

NAD**C660**

Compact Disc Recorder

**GB** Owner's Manual**F** Manuel d'Installation**D** Bedienungsanleitung**E** Manual del Usuario**I** Manuale delle Istruzioni**P** Manual do Proprietário**S** Bruksanvisning



EXPLANATION OF GRAPHICAL SYMBOLS



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

PRECAUTIONS

Read the Operating Instructions carefully and completely before operating the unit. Be sure to keep the Operating Instructions for future reference. All warnings and cautions in the Operating Instructions and on the unit should be strictly followed, as well as the safety suggestions below.

INSTALLATION

- 1 Water and Moisture** - Do not use this unit near water, such as near a bathtub, washbowl, swimming pool, or the like.
- 2 Heat** - Do not use this unit near sources of heat, including heating vents, stoves, or other appliances that generate heat. It also should not be placed in temperatures less than 5°C (41°F) or greater than 35°C (95°F).
- 3 Mounting surface** - Place the unit on a flat, even surface.
- 4 Ventilation** - The unit should be situated with adequate space around it so that proper ventilation is assured. allow 10 cm (4 in.) clearance from the rear and the top of the unit, and 5 cm (2 in.) from each side. - Do not place on a bed, rug, or similar surface that may block the ventilation openings. - Do not install the unit in a bookcase cabinet, or airtight rack where ventilation may be impeded.
- 5 Objects and liquid entry** - Take care that objects or liquids do not get inside the unit through the ventilation openings.
- 6 Carts and stands** - When placed or mounted on a stand or cart, the unit should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the unit and cart to overturn or fall.
- 7 Condensation** - Moisture may form on the CD pickup lens when:
 - The unit is moved from a cold spot to a warm spot.
 - The heating system has just been turned on.
 - The unit is used in a very humid room.
 - The unit is cooled by an air conditioner.

When this unit has condensation inside, it may not function normally. Should this occur, leave the unit for a few hours, then try to operate again.
- 8 Wall or ceiling mounting** - The unit should not be mounted on a wall or ceiling, unless specified in the Operating Instructions.



WARNING! TO REDUCE THE RISK OF FIRE OR ELECTRONIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE



This product is manufactured to comply with the radio interference requirements of EEC DIRECTIVE 89/68/EEC and 73/23/EEC

ELECTRIC POWER

- 1 Power Sources** - Connect this unit only to power sources specified in the Operating Instructions, and as marked on the unit.
- 2 Polarization** - As a safety feature, some units are equipped with polarized AC power plugs which can only be inserted one way into a power outlet. If it is difficult or impossible to insert the AC power plug into an outlet, turn the plug over and try again. If it still does not easily insert into the outlet, please call a qualified service technician to service or replace the outlet. To avoid defeating the safety feature of the polarized plug, do not force it into a power outlet.
- 3 AC power cord** - When disconnecting the AC power cord, pull it out by the AC power plug. Do not pull the cord itself.
 - Never handle the AC power plug with wet hands, as this could result in fire or shock.
 - Power cords should be routed to avoid being severely bent, pinched, or walked upon. Pay particular attention to the cord from the unit to the power socket.
 - Avoid overloading AC outlets and extension cords beyond their capacity, as this could result in fire or shock.
- 4 Extension cord** - To help prevent electric shock, do not use a polarized AC power plug with an extension cord, receptacle, or other outlet unless the polarized plug can be completely inserted to prevent exposure of the blades of the plug.
- 5 When not in use** - Unplug the AC power cord from the AC outlet if the unit will not be used for several months or more. When the cord is plugged in, a small amount of current continues to flow to the unit, even when the power is turned off.

CAUTION

Modifications or adjustments to this product, which are not expressly approved by the manufacturer, may void the user's right or authority to operate this product.

MAINTENANCE

Clean the unit only as recommended in the Operating Instructions.

DAMAGE REQUIRING SERVICE

Have the unit serviced by a qualified service technician if

- The AC power plug has been damaged.
- Foreign objects or liquid have gotten inside the unit.
- The unit has been exposed to rain or water - The unit does not seem to operate normally.
- The unit exhibits a marked change in performance.
- The unit has been dropped, or the cabinet has been damaged

DO NOT ATTEMPT TO SERVICE THE UNIT YOURSELF**OWNER'S RECORD**

For your convenience, record the model number and serial number (you will find them on the rear of your set) in the space provided below. Please refer to them when you contact your dealer in case of difficulty.


Model No. :

Serial No. :

TABLE OF CONTENTS

FEATURES

- Dual deck CD player and CD-R/CD-RW recorder.
- Dual play capability.
- 4x dubbing speed for both CD-R and CD-RW discs.
- Built in 32 to 96 kHz sampling converter
- Optical and coaxial digital inputs and outputs.
- Front panel digital input for use with portable devices.
- Extensive playback programming capabilities
- MP3 Disc Playback.
- HDCD decoding provides superior reproduction of all CDs, whether HDCD-encoded or not. When HDCD-encoded discs are played, special circuitry reveals detail and fidelity not possible in ordinary CDs.

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TYPES OF DISCS**CD-R AND CD-RW DISCS**

For recording and playback you can use the CD-R and CD-RW discs with the logos shown below.

With a CD-R disc, you can add recordings until the disc is full, but you cannot erase any of them.

With a CD-RW disc, you can add and erase recordings as needed.

Disc	Recording	Playback
CD-R 	Can be recorded only incrementally.	When finalized, can be played on conventional CD players.
CD-RW 	Can be recorded and erased as needed.	This type of disc can only be played back on CDRW compatible players. Even when finalized the disc can be erased as needed.

CONVENTIONAL AUDIO CDS

Discs with the following logo can be played back on this unit, but no recordings can be made on them.

When you load a CD-R, CD-RW or any other disc that is not compatible with this unit, "ERROR" may appear on the display to warn you that the disc cannot be used with this unit.

NOTE

- Do not use irregular shaped CDs (example: heart-shaped, octagonal ones). It may result in malfunction.
- Do not attach any seal or label to either side (the recordable side or the labelled side) of a CD-R/RW disc. It may cause malfunction.
- The unit may not play a CD-R/RW disc that is recorded on personal computers or some kinds of CD-R/RW recorders because of differences in recording platforms.
- Do not use a CD-R/RW disc which contains non-audio data or computer files.
- Trouble may occur in this unit if a CD-R/RW disc with dirt or scratches is used. In such case, refer to "ALERT MESSAGES" on page 28.

**CAUTION**

Do not open and close the disc tray of the record deck unnecessarily with a non-finalized CD-R disc inside. See page 14 for details.

**WARNING**

The digital recording capabilities which this unit provides are for personal use only. Dubbing copyrighted material without permission of the copyright owner is a violation of the copyright laws.

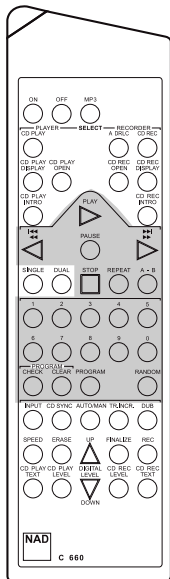
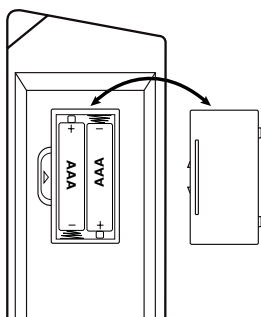
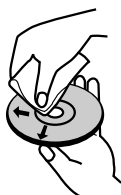
- Depending on the conditions of the surface of CD-R/RW disc (e.g. dirt, scratch, fingerprint, etc.), the head part of the first recorded track may be cut off.

ACCESSORIES

The package contains the following items.

- CDR disc (1)
- Audio cords (2)
- Coaxial digital cable (1)
- Remote control (1)
- Batteries (2)
- Owner's manual (1)

Insert the dust cap in the DIGITAL IN (OPTICAL) jack on the front panel when not using the jack.



CLEANING CABINET

Use a soft, dry cloth. If the surfaces are extremely dirty, use a soft cloth lightly moistened with a mild detergent solution. Do not use strong solvents, such as alcohol, benzine or thinner, as these might damage the surface of the unit.

STORING DISCS

After recording or playing, store the disc in its case. Do not expose the disc to direct sunlight or sources of heat, or leave it in a parked car exposed to direct sunlight, as temperature may rise considerably inside the car.

CARE OF DISCS

- Discs can be scratched. Handle them carefully.
- When a disc becomes dirty, wipe it from the centre out with a soft cleaning cloth.

