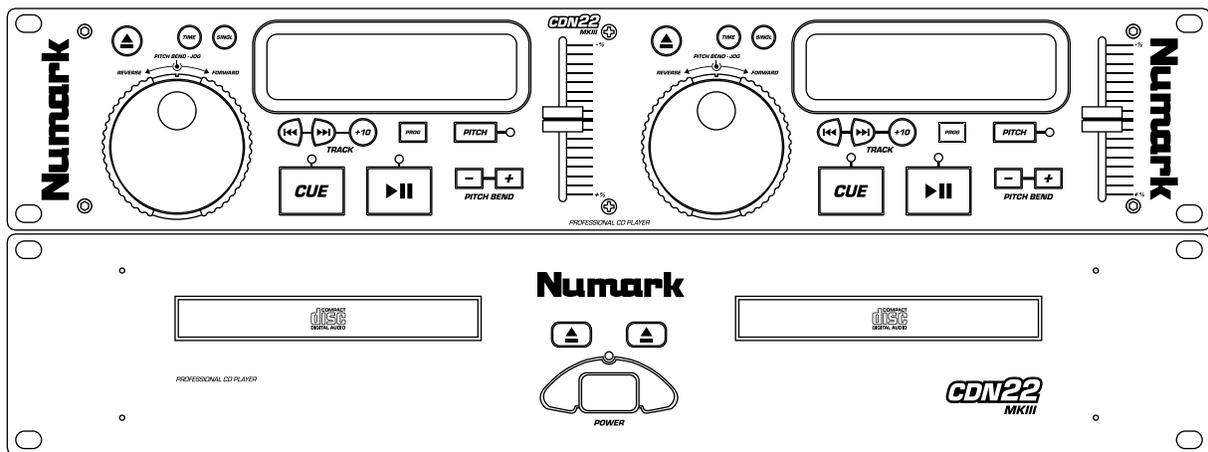


Numark®

Professional Disc Jockey Products

CDN-22MK III PROFESSIONAL DUAL CD PLAYER

OPERATING MANUAL



Safety Information and Product Registration



CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT REMOVE ANY COVER. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL ONLY.

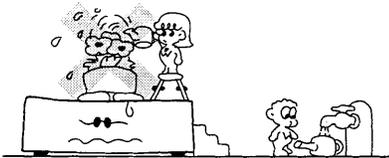
The lightning flash with arrowhead symbol within the equilateral triangle is intended to alert the user to the presence of un-insulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock.

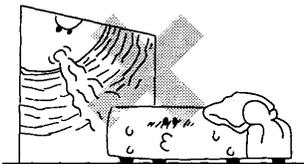
The exclamation point within the equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying this appliance.

CAUTION

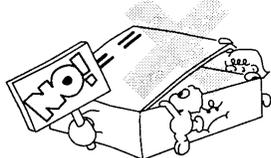
FOR USA & CANADIAN MODELS ONLY
TO PREVENT ELECTRIC SHOCK DO NOT USE THIS (POLARIZED) PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

SAFETY INSTRUCTIONS

1. Read Instructions - All the safety and operating instructions should be read before this product is connected and used.
2. Retain Instructions - The safety and operating instructions should be kept for future reference.
3. Heed Warnings - All warnings on this product and in these operating instructions should be followed.
4. Follow Instructions - All operating and other instructions should be followed.
5. Water and Moisture - This product should be kept away from direct contact with liquids.
 
6. Heat - Avoid placing this product too close to any high heat sources such as radiators.

7. Ventilation - The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation opening; or, placed in a built-installation, such as bookcase or cabinet that may impede the flow of air through the ventilation openings.
 

8. Power Sources - This product should be connected to a power supply only of the type described in these operating instructions, or as marked on the unit.
9. Power Cord Protection - Power supply cords should be routed so that they are not likely to be walked upon or pinched by items placed on or against them. When removing the cord from a power outlet be sure to remove it by holding the plug attachment and not by pulling on the cord.
 

10. Object and Liquid Entry - Take care that objects do not fall into and that liquids are not spilled into the inside of the mixer.
11. Cleaning - The appliance should be cleaned only as recommended by the manufacturer.
12. Non-use Periods - The power cord of the appliance should be unplugged from the outlet when left unused for long periods of time.
13. Damage Requiring Service - Only qualified personnel should service this product. If you have any questions about service please contact Numark at the number(s) shown on the back cover of this manual.
 

