

Thank you for selecting the DR-1 data reader as the compact disc transport for your audio system. It is ideally suited for use in combination with any of conrad-johnson's digital/analog converters, to form a compact disc playback system capable of extracting all the detail and dynamics of the best digital recordings.

At conrad-johnson, we expect our products to be a source of satisfaction and of pride to their owners for many years to come. Accordingly, circuit designs, parts and materials for all conrad-johnson products are selected with a view to maintaining optimal performance over the years. Our reputation for producing among the industry's most reliable components is a natural consequence of this engineering approach.

Although the DR-1 has been designed so that its basic operation is intuitively apparent, it has a number of sophisticated features which are fully explained in this manual. Please take a few minutes to read the manual to better understand the features and capabilities of your DR-1.

In closing, we'd like to welcome you to the family of conrad-johnson owners. We want you to enjoy your conrad-johnson product to the fullest. To this end, our staff stands ready to answer any questions you may have about the function and application of your DR-1, and to provide any needed service both during, and after the warranty period. Our goal is to heighten your enjoyment of recorded music.

Limited Warranty For Conrad-Johnson Components

conrad-johnson design, inc. will provide service under warranty to the original owner on products sold new in the United States for the lesser period of three years from the date of purchase by the original purchaser, or five years from the date of shipment to the authorized conrad-johnson dealer. During the warranty period, conrad-johnson will repair defective units without charge for labor or parts (with the exception of vacuum tubes and batteries).

Exclusions. The following are not covered under this warranty:

- a) Units which have been damaged by misuse, abuse, or accident.
- b) Units which have been modified, altered, or improperly repaired by anyone not specifically authorized by conrad-johnson design, inc.
- c) Units not purchased from an authorized conrad-johnson dealer in the United States for use in the United States.
- d) Normal wear.
- e) Incidental or consequential damages are not covered under this warranty. Some states do not allow the exclusion of incidental or consequential damages, so this exclusion may not apply to you.

Obtaining Warranty Service: To obtain warranty service, the unit must be shipped, along with evidence of purchase, in factory packing to conrad-johnson design (or designated service center) with freight and insurance prepaid by the owner. After repair, the unit will be returned with freight and insurance prepaid by conrad-johnson design to any destination in the United States.

All implied warranties, including merchantability and fitness for a particular purpose are limited in duration to the duration of this express warranty. Some states do not allow limitations on the duration of implied warranties so the above limitations may not apply to you.

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

Conrad-Johnson products purchased outside the United States are covered by warranty terms of the importing distributor in the country in which the product was originally purchased, which may differ from the terms set out herein. Importing distributors are not obligated to provide warranty service for products originally purchased outside their country. Conrad-Johnson will provide warranty service for products outside the

United States, but the customer must pay all shipping, handling and customs costs both to and from our Service Department.

Questions about this warranty should be addressed to:

Service Department
conrad-johnson design, inc.
2733 Merrilee Drive
Fairfax, VA 22031

The Service Department can also be reached by phone at 703-698-8581, or by fax at 703-560-5360

Service

If your conrad-johnson audio component requires service, repack it using the original box and packing material and ship to the Service Department address above. Boxes and packing materials can be obtained from our service department for a nominal charge, 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 your approval before commencing service.

Registering The Warranty

Please return the enclosed card to the factory within 30 days of purchase to register the warranty.

***I*nstallation**

Because the DR-1 dissipates very little heat, ventilation is not an important consideration, allowing greater flexibility for custom or built-in installations. Of course, reasonable judgement must be exercised to see that the DR-1 does not obstruct ventilation required by amplifiers or other equipment in the system. The unit must be mounted horizontally.

All DR-1s 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 DR-1 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 DR-1 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, and to assure that it does not radiate fields that might interfere with the operation of other units.

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.

Audio 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 DR-1 away from the preamplifier and other sources. Power (ac mains) cords should be dressed to remain at least 4" (100mm) away from audio signal cables, and from coaxial digital cables.