Do not use strong solvents such as alcohol, benzine, thinner, commercially available cleaners or anti-static spray intended for analog records.

REMOTE CONTROL

INSERTING BATTERIES

Detach the battery cover on the rear of the remote control and insert two batteries (size AAA).

LOAD THE BATTERIES AS ILLUSTRATED

The maximum operational distance between the remote control and the sensor on the main unit should be approximately 7 meters (23 feet). When this distance decreases, replace the batteries with new ones.

USING THE SHARED BUTTONS

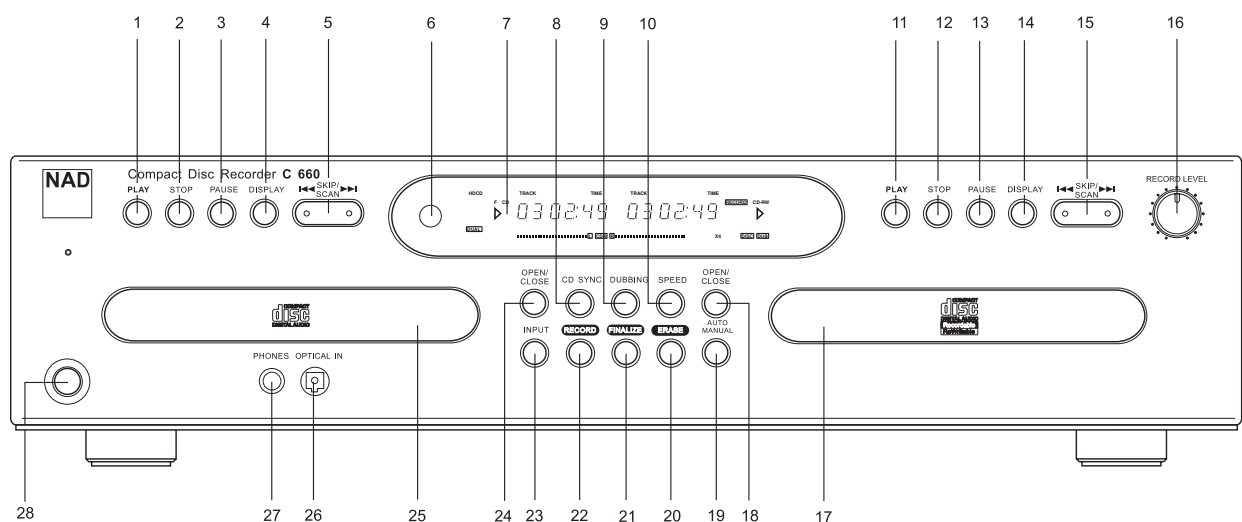
The remote control is designed to operate both of the CD decks of the unit. Some buttons are dedicated to one specific CD deck, while others are shared between the two decks.

To use shared buttons, such as **PLAY, STOP, PAUSE, FORWARD SCAN, REVERSE SCAN, FORWARD SKIP, REVERSE SKIP, PROGRAM, PROGRAM CHECK, PROGRAM CLEAR, RANDOM, REPEAT, A -B** and numbered buttons, first press either **CD PLAY** to control the play deck or **CD REC** to control the record deck.

When **CD PLAY** or **CD REC** is pressed, "CDP" or "CDR" will appear on the appropriate information display to confirm the selection.

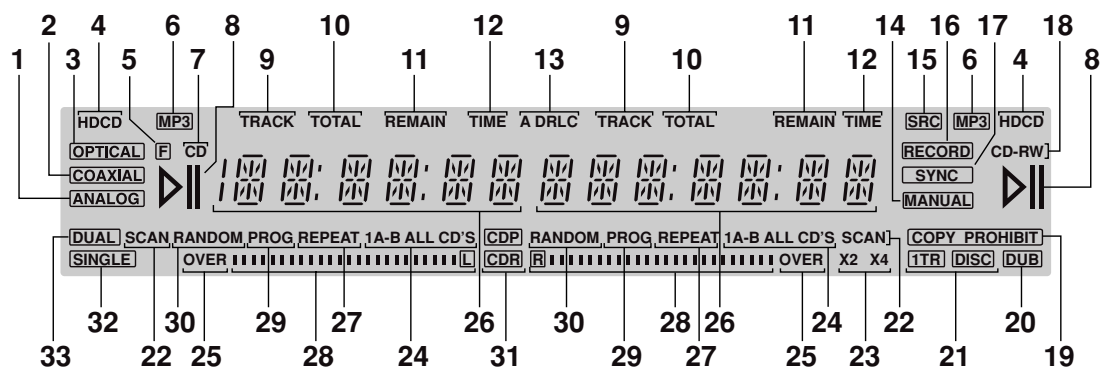
NOTE

- If the remote control is not going to be used for an extended period of time, remove the batteries to prevent possible electrolyte leakage.
- The remote control may not operate correctly when:
 - The line of sight between the remote control and the remote sensor (located on the front panel) is exposed to intense light, such as direct sunlight.
 - Other remote controls are used nearby (television, etc.).

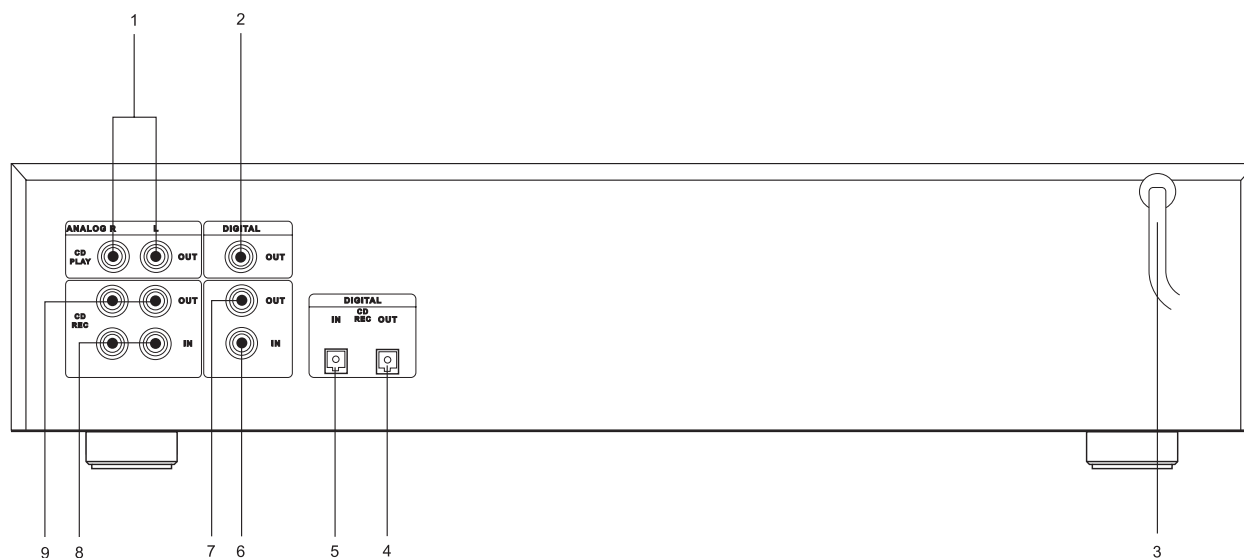
FRONT PANEL

- 1 **PLAY (play deck)** Press to play a CD in the play deck.
- 2 **STOP (play deck)** Press to stop the CD in the play deck.
- 3 **PAUSE (play deck)** Press to pause or restart the disc.
- 4 **DISPLAY (play deck)** Press to cycle through the time display options for the play deck.
- 5 **FORWARD/REVERSE SKIP/SCAN (play deck)** Press and hold to play the disc in fast-forward or fast-reverse mode. Press to move to the next or previous track.
- 6 **REMOTE SENSOR** Receives commands from the remote control.
- 7 **Information display** Displays the status of this unit.
- 8 **CD SYNC** Press to make sync recording of a single track or an entire disc from an external CD, MO, DAT player.
- 9 **DUBBING** Press to make a complete copy of the disc to a CD-R or CD-RW.
- 10 **SPEED** Press to select the recording speed for internal dubbings.
- 11 **PLAY (record deck)** Press to play a CD or to set a selection in the record deck.
- 12 **STOP (record deck)** Press to stop the CD in the record deck.
- 13 **PAUSE (record deck)** Press to pause or restart the disc.
- 14 **DISPLAY (record deck)** Press to cycle through the time display options for the record deck.
- 15 **FORWARD/REVERSE SKIP/SCAN (record deck)** Press and hold to play the disc in fast-forward or fast-reverse mode. Press to move to the next or previous track.
- 16 **REC LEVEL** Use to control input level when making recordings in analog mode.
- 17 **Record deck** Use to playback CD and record CD-R and CD-RW discs.
- 18 **OPEN/CLOSE (record deck)** Press to open the record deck. Press again to close the deck.
- 19 **AUTO/MANUAL** Press to select automatic or manual track increments during a recording session.
- 20 **ERASE** Press to erase one or more tracks of an uninitialized CD-RW disc.
- 21 **FINALIZE** Press to finalize the recording process.
- 22 **RECORD** Press to make recording.
- 23 **INPUT** Press to select the input source for recording.
- 24 **OPEN/CLOSE (play deck)** Press to open the play deck. Press again to close the deck.
- 25 **Play deck** Use to play CD, CD-R or CD-RW discs that have been finalized.
- 26 **OPTICAL IN (DIGITAL)** Use to connect a portable digital audio player to this unit for digital recording.
- 27 **PHONES** Connect headphones with a standard stereo type plug.
- 28 **POWER** Press to turn on or off the power.