14. Grounding or Polarization - Precautions should be taken so that the grounding or polarization means built into the CD player is not defeated.
15. Internal/External Voltage Selectors - Internal or external voltage selector switches, if any, should only be reset and re-equipped with a proper plug for alternative voltage by a qualified service technician. Do not attempt to alter this yourself.

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WARNING: To reduce the risk of fire or electrical shock, do not expose this appliance to rain or moisture. Electrical equipment should NEVER be kept or stored in damp environments.

DANGER: INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCK FAILED OR DEFEATED. AVOID DIRECT EXPOSURE TO BEAM.

CAUTION: This product utilizes a laser. Use of controls or adjustments other than those specified herein may result in hazardous radiation exposure.

NOTICE CONCERNING FCC REGULATIONS

This equipment generates and uses radio frequency energy and may cause interference to radio and television reception if you do not operate it in strict accordance with the procedures detailed in this OPERATING MANUAL.

This unit complies with Class B computing device rules in accordance with the specifications in Sub-part J or Part 15 of the FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. There is no guarantee, however, that interference will not occur in a particular installation. If the unit does cause interference to any radio or television reception, try to reduce it by one or more of the following means:

- a) Reposition the other unit and/or its antennae
- b) Move this unit
- c) Move this unit and the other unit(s) further apart
- d) Plug this unit into a different AC outlet so that it is on a different circuit from the other equipment.

This note is in accordance with Section 15.838 of the FCC Rules.

This unit does not exceed the Class B limits for radio noise emission from digital apparatus set out in the radio interference regulations of the Canadian Department of Communications.

SERVICE INSTRUCTIONS

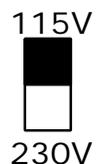
- Disconnect power cord before servicing
- Replace critical components  only with factory parts or recommended equivalents
- For AC line powered units - Before returning repaired unit to user, use an ohmmeter to measure from both AC plug blades to all exposed metallic parts. The resistance should be no more than 100,000ohms.

DOUBLE INSULATED - When servicing use only identical replacement parts

For 220-volt use in USA, use NEMA style 220-volt plug. For other countries use proper plug for local outlet.

LINE VOLTAGE SELECTION

- 1) The desired voltage may be set with the VOLTAGE SELECTOR switch on the rear panel of the main unit, using a screw driver.
- 2) Do not twist the VOLTAGE SELECTOR switch with excessive force as this may cause damage.
- 3) If the VOLTAGE SELECTOR switch does not move smoothly contact a qualified serviceman.



Please record the serial number of your unit as shown on the back of the chassis as well as the name of the dealer from whom you purchased the unit. Retain this information and your original purchase receipt for your records. Please return the enclosed warranty card to register your CD player with us.

MODEL: _____ PURCHASED FROM: _____
 SERIAL NUMBER: _____ DATE OF PURCHASE: _____

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Numark® CDN-22MK III

PROFESSIONAL DUAL-TRANSPORT CD PLAYER WITH REMOTE CONTROLLER

CONGRATULATIONS...

You have just purchased a dual CD player designed specifically for the professional DJ. This unit has been designed to provide CD mixing with the same ease and creativity that you have enjoyed with records. Please take a few moments to familiarize yourself with the CDN-22 by reading the following information before attempting to operate the unit.

Once again, congratulations and thank you for making the CDN-22 your choice in professional CD players.

FEATURES:

- Interactive pitch wheel adjustment
- Fader/relay start
- Digital Output
- 3 speed scanning
- Frame search
- Auto cue
- +10 tracks skip search
- 30 tracks program play
- Pitch display
- 8 times oversampling
- 8cm single CD compatible

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TABLE OF CONTENTS

Safety and Registration	2
Introduction	4
Set-up Instructions & Connections	7
Description of the Features	
Remote Control Unit	8
Display	9
Transport	9
Basic Operation	
Play, Pause and Cue Operations	10
Matching the Tempo	11
Beat Matching Using Pitch Bend	11
Relay and Fader Start	12
Example of Mixing	13
Before Switching off the Power	14
Troubleshooting Guide	14
Information and Specifications	15

