

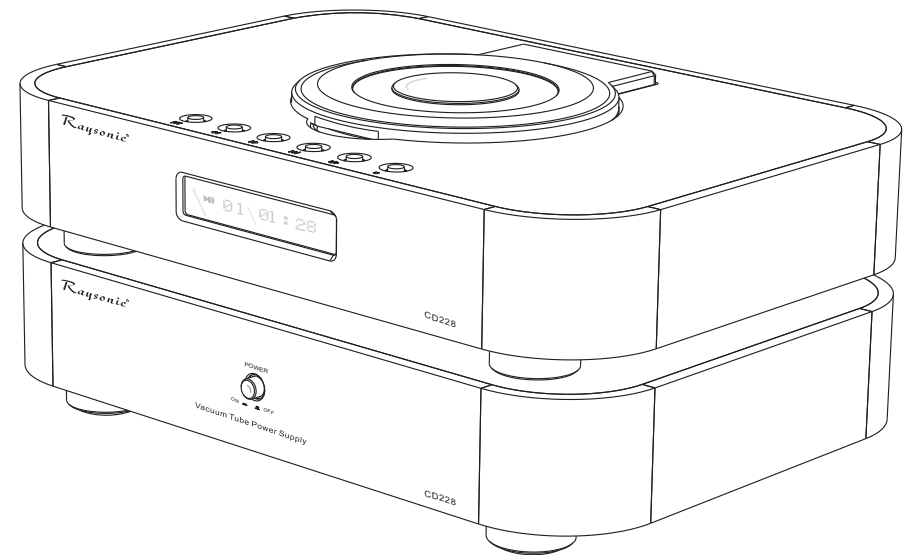
*Raysonic*<sup>®</sup>

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Model: CD228

Tube CD Player

## Owner's Manual



Raysonic Inc.  
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## Warranty Information

### One-year limited warranty

#### 90 Days warranty on stock vacuum tubes

- Limited to original purchaser. This warranty is for the sole benefit of the original purchaser of the covered product, and may not be transferred to a subsequent owner.
- Conditions & Limitations. This warranty is subject to conditions and limitations, as follows. This warranty is void and inapplicable if the product has not been used in accordance with the instructions found elsewhere in this manual, or if it has been misused, abused, damaged by accident or neglect, or in transport once in possession of purchaser. The warranty is also void if the product has been tampered with or has been repaired or modified by anyone other than **Raysonic Inc.** or its specifically authorized representatives.
- Remedy. If this product contains material, manufacturing, or workmanship defects, it must be packed in original packaging and returned to **Raysonic Inc.** or its authorized representative via insured freight, at the owner's expense. Returned products must be accompanied by written description of the defect, and a return authorization number (available from **Raysonic Inc.** or the authorized representative via e-mail). Upon receipt of the defective product, **Raysonic Inc.** or the authorized representative agrees to repair the product without charge for parts (except vacuum tubes if the unit is more than 6 months old), or labor. The product will then be returned via prepaid, insured freight, with carrier at the sole determination of **Raysonic Inc.** or the authorized representative. This constitutes the purchaser's sole remedy.
- Design change. **Raysonic Inc.** and its partners reserve the right to modify their products or change specifications at any time without obligation or liability to previous purchasers.
- Miscellaneous. Any implied warranties relating to the above product shall be limited to duration of this warranty. This warranty does not extend to any identical or consequential costs or damages to purchaser or third parties. Our liability will be no more than the amount you paid for the product that is the subject of a claim. This is the maximum amount for which we are responsible. This warranty gives you specific legal rights. You may also have other rights that may vary from country to country and state to state.

## Thank You

We would like to express our gratitude for choosing Raysonic Inc.'s **CD228** as part of your core component of your audio system. The model **CD228** is considered as a one-of-a-kind tube CD player in the high-end audio market. We understand digital audio source is pretty popular in these days and more importantly we acknowledge that record vinyl has made a strong comeback as well.