INFORMATION DISPLAY

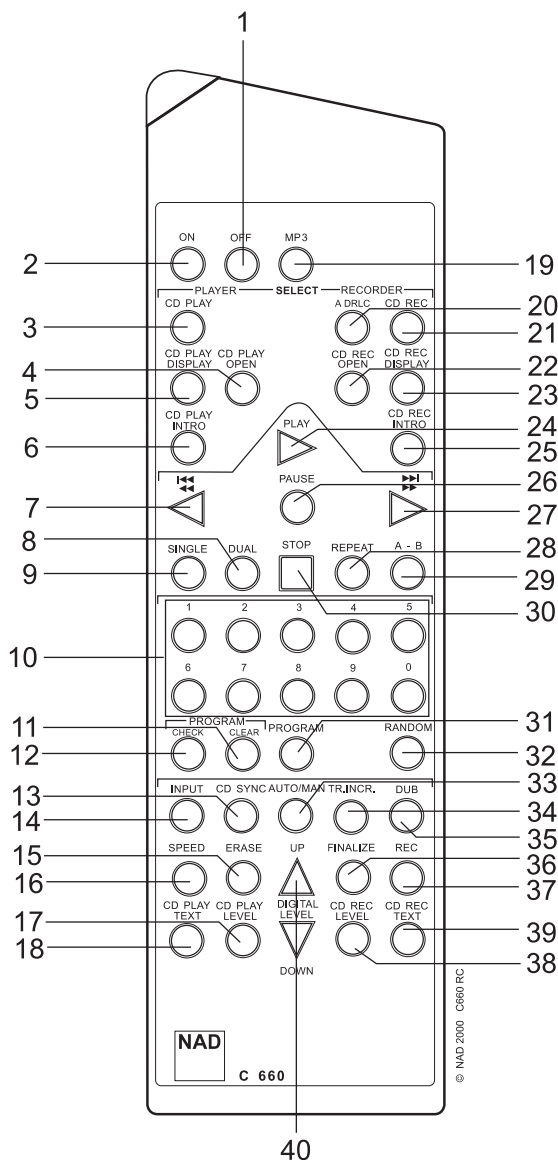


- 1 **ANALOG** Lights when signal from analog jacks is selected as source.
- 2 **COAXIAL** Lights when signal from coaxial jacks is selected as the source.
- 3 **OPTICAL** Lights when signal from optical jack (on the front panel or rear panel) is selected as the source.
- 4 **HDCD** Lights when a HDCD disc is playing in the CD deck.
- 5 **F** Lights when the front optical input has been selected.
- 6 **MP3** Lights when a MP3 disc is playing in the CD deck.
- 7 **CD** Lights when a conventional audio CD is playing in the CD deck.
- 8 **Play/Pause indicator** Indicates the status of the individual CD decks.
- 9 **TRACK** Lights when the information display shows the running time of the individual track being played.
- 10 **TOTAL** Lights when the information display shows the total time of all tracks on a disc.
- 11 **REMAIN** Lights when the information display shows the time remaining on a disc.
- 12 **TIME** Lights in conjunction with one of the time indicators TRACK, TOTAL, REMAIN, to show which of the time status mode is active.
- 13 **ADRLC** This indicator lights when the unit is recording and the ADRLC function has been selected and activated.
- 14 **MANUAL** This indicator lights when the automatic method of incrementing tracks is not selected for a recording session.
- 15 **SRC** Lights when the Sample-Rate Converter is in use.
- 16 **RECORD** Lights when making a recording and flashes while preparing to make a recording.
- 17 **SYNC** Lights when the unit has been programmed for a CD sync recording.
- 18 **CD-RW** Indicates the type of disc in the record deck. When a CD-R disc is in use, only "-R" is lit. When a CD- RW disc is in use, "-RW" is lit.
- 19 **COPY PROHIBIT** Lights when a recording is not possible due to the Serial Copy Management System (SCMS).
- 20 **DISC, DUB (DUBBING)** Lights when a dubbing is in progress between the two CD decks.
- 21 **1TR, DUB** These indicators show the status of dubbing.
- 22 **SCAN** Indicates during Intro scan play.
- 23 **X2 X4** Indicates which speed has been selected for dubbing recordings.
- 24 **1 A-B ALL CD'S** Displays the type of repeat function being used.
- 25 **OVER** Lights when recording level is excessive during analog recording.
- 26 **Status display** Displays the disc playing time and messages about the discs recordings.
- 27 **REPEAT** Lights when a repeat function is being used.
- 28 **Level indicators** Displays the input/output level during an analog recording.
- 29 **PROGRAM** Lights when one of the CD decks is being programmed for playback options.
- 30 **RANDOM** Lights when random playback has been programmed for one of the CD decks.
- 31 **CDP, CDR** These indicators show which deck the level indicators are responding to.
- 32 **SINGLE** Lights when the unit is playing in single mode.
- 33 **DUAL** Lights when the unit is playing in dual mode.

REAR PANEL

- 1 ANALOG CD PLAY OUT** These jacks carry the analog audio output signal from the play deck.
- 2 COAXIAL CD PLAY OUT** This jack carries the digital audio output signal from the play deck.
- 3 AC power cord** Connect this plug to an AC outlet.
- 4 OPTICAL CD REC DIGITAL OUT** This jack carries the digital audio output signal from the record deck.
- 5 OPTICAL CD REC DIGITAL IN** This jack accepts the digital audio input signal from a compatible digital audio product.
- 6 COAXIAL CD REC IN** This jack accepts the digital audio input signal from a compatible digital audio product.
- 7 COAXIAL CD REC OUT** This jack carries the digital audio output signal from the record deck.
- 8 ANALOG CD REC IN** These jacks accept the analog signals that are used for CD recordings.
- 9 ANALOG CD REC OUT** These jacks carry the analog audio output signal from the record deck.