CHECK TO BE SURE

THE FOLLOWING ITEMS ARE IN THIS BOX:

- 1) DUAL-TRANSPORT PLAYER UNIT
- 1) REMOTE CONTROL UNIT
- 1) OWNERS MANUAL (THIS BOOKLET)
- 2) RCA CONNECTING CABLES
- 2) CONTROL CABLES
- 1) FADER START CABLE

CONNECTIONS

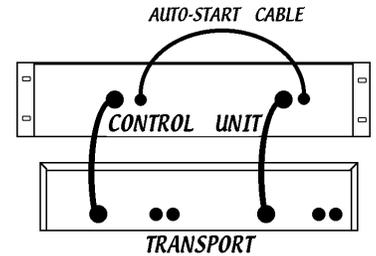
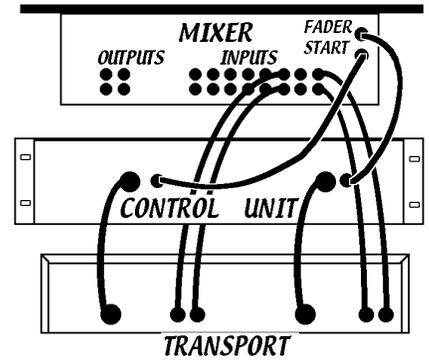
Typical connection with a mixer is illustrated right.

- a). Connect the output connection cords from the CD Player to the line inputs of your mixer.
- b). Connect the remote control connection cable from the Unit 1 connector on the main unit to the Unit 1 connector on the remote control unit. Repeat for Unit 2.
- c). The output connection cords and the remote control connection cables are supplied with the main unit. Be sure to use the remote control connection cables which have been supplied. Use of another cable type might cause damage.



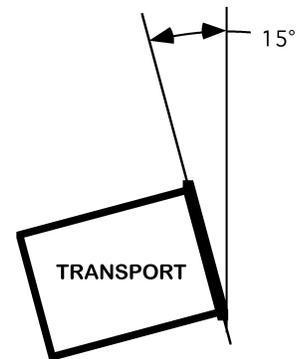
- d). Connect Relay or Fader start cables

- For fader start attach both side of your CD play to a similarly equipped DJ mixer, as in the top drawing.
- For relay capability take the auto start cable and connect the two jacks in the rear of your CD player.

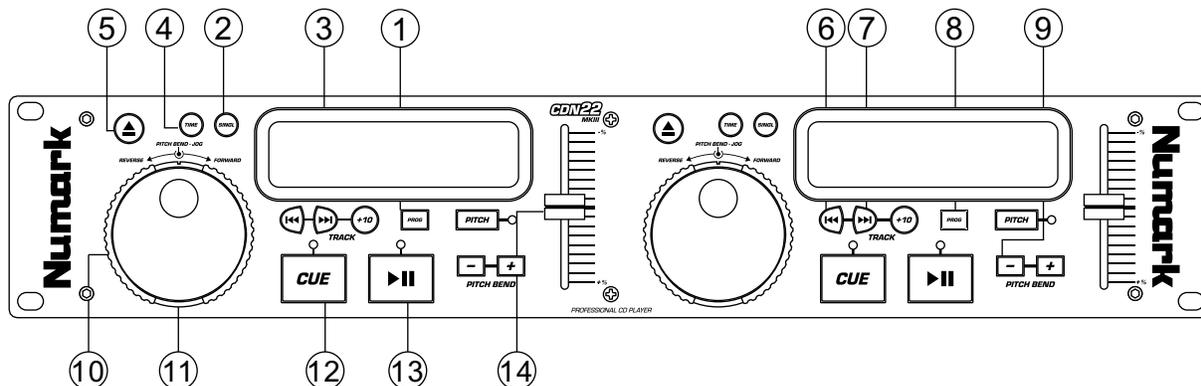


MOUNTING YOUR CD PLAYER

- e) Mount the units in your console or rack with 19" EIA rails.
- f) The transport should be mounted not to exceed an angle of 15 degrees.
- g) Your CD player can be affected by excess vibration so mount the units in a secure environment if possible.



