loading drawer.

INVERT*: The Wadia 830 has the ability to invert absolute phase in the digital domain. Pressing the Invert key on the remote control will cause the Wadia 830 to invert phase; pressing it again will switch the phase back to normal. When the phase is inverted, the PHASE LED will illuminate on the front panel.

MUTE*: The Wadia 830 Compact Disc Player has two mute modes that are automatically implemented under different circumstances. Note that CD will continue playing even when the output is muted.
> Software Mute: When the Mute key is pressed on the remote control, the Wadia 830 Compact Disc Player's DSP engine transmits a stream of zero signal level samples to the DAC section, which results in zero output.
> Relay Mute: The Wadia 830 Compact Disc Player has mute relay connected between the positive and negative outputs. When this relay is engaged, it connects the positive output to the negative output, reducing the output to zero. This relay, which produces an audible click when it engages or disengages, is not in the music signal path. The mute relay is engaged:
> 1. When the Wadia 830 Compact Disc Player detects AC input level below its minimum operating range.
> 2. Each time the Wadia 830 Compact Disc Player power switch is turned on.
> 3. When the volume control is set to zero AND the mute key on the remote control is pressed.

When the Wadia 830 is in either Mute Mode, the Mute LED will illuminate.

REPEAT*: Pressing this button will cause the disc to repeat continuously. Pressing it twice will repeat the current track continuously. Pressing it a third time will stop repeating. The repeat mode is indicated by the front panel LED's

INPUT': The Wadia 830 Compact Disc Player can be configured with four digital inputs, in addition to the internal CD drive (See section on Optional Inputs). Each time the input key is pressed, the next input is selected. For example, if you are listening to the internal CD drive, and you press the input select, Input 1 will be selected, press it again, and Input 2 will be selected and so on. After Input 4, the list will begin again with the CD drive.

SEARCH FORWARD/BACKWARD*: Pressing and holding these keys will speed forward or backward within the current track.

*These functions are available on the **remote control only.**

13

Appendices

TROUBLE SHOOTING

LOCK-UP

If the Wadia 830 experiences a powerful static shock or sudden AC surge, it is possible to "lock-up" the computer circuitry. A locked-up computer may result in erratic display, no output, and no response to remote commands.

If your Wadia 830 should lock-up, unplug the AC cord. Wait at least 30 seconds before plugging the unit in again. If the unit still does not operate normally, contact your dealer.

SOFTWARE LICENSE AGREEMENT

THIS AGREEMENT SETS FORTH TERMS AND CONDITIONS FOR THE DigiMaster SOFTWARE.

The DigiMaster software is copyrighted and patented. It is the property of Wadia Digital Corporation of River Falls, Wisconsin.

Title to Licensed Software is not transferred to the customer. The customer is granted a nonexclusive license to use the Licensed Software on a single CD Player basis. The Licensed Software cannot be shared among multiple CD Players. Each CD Player must have its own separately Licensed Software.

At Wadia Digital Corp.'s sole discretion, Wadia Digital shall provide customer with updates of the Licensed Software. Wadia Digital retains the right to provide the Licensed Software updates for a fee. The customer may refuse to accept such Licensed Software updates.

ENVIRONMENTAL CARE

Wadia Digital makes every effort to be an environmentally conservative company. We greatly appreciate it when our customers join our efforts. Please dispose of batteries and packing material in a manner that is environmentally responsible.

IMPORTANT SAFETY PRECAUTIONS

To get the best performance from your Wadia 830 CD Player, and for your own safety, please read and follow these important safety instructions.

1. Before operating the Wadia 830 CD Player please read all of the operating and safety instructions.

2. Never place the Wadia 830 CD Player near heat sources such as radiators, fireplaces, stoves, or other appliances that produce heat. Avoid placing the Wadia 830 CD Player where it will be subject to direct sunlight or low temperatures.