IDENTIFICATION OF CONTROLS



BUTTONS ON THE REMOTE CONTROL

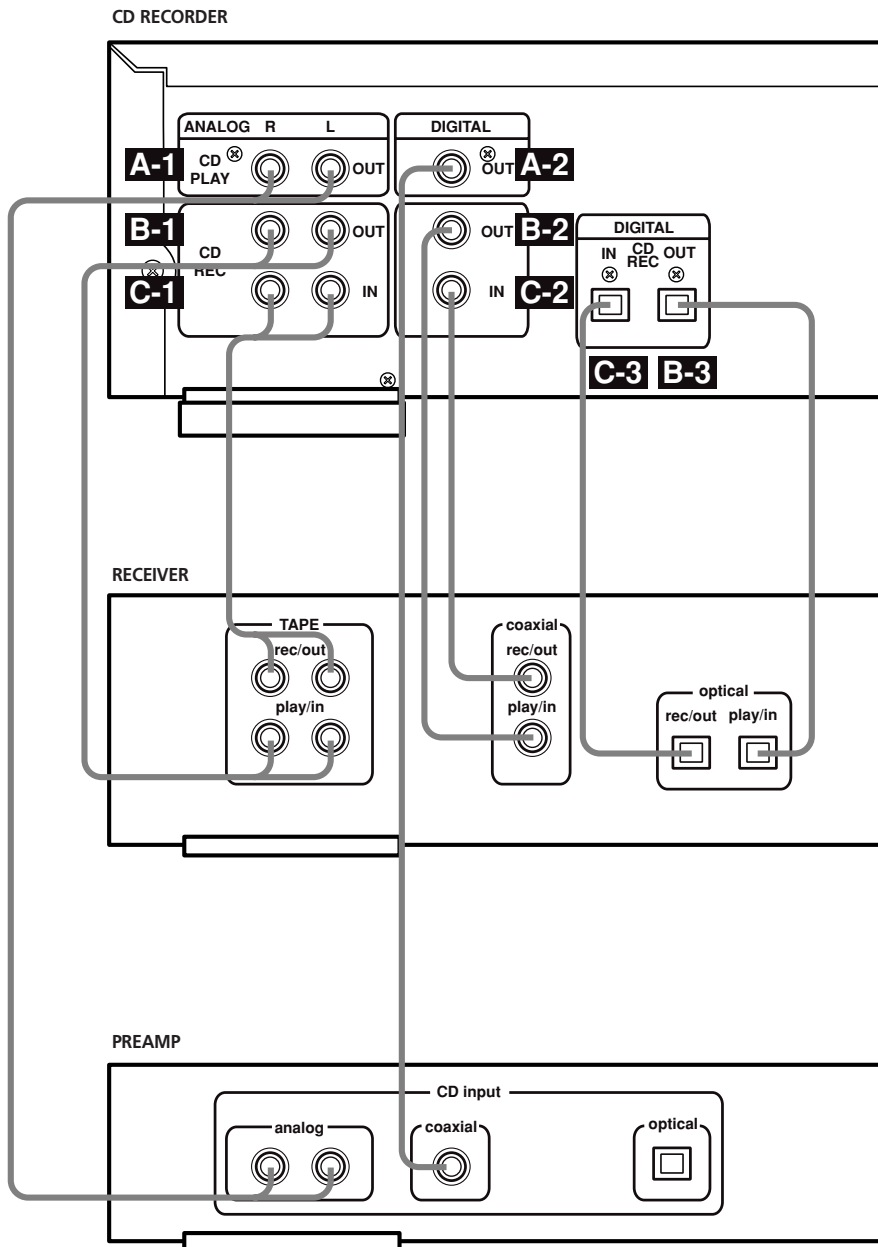
- 1 OFF** Press to turn the unit off.
- 2 ON** Press to turn the unit on.
- 3 CD PLAY** Press to control or program the functions of the disc in the play deck.
- 4 CD PLAY OPEN** Press to open the play deck.
- 5 CD PLAY DISPLAY** Press to cycle through the various time display options for the disc in the play deck.
- 6 CD PLAY INTRO** Press to do Intro scan play for the disc in the play deck.
- 7 REVERSE SKIP/SCAN** Press and hold to play the disc in fast-reverse mode. Press to move to the previous track.
- 8 DUAL** Press to enable both CD decks to play back at the same time and function as independent CD units.
- 9 SINGLE** Press to control the unit as a two-disc CD player/changer.
- 10 Numbered buttons** Press to access a specific track for playback or during the programming process.
- 11 PROGRAM CLEAR** Press to clear an item in a program sequence.
- 12 PROGRAM CHECK** Press to check or edit a programmed playback sequence.
- 13 CD SYNC** Press to make sync recording from an external CD player when a digital connection is used.
- 14 INPUT** Press to select the input source (analog, digital-coaxial, or digital-optical) for recording.
- 15 ERASE** Press to erase a track or an entire CD-RW disc or to unfinalize a disc.
- 16 SPEED** Press to select the recording speed for internal dubbing.
- 17 CD PLAY LEVEL** Press this button to switch Level Indicator to play deck.
- 18 CD PLAY TEXT** Press this button to read Text for the disc in the play deck.
- 19 MP3** Press to select the playing tracks for MP3 or CD-DA.
- 20 A DRLC** Press to change to Automatic Digital Record Level Control (A DRLC) mode.
- 21 CD REC** Press to control or program the functions of the disc in the record deck.
- 22 CD REC OPEN** Press to open the record deck.
- 23 CD REC DISPLAY** Press to cycle through time-display options for the disc in the record deck.
- 24 PLAY** Use as a play and enter button.
- 25 CD REC INTRO** Press to do Intro scan for the disc in the record deck.
- 26 PAUSE** Press to pause and resume playback.
- 27 FORWARD SKIP/SCAN** Press and hold to play the disc in fast-forward mode. Press to move to the next track.
- 28 REPEAT** Press to repeat a current track or an entire disc.
- 29 A-B** Press to specify a segment of a disc for repeat play.
- 30 STOP** Press to stop playback or recording.
- 31 PROGRAM** Press to begin the programming sequence for one of the CD decks.
- 32 RANDOM** Press to begin random play of all tracks on a disc.
- 33 AUTO/MANUAL** Press to select automatic or manual track increments during a recording session.
- 34 TR. INCR** Press to increase the track number.
- 35 DUB (DUBBING)** Press to make a dubbing.
- 36 FINALIZE** Press when a recording is complete to initiate the finalization process.
- 37 REC** Press to make a manual recording.
- 38 CD REC LEVEL** Press this button to switch Level Indicator to record deck.
- 39 CD REC TEXT** Press to read Text for the disc in the record deck.
- 40 DIGITAL LEVEL** Press to adjust the record level up or down when the unit is recording from a digital source.

CONNECTION DIAGRAM

To prevent possible damage to your speakers or other components in your audio system, all system components, including this unit, should be turned off and unplugged from their AC power source when any connections are made or a new component is installed.

PRECAUTIONS WHEN OPERATING THIS UNIT

Never move or tilt this unit or subject it to mechanical shock when recording or play-back is in progress. The disc spinning at high speed may be damaged.



CONNECTIONS

Using the DIGITAL IN (OPTICAL) jack on the front panel

Connections to a portable digital CD or MD player may be made by connecting the digital output of the player to the front panel DIGITAL IN (OPTICAL) jack on this unit.

NOTE

Consult the owner's manual on your receiver or processor for details, as the names of the jacks may vary from unit to unit.

POWER CONNECTIONS

Connect the AC Power Cord to an AC power source.

USING HEADPHONES

Connect headphones with a stereo standard plug (ø 6.3 mm) to PHONES.

- When the unit is in the dual playback mode (see page 26), only the output of the play deck will be fed to PHONES jack.

PLAY DECK CONNECTIONS

OUTPUT JACKS

A-1 ANALOG

Connect the ANALOG CD PLAY OUT jacks to the CD input analog jacks on your receiver, preamp or surround processor.

A-2 COAXIAL

Connect the COAXIAL CD PLAY OUT to the CD input coaxial jack of your receiver, preamp, processor or external digital decoder.

RECORDING DECK CONNECTIONS

OUTPUT JACKS

B-1 ANALOG

Connect the ANALOG CD REC OUT jacks to the TAPE play/in jacks on your receiver, preamp or surround processor.

B-2 COAXIAL

Connect the COAXIAL CD REC OUT jack to the coaxial play/in jack on your receiver, preamp, processor or external digital decoder.

B-3 OPTICAL

Connect the OPTICAL CD REC OUT jack to the optical play/in jack on your receiver, preamp, processor or external digital decoder.

INPUT JACKS

C-1 ANALOG

Connect the ANALOG CD REC IN jacks to the TAPE rec/out on your receiver or processor.

C-2 COAXIAL

Connect the COAXIAL CD REC IN jack to the coaxial rec/out jack on your receiver or processor.

C-3 OPTICAL

Connect the OPTICAL CD REC IN jack to the optical rec/out jack on your receiver or processor.

TO MAKE RECORDINGS FROM EXTERNAL DIGITAL SOURCES

- If your receiver does not have digital output jacks, you may connect the COAXIAL CD REC IN / OPTICAL CD REC DIGITAL IN jacks on the unit directly to the coaxial/ optical rec/out jacks on your CD player or other digital devices.
- If the CD player has both types of outputs, you may connect one to the input of your receiver and the other directly to the unit.

IMPORTANT NOTES ON DIGITAL CONNECTIONS

Coaxial Connections

- Use a commercially available digital cable (or 75-ohm video cable).
- Do not use audio cords that are not appropriate for digital signal use.

Optical Connections

- Use a commercially available optical fibre cable.
- To ensure proper connection of optical cable, fully insert it into the jack until there is an audible click.
- Remember to save the plastic dust caps that cover the optical jacks, and replace them when a jack is not in use to prevent dust from entering the connection point.