CONNECTION

The outputs from the DR-1 are digital signals only. You must have a D/A (digital to analog) converter in order to provide an analog signal that your stereo system can use. The DR-1 comes standard with a coaxial (RCA) output connector. Use a coaxial digital cable to connect this output to the digital input of your D/A converter. If your DR-1 is equipped with the Professional Output option, it also has available connectors for AT&T glass fiber optic cable or balanced (XLR) transmission lines. The choice will depend on the available inputs on your D/A converter as well as personal preference.

CONTROLS

power: This is the main power switch for the CD transport.

o/c (OPEN/CLOSE): Pressing this button will open the CD tray. Press again to close.

> (PLAY): Pressing this button starts playback of the chosen track. If a track is already playing, pressing it will restart playback from the beginning of the track being played. If the CD tray is open, pressing > will close the tray, and initiate playback.

■ (STOP): Pressing this button during play will stop playback. Pressing it while programming will clear (erase) the program.

|| (PAUSE): Pressing this button interrupts play. PAUSE will light up on the display. To resume play, press a second time.

<< AND >> : These buttons can be used to select another track during play or to select the track to start play with. Briefly pressing the >> button will move to the next track, while pressing << will move to the previous track. Pressing and holding these buttons during play will enable fast search (forward >> or backward <<). These buttons are also used to set edit parameters (see instructions for tape dubbing, below).

time: This button is used to select between the program time display options. During playback, the display initially reads the elapsed time of the track being played (TRACK TIME will be lit above the time display). Press *time* once to switch the display to read the time remaining for the current track (REM TRACK TIME). Press *time* again to display time remaining for the entire CD (TOTAL REM TIME). Pressing once again will return to the initial display of elapsed track time.

prgm (Program): This button is used to initiate and then to close programming of playback.

clr (Clear): Used to erase a program in its entirety or track selections from within a program.

review: Displays the program in memory, allowing user to check the program prior to execution.

edit: allows user to set up a recording session that will fit within the time constraints of a particular cassette.

peak: pressing this will cause player to scan the entire CD for the loudest passage, and when found, will play that passage repeatedly, allowing recording levels to be set. Press STOP to end.

THE REMOTE CONTROL

PLAY, STOP, PAUSE, <<, and >> are duplicated on the remote control. These keys on the remote function in exactly the same way as the front panel controls. The following additional controls are available only on the remote control:

NUMBER KEYS 0-9: These keys can be used for direct selection of a different track during play, a track to begin play with, and tracks for a program. The second digit in two digit numbers (eg: 12) must be entered within 2 seconds.

SCAN: Press to automatically play the first ten seconds of each track. To play a full track, press again, or press PLAY.

REPEAT: Press once before or during play to cause the displayed track to play continuously. REPEAT 1 will light on the display. Pressing a second time before or during play will repeat the entire CD, and REPEAT will light on the display. Pressing a third time will end the repetition.

VOLUME (+ and -): Digitally adjusts the playback level. *Important Note:* when playing HDCD encoded discs with an HDCD D/A converter, volume level *must* be set to maximum for the HDCD decoder to operate. The volume control is a convenience feature which we believe you will find useful. Be aware, however, that volume should be set to the maximum level for best sonic performance.

SHUFFLE: Press before or during play to play tracks in random order. SHUFFLE will light on the display. Press again to return to normal play. If you elect to repeat the entire cd in SHUFFLE mode, the tracks will be played randomly each time, except that playback will always begin with the same track.

The handheld remote is a battery operated device, using two 1.5 volt AAA (or RO3, UM4) batteries. Expected battery life is approximately one year.

DISPLAY MESSAGES

The DR-1 is equipped with a six character alpha-numeric display. This display shows track and time information during normal playback. It also is used to provide other information and instructions regarding the status and operation of the machine. Some of the messages you may see are described in this section.

close: cd tray is being closed.

read: the CD's contents are being scanned.

noDISC: there is no CD in the player.

noAUDIODISC: disc in player is a non-audio CD (CD-ROM, CD-I, or CDV).

notPOSSIBLE: a non-existent track number has been selected.

FULL: you have attempted to program more than 30 tracks.

GO TO PLAY: you have attempted a function which requires that you first start play.

GO TO STOP: you have attempted a function which requires that you first stop play.