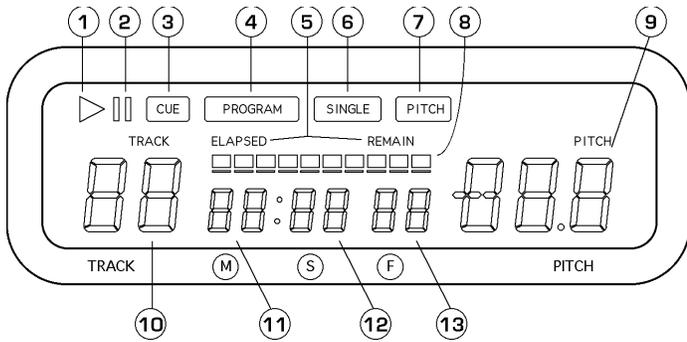
DESCRIPTION CDN-22S REMOTE FEATURES



1. **PROGRAM** - Depress this button and the unit will stop and the program indicator will light. Select each track to be programmed and press the PROGRAM button between selections. You can program up to 30 tracks. Press PLAY to start the program. To exit and erase program hold the program button down for more than 2 seconds while the unit is stopped, open the disc tray, or turn off the power.
2. **CONT/SING** - Will cause just a single track to play or all tracks in order by pressing once or twice.
3. **LCD DISPLAY** - Indicates all the functions, as they are occurring, with the CD. These functions are explained in the next section.
4. **TIME (Time Button)** - The TIME button switches the time display between elapsed playing time and remaining time on the track. Holding for more than one second activates auto-start functions.
5. **OPEN/CLOSE (Disc Tray Open/Close)** - Press to load or eject the disc. Each press will open or close the disc tray on the transport. NOTE: Tray will not open unless the disc has been paused.
6. **TRACK (Track Buttons)** - These buttons are used to select the track to be played.
7. **Track 10 Button** - This button is for quickly advancing to higher tracks on a CD.
8. **PITCH (Pitch Button)** - This button activates the Pitch Slider (14).
9. **PITCH BEND (Pitch Bend Button)** - When each of the two CD players is playing a CD, the pitch bend function allows the positioning of the bass beats to be matched after the pitch of each disc is matched. Either player can "catch up" or "fall back" to match the other player. The pitch will automatically rise while the + button is pressed (allowing "catch up") and return to the original pitch when the button is released. The pitch will automatically drop while the button is pressed (allowing "fall back") and return to the original pitch when the button is released. By changing the pitch of one disc with respect to the other in this way the beats can be matched.
10. **SEARCH WHEEL (OUTER RING)** - This wheel has 3 forward and 3 reverse speed positions for searching through songs. The more you turn the wheel in either direction the faster you search through the music.
11. **JOG WHEEL (INNER RING)** - This jog wheel serves 2 functions depending on the current mode.
 - a) The jog wheel will act as a slow frame search control when the CD is not playing but either paused or set to a cue point. To set a new frame cue point, spin the wheel then press play when you have determined the proper position. Press CUE to return to the "CUE POINT".
 - b) The jog wheel will temporarily bend the pitch of the music if the song is already playing by rotating the wheel clockwise to speed up or counterclockwise to slow down.
12. **CUE** - Pressing the CUE button during play provides a return to the position at which play was started. If PAUSE is used before CUE, that will become the cue point. Alternately pressing the PLAY button and the CUE button allows the CD to be played from the same position any number of times. The CUE LED will light up from the time the CUE button is pressed until the CD has reset to the position at which play was started. Steady lighting of this LED indicates the ready condition.
13. **START/PAUSE (Play/Pause Button)** - Each press of the Play/Pause Button causes the operation to change from play to pause or from pause to play.
14. **PITCH SLIDER** - The pitch can be changed up to +/- 12% by pressing the PITCH button so the PITCH LED is lit, then moving the sliding fader. The pitch will not be changed if the PITCH LED is off.