- 1 **Press ON on the remote control or POWER button on the front panel.**
STANDBY/ON will turn green, indicating that the unit is on and functioning.
- 2 **Press appropriate OPEN/CLOSE on the front panel or remote control to open the desired deck.**
- 3 **Load a disc with the label side up.**
The play deck may not play the CD-R/RW discs, unless they are finalized. You can play them in the record deck.
- 4 **Press appropriate OPEN/CLOSE to close the desired deck.**
You can also close the deck by gently pressing on the outside of the disc tray.

NOTE

- Do not attach any seal or label to either side (the recordable side or the labelled side) of a CD-R/RW disc. It may cause malfunction.
- Do not use irregular shaped CDs (example: heart-shaped, octagonal ones). It may cause malfunction.
- When loading an 8-cm (3-inch) disc, put it on the inner circle of the tray.
- Do not place more than one compact disc on one disc tray.
- Do not tilt the unit with discs loaded. Doing so may cause malfunctions.

INFORMATION DISPLAY

When the disc is loaded, the type or status of disc is displayed as follows.

Conventional audio CD, CD-Text CD, finalized CD-R or CD-RW disc

"TOC" will flash while the unit reads the disc's Table Of Contents information.



The total number of tracks and the total time of all tracks will be displayed. "CD" will also light to indicate that a conventional audio CD is in use.

Non-finalized CD-R or CD-RW disc

"OPC" will be displayed once "TOC" has been read. OPC determines the intensity and duration of the recording laser beam that is best for the currently loaded disc.



The total number and total time of all tracks that have already been recorded will be displayed, and the appropriate indicator will light if a CD-R or CD-RW disc is in use.

**NOTES ON THE OPC LIMIT OF CD-R DISCS**

When a non-finalized CD-R is loaded in the record deck, "OPC" (Optimum Power Control) appears on the information display. OPC determines the intensity and duration of the recording laser beam that is best for the currently loaded disc.

NOTE

The ON or OFF button on the remote control is only active when the POWER button on the front panel is in the ON position.



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"CD" lights



Total number of tracks

Total time of all tracks



Optimum Power Control

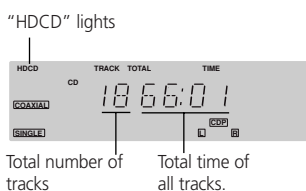
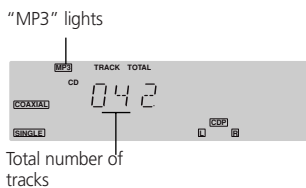
"CD-R" or "CD-RW" lights



Total number of tracks

Total time of all tracks

LOADING DISCS



LOADING A MIXED DISC

MP3 off mode: Total Track number and Total Time.

MP3 on mode: "MP3" and Total Track number. (When the other Deck is in the MP3 On Mode, both "MP3" indicators will blink.)

With MP3 discs, the MP3 indicator will light and the disc drive will start up. If the other deck is also operating with an MP3 disc, then MP3 BUSY will blink 3 times and will revert to Stop Mode.

MP3 DISC

"MP3" and Total Track number. (When the other Deck is in the MP3 On Mode, both "MP3" indicators will blink.). With MP3 discs, the MP3 indicator will light and the deck containing the disc will start up. If the other deck is also operating with an MP3 disc, then MP3 BUSY will blink 3 times and will revert to Stop Mode.

HDCD DISC

The total number of tracks and the total time of all tracks will be displayed. "HDCD" will also light to indicate that an HDCD disc is in use.

COMPUTER DATA DISC

"DATA DISC" will be displayed when there is an error. Data discs will not play and may not be recorded or dubbed in this unit.

⚠ DO NOT OPEN AND CLOSE THE DISC TRAY UNNECESSARILY
 OPC runs every time a non-finalized CD-R disc is loaded, and OPC can run only a limited number of times (approximately 100 times) on a non-finalized CD-R disc. OPC does not run when loading a finalized CD-R disc or a prerecorded music CD.



PRECAUTIONS**ON RECORDING PROGRAMMED PLAY**

Do not attempt to record a sequence of tracks, as programmed on your DAT, DCC or other digital sources. Those tracks would not be numbered continuously. If you want to record a sequence of tracks, record them one by one.

ABOUT THE UPDATE PROCESS

"UPDATE" is displayed after recording. The update process writes non-audio data in the PMA (Program Memory Area) of the disc. When finalizing the disc, TOC (Table Of Contents) is generated from the PMA data.

WHEN DIGITAL INPUT IS INTERRUPTED DURING RECORDING

If incoming digital input from the source device is interrupted momentarily, such as when the sampling frequency is changed on the source, a blank segment is recorded. If there is an interruption longer than 4 seconds, this unit stops recording and updates the PMA data.

WHEN RECORDING ADDITIONAL TRACKS

Additional recordings are made in sequence to the end of the last track on a non-finalized CD-R/RW if there is enough time remaining on the disc. Up to 99 tracks can be recorded on a single disc.

MINIMUM LENGTH OF RECORDING YOU CAN MAKE

The shortest possible length of recording is restricted to 6 seconds. In other words, you cannot terminate recording before the first 6 seconds are up. During this interval, pressing PLAY or STOP has no effect.

COMPRESSED AUDIO, AND VIDEO OR GRAPHICS DATA

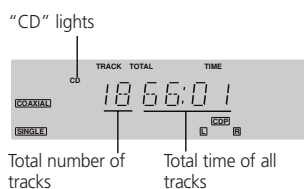
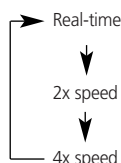
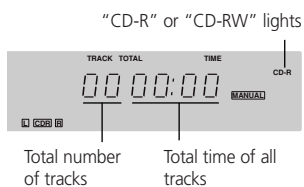
This unit is not capable of recording compressed audio like DTS and Dolby Digital Surround sounds. Non-audio data contained in a Graphics CD or HDCD cannot be recorded on this unit either.

COPY PROHIBIT

Some commercial CD discs may contain a copy protection data bit that will prevent the disc from being dubbed. In this case, "COPY PROHIBIT" will light.

SRC (SAMPLE-RATE CONVERTER) INDICATOR

This indicator lights when the Sample-Rate Converter is in use to change the digital sample rate when the incoming signal is not the standard 44.1kHz used by standard CDs. This is an automatic function and does not require any user intervention.



DISC DUBBING

- 1 Load a blank or non-finalized CD-R/RW disc on the record tray** After TOC and OPC process, total number of tracks and total time of all tracks will be displayed. "CD-R" or "CD-RW" will also light depending on the disc in the tray.
- 2 Press SPEED repeatedly to select dubbing speed** With each press of the button, the dubbing speed changes as shown on the left.
 - The default dubbing speed is "real-time". The recording takes as long as the actual running time of the disc.
 - When no speed indicator lights, the unit is set to real-time recording.
 - Note that the slower the record-dubbing speed, the more tolerant the unit is of errors on the blank disc. However, with most high-quality blank discs, the 2x and 4x speeds should not present a problem.
- 3 Load the disc to be dubbed on the play tray** After TOC process, total number of tracks and total time of all tracks will be displayed and CD will light.
- 4 Press DUB on the remote control or DUBBING on the front panel, and wait until "01 00:00" is displayed** When "DISC FULL" is displayed, there is not enough space on the disc. Use another disc.
- 5 Press PLAY on the play deck or record deck** Alternatively, press PLAY on the remote control. The dubbing will stop automatically when the source disc has played through to the end. After the dubbing is finished, "BUSY" and "UPDATE" will be displayed briefly.

TO STOP A DUBBING OPERATION MANUALLY

Press STOP on the play deck or record deck.
Alternatively, press STOP on the remote control.

TO PLAY IN OTHER MACHINES

As with all recorded CD-R/RW discs, the disc must be finalized before it can be played in other machines. See page 20 for details.

CHANGING THE ORDER OF TRACKS TO BE DUBBED

Before starting the dubbing, program the tracks so that they will be played in the desired order. See page 24 for details.

- Dub containing programmed playback may only be made by real-time or 2x speed. If you attempt to make a programmed dubbing at 4x speed, the unit will automatically select the 2x speed.

NOTE

- Recording levels can be adjusted during digital recordings.
- It is possible to listen to the disc while it is being dubbed by selecting the appropriate input on your receiver, preamp or processor.
- Do not use high volume levels when listening to high-speed dubbings while they are in progress. It may cause malfunction.
- PAUSE does not operate while a dubbing is in progress.
- Tracks will be added automatically to mirror the track structure of the original disc.
- The total time indication of the recorded CD may vary slightly from the original due to variations in the spin speed of each drive. But no information has been lost in the recording process.
- If the original disc being dubbed is a digital copy or if it contains copy-prohibit signals, the unit will automatically make a copy with real-time speed in analog mode because of SCMS (see page 29).