The **Raysonic CD228** tube CD player has the following features:

- 2 Chassis full-featured true balanced Top Loading CD-Player.
- Real class-A triode vacuum-tube output stage for single-ended & balanced operation.
- Very compact output buffer.
- 4 x 6922EH GOLD triodes tubes-Russia.
- Ceramic tube sockets.
- Warm up function-extends tube life time.
- 2pcs burr brown pcm 1792.
- Upsampling 24bit/192KHZ.
- Philips CD transport mechanism.
- Suspension system to isolate the CD-transport from vibration.
- Mundorf MCap/Supreme Silver Oil capacitors.
- Solen-MKP capacitors.
- Large noiseless C-core power transformer.
- Mirrored display glass.
- Display dimmer & mute function.
- Metal remote volume control.
- Top Loading blue display LED ON/OFF function.
- Aluminium brushed and anodized chassis: black or silver.
- Fission power source: avoid signal interference.

#### POWER SUPPLY

- External power supply – tube regulated & stabilized
- 2 large noiseless c-core power transformers
- Choke regulated power supply
- Power supply is separated from CD player

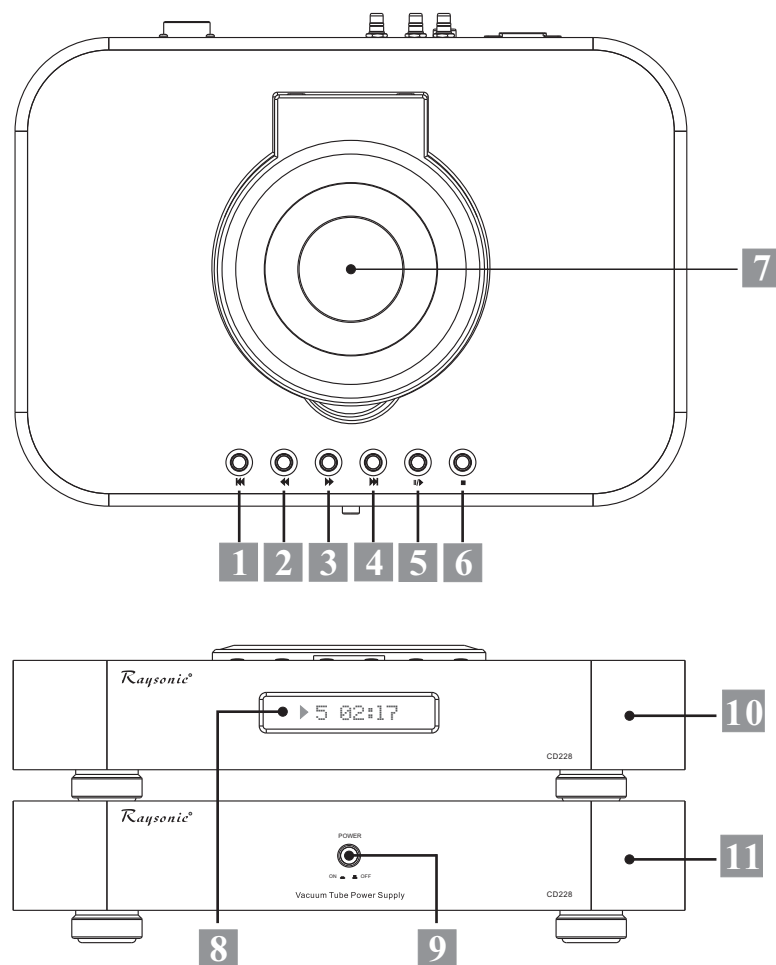
**Raysonic** was incorporated in 2000 and is currently based in Toronto, Canada. We are a high-end audio equipment manufacturer constantly striving for craftsmanship excellence and audio quality. We truly believe that the **CD228** is a unique tube CD player by its own. We hope you can both enjoy the visual appeal and the sound quality of this product. Should you have any questions and comments please do not hesitate to contact us by any means.

Thanks very much for your support

Steven Leung

CEO Raysonic Inc.