Standard CD Playback

To play a cd:

- press power, if unit is not already turned on;
- press *o/c* to open the cd tray;
- place a 3" or 5" audio cd in the tray, printed side up;
- press *o/c* to close the cd tray. After initializing, the display will show the number of tracks and total time of the cd;
- press *>* to begin play from the beginning of the cd, or
- select a track to begin play by pressing *>>* as many times as needed to get to the desired track number, and then press play, or simply select a track number directly by using the 0-9 keys on the remote control (the second digit of a two digit number must be entered within two seconds of the first digit).
- play will stop after the final track is completed.

Programming

The DR-1 can be programmed to play up to thirty tracks on a CD in any desired sequence. To enter a program:

- if needed cd is playing, press STOP ;
- press ***prgm*** (PROGRAM lights up and flashes);
- key in desired track numbers using number keys on remote control. Each time you key in a track number, the number of tracks and the playing time of your option will be shown under TRACK and TOTAL TIME on the alpha-numeric display;
- press PRG to conclude the program;
- press PLAY to play the program.

You can check the program you have entered by pressing ***review***. The track/time display will show in sequence the track numbers and track times for your program. If you press ***review*** without having first entered a program, the display will show NO PROG.

You can erase the program while playing by pressing ***o/c***, or by pressing STOP twice. You can erase a program that is not playing by pressing ***o/c***, ***clr*** (clear), or STOP.

You can remove a track from the program by stopping play, then pressing **review**. When the track number you want to remove is displayed, press **clr** (clear).

Taping CDs

The DR-1 has special features to assist you in making tape recordings of your favorite cds. These features are provided solely to assist you in making legal copies of cds for your own private use. They are not intended to facilitate illegal copying of copyrighted material.

One particularly useful feature is peak search, which will locate the loudest passage on a cd and play it continuously (from 2 seconds before the peak to 2 seconds after), allowing you to set the recording levels on your tape recorder. To initiate this process, press the button labeled **peak**. The process can be concluded by pressing STOP, or **o/c**.

The DR-1 will also determine for you how many tracks will fit on each side of a tape, and set up a program to play only those tracks. To use this feature:

- press STOP if the cd is playing;
- press **edit** to activate edit mode (display shows "EDIT") - this selects the "normal" edit mode.
- two modes are available: EDIT (normal) and OPT(imal). EDIT - will determine which tracks fit on each side of the tape and will stop on the last track. Tracks will be recorded in the order in which they appear on the CD. OPT - will calculate the number and order in which the tracks should be recorded to best utilize available recording time.
- if desired, use the << and >> buttons to display OPT(imal), or CANCEL, or EDIT (normal). With the desired mode displayed, press EDIT to select. Selecting CANCEL will exit edit mode.
- the display will now show "C90" which is the default setting. With the << & >> buttons, other tape lengths may be selected (options are: C100, C105, C120, C30, C45, C60, C75, or C90). Press Edit to store the desired recording time.
- the track number indicator will now show which tracks fit onto side A of the tape, and the alpha-numeric display will show the number of tracks and total playing time. Begin recording, and press > (PLAY) on the DR-1. The transport will play the tracks

selected for side A, and will then go into PAUSE. Display will next show the track selections for side B. Turn over the tape, put tape recorder into RECORD, and press > (PLAY) on DR-1 to start side B program. After last track is played the display will read "EDIT CANCELED".

Specifications

Output: one 75 ohm coaxial (RCA connector). Professional Output option adds one balanced output and one ST glass optical output.
Dimensions: 13.125"D x 19"W x 3.315"H
Net Weight: 17 lbs.

Fuses

The DR-1 has four fuses protecting the dc power supplies. These fuses are located on the printed circuit board nearest the middle of the unit. Failure of any fuse is a symptom of a more serious problem, and a competent service technician should be consulted. ***In no event should these fuses be replaced with a value or type different than that originally supplied.*** The correct fuse value and type for all four fuses is: 1.5 amp, fast blow.

Some of the units supplied for 220 or 240 V operation have an autoformer that is protected by a chassis mount fuse near the line cord. This fuse is a 1/4 amp fast blow fuse.