CD SYNC RECORDING (FROM CD, MD OR DVD PLAYER)

CD sync recording allows you to make an automatic digital recording from an external CD, MD or DVD player. During CD sync recording, the record deck starts in sync with the source, and tracks are automatically numbered.

- 1 Press INPUT on the front panel or the remote control repeatedly until the desired input is displayed** With each press of the button, the input changes as shown on the right.
- 2 Load a blank or non-finalized CD-R/RW disc on the record tray**
- 3 Press CD SYNC repeatedly on the front panel or remote control to select "1 TRK" or "ALL"**
To record only the first track from the source player, select "1 TRK". To record the entire disc or tape, select "ALL".
- 4 Play the source device** Recording starts in sync with the source, and stops when there is no incoming signal for more than three seconds. After the recording is finished, "BUSY" and "UPDATE" will be displayed briefly.
 - If the source material is a CD, tracks will be added automatically to mirror the track structure of the original disc.
 - Recording levels can be adjusted during digital recordings.

WHEN "DISC FULL" IS DISPLAYED

There is not enough space on the disc, use another disc.

TO STOP THE RECORDING MANUALLY

Press STOP on the record deck. Alternatively, press CD REC and then STOP on the remote control.

TO PLAY IN OTHER MACHINES

As with all recorded CD-R/RW discs, the disc must be finalized before it can be played in other machines. See page 20 for details.

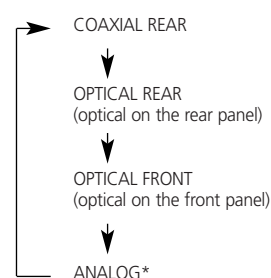
WHEN MAKING A DIGITAL RECORDING FROM A DVD PLAYER

- From the DVD player, select "linear PCM" as audio output. Compressed digital signals, such as "DTS bit stream" or "Dolby Digital bit stream" cannot be used. Read and follow the manual attached to your DVD player about how to change the setting of audio output.
- Some DVD discs contain copy-prohibit signals. In such cases you can copy the disc by using an analog input.

NOTE

You cannot start or resume recording from a halfway point.

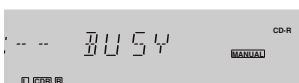
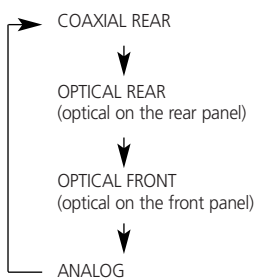
- *When in CD sync record-standby mode and the source device is switched from pause to playback, this unit does not start recording, but remains in the standby mode.*
- *If you switch the source device from playback to pause during CD sync recording, this unit stops recording and runs the update process.*
- *It is possible to listen to the sound while recording by selecting the appropriate input on your receiver, preamp or processor.*



*CD sync recordings can not be made from an analog input.



RECORDING



MANUAL RECORDING (FROM EXTERNAL SOURCE)

The recording can be started and paused at will.

- 1 **Press INPUT on the front panel or the remote control repeatedly until the desired input is displayed** With each press of the button, the input changes as shown in the diagram on the left.
- 2 **Load a blank or non-finalized CD-R/RW disc on the record tray.**
- 3 **Press AUTO/MANUAL on the remote control to select how tracks will be numbered on the recorded disc** See page 19 for details.
- 4 **Press RECORD on the front panel or press REC on the remote control** "RECORD" will flash, and "BUSY" will briefly appear. When the display returns to the track and running-time information, the unit is ready to record.
- 5 **Play the source device.**
- 6 **Press PLAY on the record deck. Alternatively, press CD REC and then PLAY on the remote control** "RECORD" will stop flashing and the recording will be started.

TO STOP THE RECORDING

Press STOP on the record deck.

Alternatively, press CD REC and then PAUSE on the remote control. "BUSY" and "UPDATE" will be displayed briefly.

TO PAUSE THE RECORDING

Press PAUSE on the record deck.

Alternatively, press CD REC and then PAUSE on the remote control.

To resume recording, press PLAY on the record deck.

Alternatively, press CD REC and then PLAY on the remote control.

TO PLAY OTHER MACHINES

As with all recorded CD-R/RW discs, the disc must be finalized before it can be played in other machines. See page 20 for details.

NOTE

- *It is possible to listen to the sound while recording by selecting the appropriate input on your receiver, preamp or processor.*

NUMBERING TRACKS

The tracks can be numbered automatically (auto mode) or manually (manual mode).

AUTO MODE

Auto mode can be used with either digital or analog recording.

The auto mode will add track numbers automatically, in one of two ways.

- When track data is present from a digital recording, it will be carried over to the new copy disc.
- In the auto mode for recordings from an analog source or a digital source with no track data, the track number will be increased when the unit receives silence for 3 seconds (digital) or 10 seconds (analogue). The unit will also go into the pause mode until the input source resumes.

MANUAL MODE

For digital or analog recordings, the track numbers may be added at any time by pressing TR. INCR. on the remote control.

TO SWITCH THE NUMBERING MODE

Press AUTO/MANUAL repeatedly. When manual mode is selected, "MANUAL" lights.

DIGITAL RECORDING LEVEL CONTROL (DRLC)

The Digital Recording Level Control is adjusted manually (manual mode) or automatically (auto mode) when the unit is recording digital source. You can increase or decrease digital recording level by using this function.

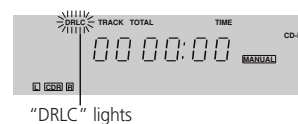
MANUAL MODE

To adjust the Digital Recording Level Control manually, press DIGITAL LEVEL (UP or DOWN). The "DRLC" lights. The Manual Digital Recording Level is adjusted from -3dB to +3dB (7 steps). If the Manual Digital Recording Level is set to 0dB, "DRLC" will disappear.

AUTO MODE

To change to Automatic Digital Recording Level Control (A DRLC) mode, press A DRLC on the remote control. The "A DRLC" lights.

To release the DRLC or A DRLC mode, select 0dB by pressing DIGITAL LEVEL (UP or DOWN) on the remote control.



FINALIZATION

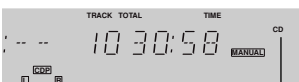
Finalization completes the recording of a disc so that it can be played in other machines.

PRECAUTION

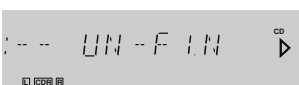
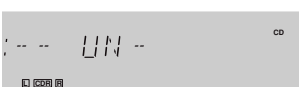
- Once a CD-R disc is finalized, the disc cannot be unfinalized.
- A CD-RW disc can be unfinalized.
- During the finalization process, never switch the power off, or the disc may be damaged.
- Once started, the finalization process cannot be aborted.
- Dust or scratches on a disc may prevent it from being finalized successfully.
- The finalization process time depends on the disc and number of tracks.
- During the finalization process the record deck will not accept any operating commands.

- 1 Load the CD-R/RW disc on the record tray.**
- 2 Press FINALIZE on the front panel or remote control** "FINAL" will begin flashing.
- 3 Within 3 seconds, press PLAY on the record deck. Alternatively, press CD REC and then PLAY on the remote control** "FINAL" and remaining time will flash.
 - The finalization process will take between 60 and 90 seconds, depending on the length of material recorded on the disc.
 - During the finalization process the record deck will not accept any operating commands.

When the finalization process is complete "FINAL" will go out, and "CD" will light as an indication that the disc is now playable on other players.



"CD" lights



UNFINALIZATION

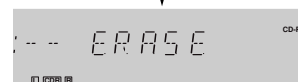
To keep the material that is already recorded on a CD-RW disc and to add an additional track and erase an individual track, you must first unfinalize the disc.

- 1 Load the CD-RW disc on the record tray.**
- 2 Press ERASE on the front panel or remote control repeatedly until "UN-" and "FINAL" will flash.**
- 3 Within 3 seconds, press PLAY on the record deck. Alternatively, press CD REC and then PLAY on the remote control** "UN-FIN" and remaining time will flash. When the unfinalization process is complete, "UN-FIN" will go out, and "CD-RW" will light.

ERASING AN ENTIRE CD-RW DISC

An entire disc erase facility is available for both finalized and unfinalized CD-RW disc.