## Front Panel



- |                           |                        |
|---------------------------|------------------------|
| 1. Previous track button. | 7. Compact Disc cover. |
| 2. Fast backward button.  | 8. Display screen.     |
| 3. Fast forward button.   | 9. Power switch.       |
| 4. Next track button.     | 10. CD Player.         |
| 5. Play/Pause button.     | 11. Power supply.      |
| 6. Stop button.           |                        |

## Caution

To prevent fire or shock badly, **do not** expose the unit to rain or moisture since the unit is designed for indoor use only. **Do not** move the unit while it is operating. For safety, always replace the fuse with the same type and rating. The unit contains: **LETHAL** voltage; **do not** open or tamper with any parts and circuitry inside the chassis. Even with the power turned off, a lethal voltage charge can be still remained in the circuit for sometime. Refer any need of services to **Raysonic** authorized dealers and service centers.

## Cleaning

**Cut off the power source before cleaning.** Clean the unit with soft damp cloth to remove dust. Some none alkaline soap solution may be used to remove fingerprints or smudges. Any **abrasive** or **chemical** type cleaner **should not be used**.

## Warranty

The **CD228** is backed by one-year warranty of parts and labor **excluding** the vacuum tubes. Vacuum tubes only warrant for ninety days. Any tampering, modification or misuse of the unit will automatically void the warranty. **Raysonic** reserves the right to change the design and specification without notice and obligation to the units previously sold. And shall not be liable for any incidental or consequential damage in the event of any defect in material or workmanship of the unit during the term of the warranty or thereafter.

## Package Contents

Raysonic CD228 tube CD player	1
CD228 Power supply	1
DC Cable	1
Power Cord	1
This Owner's Manual	1
White Gloves	1 pair
CD Pressing	1
Main Slow Blow Fuse 100V-120V 50Hz/60Hz	1x1A fuse
220V-240V 50Hz	1x630mA fuse
Remote Control	1

## Remote Volume Control

b. During programming, press this button to program the track order.

### (13) Previous track button

When the system is at normal playback, fast forward, fast reverses, or A-B repeated playback, press this button will clear those playback modes, and the system will playback the previous track normally. (If press this button when the first track is playing, the system will jump to the last track of the disc.)

### (14) Play/Pause button

- When the system is in stop mode, press this button to playback the first track.
- When the system is in pause mode, press this button to return to normal playback.
- When the system is in fast-forward or fast-reverses mode, press this button to return to normal playback.
- When the system is in any playback mode, press this button to pause playback.

### (15) Next Track button

When the system is at normal playback, fast forward, fast reverse, or A-B repeated playback, press this button will clear those playback modes, and the system will playback the next track normally. (If press this button when the last track is playing, the system will jump to the first track of the disc.)

### (16) Volume Control-

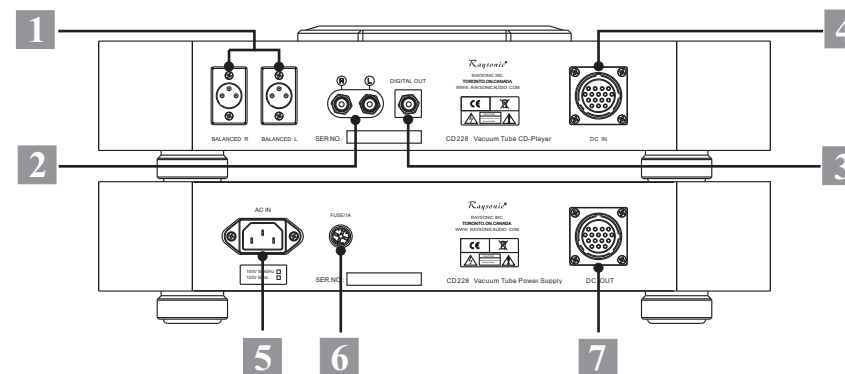
### (17) Stop button

During normal playback, press this button to stop the system. When the system is in stop mode, press this button will display the total track number and playback time for the entire disc.

### (18) Volume Control +

Thank you for making the **Raysonic CD228** as a part of your home music equipments system. A few helpful tips on the operation and care of this tip will maximize the service life of the equipment and to ensure the utmost fine musical enjoyment.