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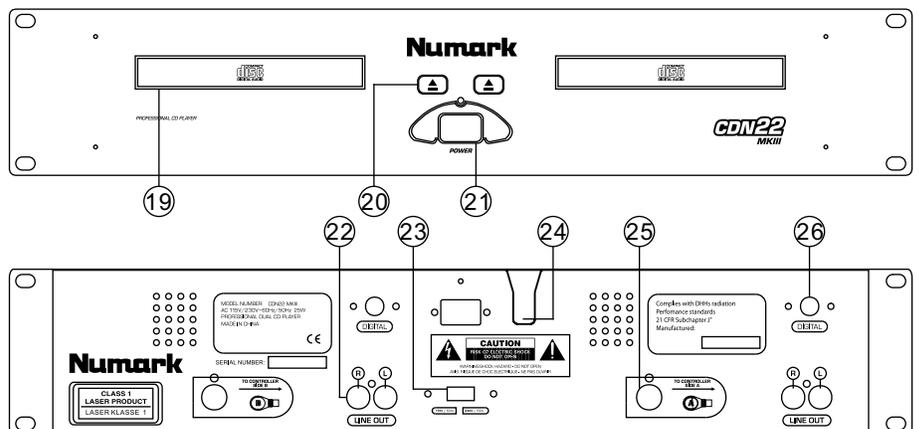
LCD DISPLAY FEATURES



- PLAY** - Active while the unit is actually playing a CD.
- PAUSE** - Active when the unit is paused.
- CUE** - Flashing when the unit is setting a cue point. Lit continuously when the unit is paused at a cue point.
- PROGRAM** - Used for preprogramming the track order to automatically be played by the unit. This is a great function if you need to leave the CD player alone.
- TIME MODE** -
(Elapsed) is for showing time as it is taking place.
(Remain) shows how much time is left on a particular track. This function is controlled by the TIME BUTTON (4).
- SINGLE** - Shows when the unit is set to play just one track at a time. When this is not lit the CD will play continuously through all tracks. This function is controlled by the SING/CONT BUTTON (2).
- PITCH** - Is lit when the PITCH BUTTON is active.
- TIME BAR** - Shows either time remaining or elapsed depending on the setting of the TIME BUTTON (4).
- PITCH** - Shows the percentage change in pitch.
- TRACK** - Shows the track that the unit is playing with.
- MINUTES** - Shows the minutes elapsed or remaining depending on mode setting.
- SECONDS** - Shows the seconds elapsed or remaining depending on mode setting.
- FRAMES** - The CD Player breaks down a second into 75 frames for accurate cueing. This shows the frames elapsed or remaining depending on mode setting.

TRANSPORT FEATURES

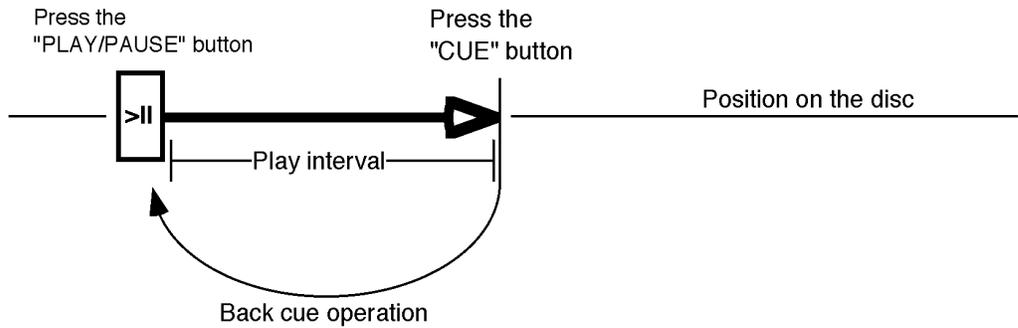
- DISC TRAY** - Place your CD in here.
- OPEN/CLOSE (Disc Tray Open/Close)** - Press to load or eject the disc. Each press will open or close the disc tray on the transport. NOTE: Tray will not open unless the disc has been paused.
- POWER BUTTON** - Turn on and turn off the machine from this button. The unit should always be shut down with this button first before any external power is removed.
- RCA AUDIO JACKS** - Connect your CD player to your mixer from this line level output.
- VOLTAGE SELECTOR** - Set this switch to the voltage for your location.
- POWER CONNECTOR** - Plug your power supplied power cord into here then plug unit into a power outlet
- CONTROL CONNECTOR** - Plug your control cables for each unit into here and the back of the remote unit.
- DIGITAL OUTPUTS** - The format is type 2, form 1, also known as S/PDIF (Sony/Phillips Digital Interface Format).