- 1 Load the CD-RW disc to be erased on the record tray.
- 2 Press **ERASE** on the front panel or remote control repeatedly until **"ALL"** is displayed. **"ALL"** and **"ERASE"** will begin flashing.
- 3 Within 3 seconds, press **PLAY** on the record deck. Alternatively, press **CD REC** and then **PLAY** on the remote control **"ERASE"** will stop flashing and remain lit. After the erasure process, **"00 00:00"** is displayed and **"ERASE"** goes out.

**ERASING INDIVIDUAL TRACKS**

- One or more individual tracks on a CD-RW disc may be erased at a time, starting with the last track on the disc.
- Individual track erase is available only for a non-finalized CD-RW disc. If you want to erase a track in a finalized CD-RW disc, the disc has to be unfinalized first.

- 1 Load the CD-RW disc to be erased on the record tray.
- 2 Press **ERASE** on the front panel or remote control repeatedly until **"01 TRK"** is displayed. **"01 TRK"** and **"ERASE"** will begin flashing.
- 3 Within 3 seconds, press **FORWARD SKIP** or **REVERSE SKIP** on the record deck or remote control until the number of tracks to be erased is displayed. For example, when **"06 TRK"** is displayed a total of six tracks will be erased, counting back from the last track on the disc.
- 4 Within 3 seconds, press **PLAY** on the record deck. Alternatively, press **CD REC** and then **PLAY** on the remote control. After the erasing process, **"ERASE"** will go out and the total number of tracks will be displayed.

**NOTE**

The time it takes to complete the erasing process varies from one disc to another.



BASIC OPERATION

- 1 Turn on the power and load a disc See page 13 for details.
- 2 Press **PLAY** on the front panel for the appropriate deck. Alternatively, press **CD PLAY** or **CD REC** for the desired deck and then **PLAY** on the remote control. ▶ will appear and the track number being played and the running time of the track will be displayed.

WHEN THERE IS A DISC IN EACH DECK

The player will respond in one of two ways depending on whether the dual play setting is activated or not. See page 26 for details.

IN NORMAL MODE (SINGLE PLAY MODE)

When the disc in one deck finishes, the disc in the other deck will begin to play.

IN DUAL MODE

Each deck will operate as a separate, single play CD unit without regard to the status of the other deck.

WHEN "ERROR" IS DISPLAYED

Non-finalized CD-R/RW discs will not play in the play deck. Play the disc in the record deck.

TO STOP PLAYBACK

Press **STOP** on the front panel for the appropriate deck.
Alternatively press **CD PLAY** or **CD REC** for the desired deck and then **STOP** on the remote control.

TO PAUSE PLAYBACK

Press **PAUSE** on the front panel for the appropriate deck.
Alternatively press **CD PLAY** or **CD REC** for the desired deck and then **PAUSE** on the remote control.
Press either **PLAY** or **PAUSE** to resume playback.

TO SKIP THE TRACK

To skip forward to other tracks during playback, pause or stop, press **FORWARD SKIP/SCAN** on the front panel as many times as necessary, or press **CD PLAY** or **CD REC** on the remote control for the desired deck and then press **FORWARD SKIP/SCAN**. To skip backward, use **REVERSE SKIP/SCAN**.

TO SEARCH THE TRACK

To move forward through the disc, press and hold **FORWARD SKIP/SCAN** on the front panel, or press **CD PLAY** or **CD REC** on the remote control for the desired deck and then press and hold **FORWARD SCAN**. To move backward, use **REVERSE SKIP/SCAN** on the front panel or **REVERSE SKIP/SCAN** on the remote control.

PLAYING A SPECIFIC TRACK (DIRECT PLAY)

To go directly to a specific track on a disc, enter the track number using the numbered buttons.
When selecting a two digit track number, the second number must be entered within 3 seconds after the first number pressed.

INTRO SCAN PLAY

The first portion of each track will be played 10 seconds sequentially by pressing **CD PLAY INTRO** or **CD REC INTRO** button. When the **CD PLAY INTRO** or **CD REC INTRO** button is pressed again, the intro mode will be released. While the disc is being played as Intro Scan the Information Display will show track number and elapsed time.

RANDOM PLAYBACK

All of the tracks can be played in random order.

In stop mode or during playback, press **CD PLAY** or **CD REC** for the desired deck, and then press **RANDOM**. "RANDOM" will light.

- When **RANDOM** is pressed in stop mode, random playback will start automatically.
- Each track will be played in a random order until all tracks on the disc have been played.
- During the search, a clockwise circle is displayed to confirm the search.

TO RESUME NORMAL PLAY

Press **RANDOM** again.

REPEAT PLAYBACK

One or all the tracks can be played repeatedly.

REPEAT PLAYBACK

During playback, press **CD PLAY** or **CD REC** for the desired deck, and then press **REPEAT** repeatedly to display "REPEAT 1", "REPEAT ALL" or "REPEAT ALL CD'S".

To repeat the current track only, select "REPEAT 1".

To repeat all the tracks, select "REPEAT ALL".

To repeat all the tracks of both disc, select "REPEAT ALL CD'S".

- If the track is changed by using **FORWARD SKIP/REVERSE SKIP** while the **REPEAT 1** mode is active, the new track will now be repeated.
- In the **REPEAT ALL** mode, the disc will play from beginning to end continually, until **STOP** button is pressed.
- In the **REPEAT ALL CD'S** mode, the discs in both decks will play from beginning to end continually, until **STOP** button is pressed.
- **REPEAT ALL CD'S** is available in single play mode only.

TO RESUME NORMAL PLAY

Press **REPEAT** repeatedly until "REPEAT 1", "REPEAT ALL" or "REPEAT ALL CD'S" goes out on the information display.

A-B REPEAT PLAYBACK

1 During playback, press **CD PLAY** or **CD REC** for the desired deck, and then press **A - B** at the starting point on the portion you want to repeat.

2 Press **A - B** again at the ending point of the portion you want to repeat "REPEAT" and "A - B" will light.

TO RESUME NORMAL PLAY

Press **A - B** again.



"RANDOM" lights



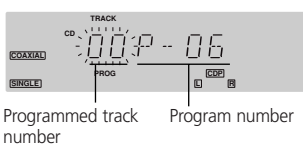
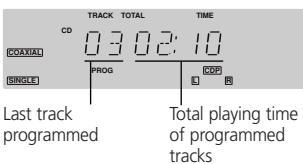
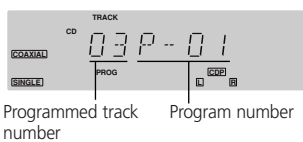
REPEAT 1", "REPEAT ALL" or "REPEAT ALL CD'S" lights



"REPEAT" lights and "A-" flashes



"REPEAT A-B" lights



NOTE

In stop mode, simply open and close the disc tray. Whenever a disc is removed or the unit is turned off, the program is cleared

PROGRAMMED PLAYBACK

- You can program up to 32 tracks and play them in any order.
- You can program tracks only in stop mode.

1 In stop mode, press CD PLAY or CD REC for the desired deck.

2 Press PROGRAM "PROG" will light and "00 P-01" will be displayed.

3 Press the numbered button to program a track When selecting a two digit track number, the second number must be entered within 3 seconds after the first number pressed. As each track is entered, the display will flash three times, alternating between two displays.

4 Repeat step 3 to program other tracks Tracks may also be added using REVERSE SKIP and FORWARD SKIP to locate the track, and the PROGRAM to enter that track to the programmed sequence.

5 Press PLAY to start programmed playback The program will remain in the unit's memory until the disc is removed or the unit is turned off.

TO CHECK THE PROGRAM

To scroll through a program list, press PROGRAM CHECK repeatedly. Each press of the button will move through the tracks that have been programmed.

TO ADD A NEW TRACK.

- 1 Press PROGRAM CHECK repeatedly until "00" will flash.**
- 2 Press a numbered button to add a new track.**

TO DELETE A TRACK IN THE PROGRAM

- 1 Press PROGRAM CHECK repeatedly to select the track you wish to delete.**
- 2 Press PROGRAM CLEAR** The selected track will be deleted and programmed tracks with higher numbers are decreased by one.

TO CHANGE THE PROGRAM

- 1 Press PROGRAM CHECK repeatedly to select the track you wish to change.**
- 2 Press the numbered button.**

TO CLEAR THE PROGRAM

Press PROGRAM while the program is playing "PROG" will go out on the information display.

MP3 DISC PLAYBACK

The MP3 function supports the following discs ; MP3 and MP3/CD mixed discs (MP3 + CDDA) multi-session recorded discs. The MP3 playing function is accessed by the MP3 button on the remote control. MP3 discs automatically convert the playing function to the MP3 On Mode without pressing the MP3 button. Any mixed MP3/CD discs will be read as CDDA. With these CDs, conversion to the MP3 On Mode will occur only after pressing the MP3 button.