3. This product is equipped with a three prong IEC power inlet that includes an earth ground connection. To prevent shock hazard, all three connectors must always be used. If your electrical outlets will not accept this type of plug, an adapter may be purchased. If an adapter is necessary, be sure it is an approved type and that it is used properly, supplying an earth ground. If you are not sure of the integrity of your home's electrical system, contact a licensed electrician for assistance.

4. AC extension cords are not recommended for use with this product. If an extension cord must be used, be sure it is an approved type and has sufficient current carrying capacity to power this product.

5. Before cleaning the Wadia 830 CD Player, always disconnect the power supply cord. Use a soft cloth and, if necessary, dampen with clean water or mild cleaning agent. Never apply water, or any other cleaner, directly to the chassis.

6. If you smell smoke, or an abnormal smell, immediately unplug the Wadia 830 CD Player from the power supply and contact your Wadia dealer.

7. Never attempt to service the Wadia 830 CD Player beyond what is described in this Owner's Manual. All service should be performed by qualified service personnel.

8. Unplug unit if it becomes wet.

9. Do not open unit when attached to AC outlet.

10. Replace fuse only with the exact type originally included.
    100 volt: 1 amp Slo-Blo (1 fuse]
    120 volt: 1 amp Slo-Blo (1 fuse)
    220 volt: l/2 amp Slo-Blo (2 fuses]
    240 volt: l/2 amp Slo-Blo (2 fuses)

1 1. Do not attempt to repair or modify your Wadia 830 CD Player.

SPECIFICATIONS

Pickup Mechanism	Pioneer Stable Platter
Decoding Software	32-Times Resampling DigiMaster
Digital Processing Capability 24 Bits	
Digital Volume Control Range 50 dB in one-hundred 1/2 dB steps	
Digital Resolution	21 Bits
Analog Outputs	One pair of Balanced (XLR); One pair of Unbalanced (RCA). Both can be used simultaneously.
Optional Digital Outputs	1 - Glass Fiber-Optic (ST); 1 - S/PDIF (BNC)
Optional Digital Inputs	1 - Glass Fiber-Optic (ST); 2 - S/PDIF (BNC); 1 - Plastic Optical (Toslink).
Output Impedance	Less than 15 ohms
Power Consumption	18 watts
Weight	16 lbs.; 20 lbs. including carton
Dimensions (W x D x H)	17 x 14 1/2 x 4 3/4 inches (43 x 27 x 12 cm)

WARRANTY

This Warranty covers the Wadia 830 Compact Disc Player
Wadia Digital warrants that this product shall be free from defects in materias and workmanship for:

1 year for the player mechanism's mechanical structure and associated electronics,
and 5 years for all other parts of the product (excluding batteries).

The warranty period begins at the date of sale and is subject to the following requirements and understandings:

1) The product must not have been modified in any manner whatsoever, or the warranty is immediately voided.

2) The product must not have been stored in a humid, damp environment; nor subjected to weather, water, or salt spray.

3) During the warranty period Wadia Digital will repair the Wadia 830 Compact Disc Player to working order, or, at Wadia's option, replace a defective Wadia 830 with a similar available product, at no cost to the owner for labor, materials, and shipping charges from Wadia Digital, River Falls, Wisconsin.

4) Wadia Digital shall not, under any circumstances, be liable for any incidental or consequential damages arising from the loss of property or other dama.ge or losses due to the failure of a Wadia 830 Cornpact Disc Player. Wadia Digital will not pay for loss o use or inconvenience caused by the failure of a Wadia 830 Compact Disc Player. Wadia Digital will not pay for damage caused to other audio components caused by the failure of the Wadia 830 Compact Disc Player within the limits allowed by State law.

5) All repairs performed after the warranty period has expired will be billed to the owner and will carry a 90 day warranty on parts and labor.

6) The customer is responsible for the shipping charges for all repairs, warranty or non-warranty, shipped to Wadia Digital. Digital will pay return shipping to the customer or dealer (within the United States) for all warranty repairs. Special shipping methods or services will not be covered by Wadia Digital.

7) All repairs must be serviced by Wadia Digital or an authorized service facility.

8) This product is only warranted in the country of original sale by Wadia Digital.