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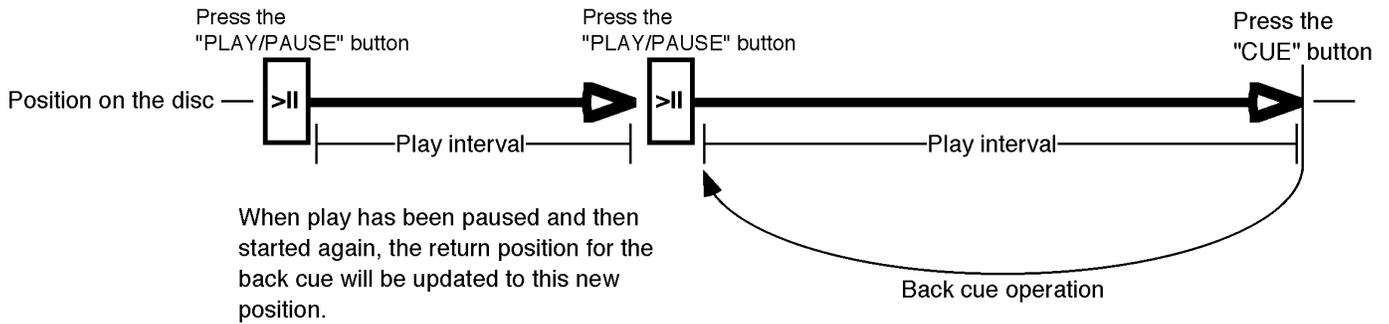
DESCRIPTION OF THE PLAY/PAUSE AND CUE OPERATIONS

PLAY and CUE



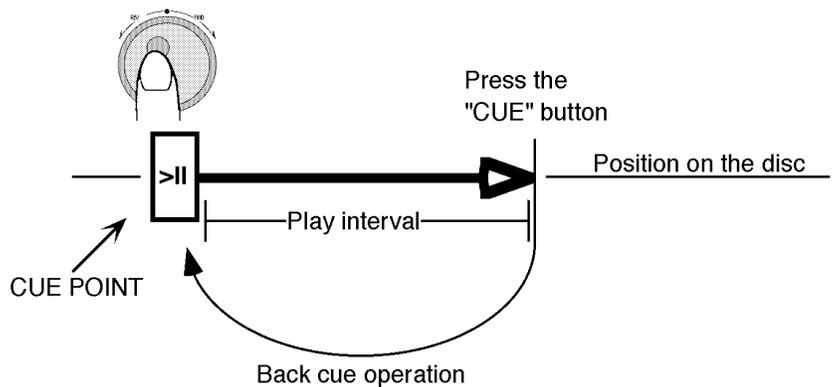
Pressing the “PLAY/PAUSE” button starts the disc. Pressing the “CUE” button will reset the disc to the last place where the disc was started. This is called the cue point. By alternately pressing the “PLAY/PAUSE” button and the “CUE” button, the disc may be returned and played from the cue point any number of times. This function is called back cue.

PLAY, PAUSE and CUE



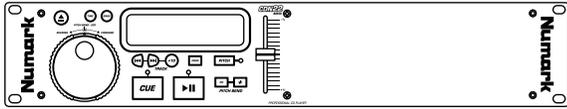
EDITING CUE POINT

When the inner search dial is turned while a cue point is set, a new cue point can be located. The CD player will repeatedly play small parts of the CD as you move it to the desired position. By pressing “PLAY/PAUSE” then “CUE” you can confirm that this new cue point is desirable

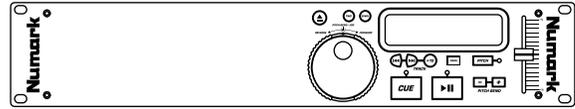


MATCHING THE BEATS PER MINUTE (BPM)

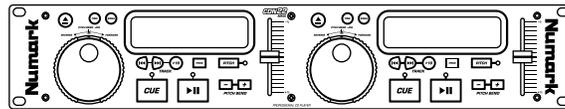
Match the tempo by monitoring the music of both PLAYER 1 and PLAYER 2 by ear and adjusting the pitch. When the tempo of the music of the selected CD player is slow compared to the tempo of the other player, move the slider to the (+) side and match the tempo. When faster, move the pitch slider to the (-) side. The following description is for the case of matching the pitch of PLAYER 2 to the pitch of the music being played on PLAYER 1.