MP3 operation is possible in both CDP and CDR. However if one deck is in the MP3 Play Mode, the other deck cannot function in the MP3 Play mode. The MP3 function allows playing options like RANDOM, SKIP, and the use of the number buttons. However, it does not provide the Search function. In this mode only MP3 discs can be played. The disc in the deck in MP3 Play Mode can proceed with the "Dubbing" of CDDA Format to the recording deck at 1x speed. The MP3 function can only support "External Analog Out". It does not support "External Digital Out."

Press the MP3 button on the remote control to select MP3 or CD format as required.

HDCD DISC PLAYBACK**HDCD IS?**

HDCD, which stands for High Definition Compatible Digital®, is a sophisticated process that enables the unit to deliver outstanding digital-to-analog decoding, no matter what type of CD is played.

When a disc with the HDCD logo is played, this unit is able to take advantage of the special recording process that is used in the creation of HDCD discs. Although HDCD discs are playable on any CD player, when they are used in a unit such as this unit, the special circuitry delivers audio with extraordinary fidelity, stunning resolution and the highest possible overall quality. The HDCD process effectively cancels the additive and subtractive distortions that are present in other recordings.

No special adjustment is required to play a HDCD disc. Simply play the disc as you would any other CD, and this unit will automatically sense that it is a HDCD recording. If the special circuitry (Processor) is not used by another deck to decode a MP3 CD or even another HDCD disc, the HDCD indicator will light in the Information Display on the front panel to remind you that a HDCD disc is playing.

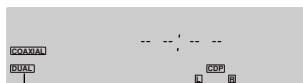
It is important to note that the HDCD process is completely compatible with standard recordings. Its high-quality digital-to-analog circuitry provides enhanced play-back from all standard CD audio discs.

CD-TEXT DISC PLAYBACK

- CD-Text will only be operated through Remote Control.
- Press TEXT button of the appointed deck in stop mode, then the title of inputted Text CD will be scrolled once in 13 digits. Then it will scroll Disc Artist in 13 digits once and then return to initial mode.
- Press TEXT button in playing mode, then it will scroll once the title of playing track and then scroll the track artist in 13 digits. Then it will return to its play mode.
- Press TEXT button after selecting Track No. from numeric keys in stop mode, then it will scroll the title and artist of that particular track and return to its previous mode.

NOTE

If the disc in the deck is not a CD-Text disc, pressing the TEXT button will have no effect. Only English and numbers can appear in the display. No other language is supported. The display shows only upper-case letters. Invalid letters will be displayed as blank in the text.



"DUAL" lights

DUAL PLAY MODE

- You may play a different disc in both decks at the same time.
- The output of each deck will be sent to the appropriate output jacks.
- You may use the output of one deck to feed your main room system while the second deck is used to feed a remote room.

1 To select dual mode, press DUAL on the remote control "DUAL" will light.

2 Select the deck you wish to listen by using the input selectors on your receiver, preamp or processor

TO RETURN TO SINGLE PLAY MODE

Press SINGLE on the remote control.

NOTE

Pressing SINGLE on the remote control while both decks are playing, will automatically stop playback of the disc in the record deck while the disc in the play deck continues to play.

CHANGING THE TIME DISPLAY MODE

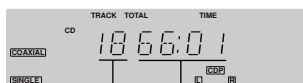
Various information about the contents of a CD can be displayed on the information display.

IN STOP MODE

The total number of tracks and the total time of all tracks will be displayed.

DURING PLAYBACK

Press appropriate DISPLAY on the front panel or press CD PLAY DISPLAY or CD REC DISPLAY on the remote control for the desired deck repeatedly to change the time display as follows:



Total number of tracks Total time of all tracks.



Track number being played Elapsed time of the current track



Track number being played Remaining time of the current track



Track number being played Total remaining time on disc



SYMPTOM	POSSIBLE CAUSE	SOLUTION
The unit does not operate when POWER on the front panel is pressed	No AC power	Make sure AC power is fully inserted into an AC outlet
Remote control does not function	Wrong deck selected	Press CD PLAY to control the play deck; press CD REC to control the record deck
	Sensor blocked	Remove obstructions from front panel
	Dead batteries	Replace both batteries
Disc cannot be erased	CD-R disc is in use	CD-R discs are not erasable. Use CD-RW discs
Recorded CD-R/RW disc does not play in another CD player or "ERROR" appears in play deck display	CD-R/RW disc not finalized	Finalize the CD-R/RW disc in the unit's record deck. (see page 20)
Recording suddenly stops	Input source stopped or paused	Recordings will always stop when the input source is paused for more than 3 seconds for digital recordings and 10 seconds for analog recordings

ALERT MESSAGES

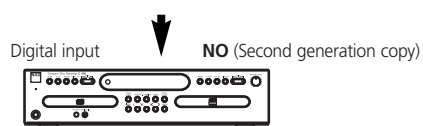
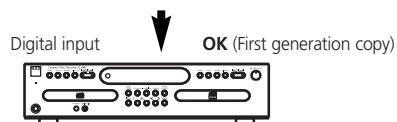
ERROR MESSAGE	EXPLANATION	SOLUTION
CHECK DISC	A record-related button has been pressed when a finalized disc is in the record deck	Unfinalize the disc to add tracks to a CD-RW disc
	A record-related button has been pressed when a standard CD is in the record deck	Replace the disc with a blank CD-R/RW disc
DATA DISC	A non-audio CD-ROM or a Video CD disc has been placed in the unit	Only audio CD discs will play in the unit; replace the disc
ERROR	A non-finalized disc has been placed in the play deck	Finalize the disc
	A DVD disc has been placed in the unit This unit does not play or dub DVD discs	Replace the disc
DISC FULL	There is not enough time left on the disc to complete a planned recording	Use another blank CD-R/ RW disc. Erase one or more tracks on a CD-RW disc
ERROR	The disc is not loaded properly	Open the tray and check to see that the disc is properly loaded
	There is a problem with the disc	Try another disc
FAILED	A dubbing has not been completed properly	Check the play disc Repeat the dubbing process
FULL	Trying to program 33rd track	Up to 32 tracks can be programmed in this unit
NO AUDIO	A record-related button has been pressed when a non-audio disc is in the record tray	Replace the disc with a blank CD-R/RW Audio disc



The Serial Copy Management System (SCMS) is implemented in this unit to protect the rights of copyright holders. SCMS allows you to make a “first-generation” digital copy—a digital copy of the original source—, but not a copy of this copy. The SCMS copy restriction does not apply to analog recordings.

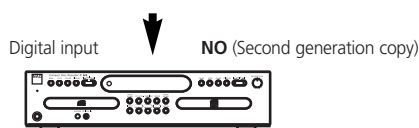
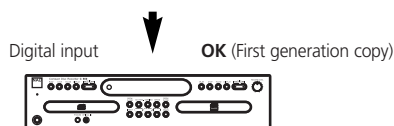
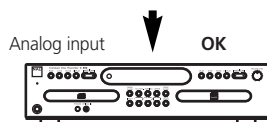
Recording from digital sources with copy prohibition code.

Copyrighted CDs or copyright protected digital sources.



Copying a disc recorded from analog sources.

Any analog source.



SPECIFICATION

Discs supported	CD/CD-R/CD-RW for digital audio
Frequency response	2 Hz to 20 kHz
Playback signal-to-noise ratio	100 dB
Playback total harmonic distortion	0.005% / -88 dB
Digital input sampling frequency range	32 to 96 kHz (sampling rate conversion)
Digital input format	IEC60958
Recording format	16 bits, 44.1 kHz
Analog in	RCA
Analog out	RCA
Digital in	Optical, Coaxial
Digital out	Optical, Coaxial
Power supply	100-240 V AC, 50/60 Hz
Power consumption	28 W
Dimensions (W x H x D)	435 x 110 x 339 mm (17.3 x 4.4 x 13.5 in.)
Weight	4.8 kg (10.6 lbs)

HD/CD system manufactured under license from Pacific Microsonics Inc. This product is covered by one or more of the following patents: In the USA; 5,479,168; 5,638,074; 5,640,161; 5,808,574; 5,838,274; 5,854,600; 5,864,311; 5,872,531; and in Australia; 669114. Other patents pending.

NOTE

Specifications and external appearance are subject to change without notice.



COPYRIGHT

Please check the laws on copyright relating to recordings from discs, radio or external tapes for the country in which the unit is being used.



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