## Rear Panel

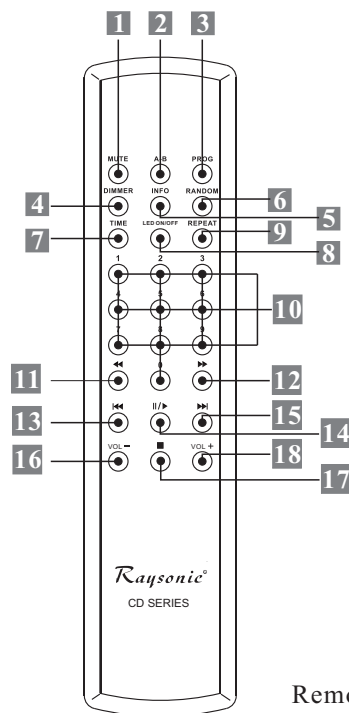


- Balanced Analog Outputs.
- RCA Analog Outputs.
- Digital Outputs.
- DC IN.
- AC Power Socket.
- Fuse.
- DC OUT.

## Specification

- Vacuum Tubes: Russia 6922EH GOLD x 4.
- CD transport: Philips VAM 1202.
- Conversion Rate: 24bit / 192kHz.
- Output Level: 0 - 4.7V.
- Frequency Response: 20Hz - 20KHz,  $\pm 0.2$ dB.
- S/N Ratio: >100dB.
- Distortion: <0.002%.
- Dynamic Range: 110dB.
- Output impedance Single Ended RCA-110 ohms.
- Output impedance Balanced XLR-330 ohms.
- Digital output: 75 ohm.
- Power Consumption: 38 watts.
- Remote volume control: yes.
- Dimensions: 43L x 30W x 8.5H / 9.7H (cm).
- Operating Voltage: 100-120VAC. 50Hz/60Hz (220-240VAC 50Hz/60Hz).
- CD Player Weight: 7kg.
- Power supply Weight: 10kg.

## Remote Volume Control



Remote control layout

(1) Mute button (MUTE)

(2) A-B button for repeated playback of a specified passage (A-B):  
During normal playback:

- Press this button once at the starting point (A) of the passage you want to repeat. If do not press the button again to mark the stopping point (B) before the next track starts, the starting point A will be cleared during the track change.
- Press this key again at the end of the passage (B) you want to repeat, the designated passage A-B will be played repeatedly.

(3) Program button (P R O G)

When the system is at stop stage:

- Press this button once to display **P00:00** (play order track number). maximum 20 tracks can be programmed.
- Press numeric button to select tracks.
- Press play button to activate program play (using fast forward, fast reverse button to select playback order.)

## Remote Volume Control

(4) Screen display mode. (DIMMER)

(5) Introduction (INFO)

When the system is at stop stage:

- Press this button once: the system will scan the disc and play back each track for 15 seconds. After all tracks are played, the system will stop and display the total track number and time for the entire disc.
- Press this key again: the system will return to the normal play back mode.

(6) Random Playback button (RANDOM)

When the system is at stop mode:

- Press this button once: the system will enter random play back mode. After all tracks are played once, the system will stop and display the total track number and play back time for the entire disc.
- Press this button again: the system will return to normal play back.

(7) Track time and surplus time button (TIME)

(8) LED ON/OFF

(9) Repeat button (REPEAT)

During normal playback:

- Press this button once: the system will play the current track repeatedly.
- Press this button again: the system will play all tracks repeatedly.

(10) Numeric button (0-9, totally ten buttons)

Press 1-9 buttons to select a specific sound track you want to play. For the track number bigger than 10, press the two button for the track number.

(11) Fast backward button

- When press this button during normal playback, the system will play the track reversely at a speed twice faster than the normal. Once the track is finished, the system will play the previous track normally. (Press this button when the system is playing the first track, the system will stop and display total track number and playback time for the entire disc.)
- When the system is at programming stage, press this key to program the sequence of the tracks.

(12) Fast forward button

- During normal playback, press and hold this button, the system will play at a speed twice faster than the normal. Once the track is finished, the system will play the next track normally. (Press this button when the system is playing the last track, the system will stop and display the total track number and playback time for the entire disc.)