Press PLAY/PAUSE to start PLAYER 1
PLAYER 1 is playing

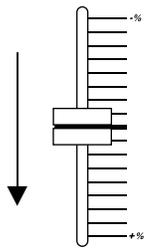


Press PLAY/PAUSE to start PLAYER 2
Both CD players are playing discs.

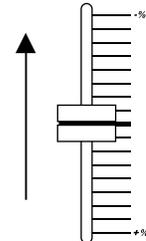


Listen to PLAYER 2 in your headphones

When PLAYER 2 is slow compared to PLAYER 1 speed up PLAYER 2



When PLAYER 2 is fast compared to PLAYER 1 slow down PLAYER 2



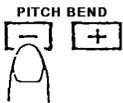
BEAT MATCHING USING PITCH BEND

If you find the BPM's (Beats Per Minute or Tempos) are the same, however, the drum beats are not matched you will need to temporarily change the pitch. This description is for the case of matching the beat of PLAYER 2 to the beat of the music being played on PLAYER 1. (This procedure can be done on either PLAYER).

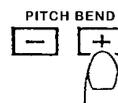
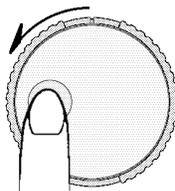
After matching the BPM's adjust the pitch temporarily as follows:

When PLAYER 2 is ahead press the  or rotate the jog wheel counter clockwise

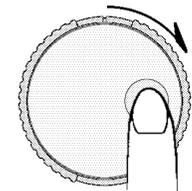
When PLAYER 2 is behind press the  or rotate the jog wheel clockwise



or



or



The pitch changes automatically while the  or  button is being pressed or the jog wheel is rotated. The faster you rotate the wheel the more you change. Releasing the button or wheel results in a return to the original pitch. (So the BPM's are once again the same.)

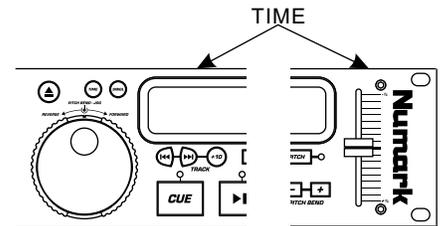
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RELAY PLAY

The cables required are commercially available 3.5mm (1/8") mini-plug cables. One has already been included with your unit so the relay function could be used.

1. Connect auto start cable between both sides of the remote unit.
2. Insert CDs into both sides of the unit.

3. Hold down the time buttons for 1-2 seconds until the display indicates "auto" and the track number begins to flash. The track number will flash while the mode is active. Both sides must be active for relay to work.



4. Put both sides in SINGLE play mode while learning this function.
5. Press play on CD1 of the unit. When that CD1 has finished play it will send a signal to CD2 to start play. You will see CD2 start play and CD1 pause and cue to the beginning of the next track. When CD2 has completed play CD1 will start.

Note: The play command is sent at the end of specified play. If the unit is in SINGLE mode the play command will start at the end of the track. If the unit is in CONTINUOUS mode the play command will be sent at the end of the full CD. Two CDs will play continuously, alternating from side to side. This feature will also work in program mode, however, if the sides are also in SINGLE mode the same number of tracks programmed should be the same. Play will stop at the end of the last track.

FADER-START MODE

This mode is achievable by attaching both sides of your CD player to a similarly equipped DJ mixer.

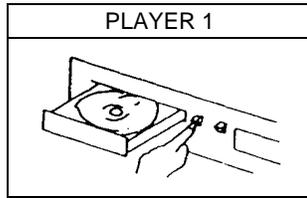
1. Connect cables between the CD remote unit and your DJ mixer.
2. Hold down the time button for 1-2 seconds to activate the fader start capability.
3. Follow the directions in your mixer manual

Typically if you move the crossfader toward the active channel, the attached CD player will activate. When it is moved away that side will cue, (similar to pressing the cue button).

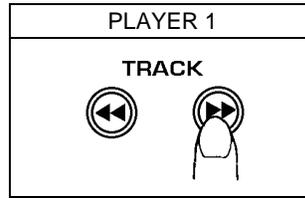
EXAMPLE OF MIXING USING BOTH PLAYERS OF YOUR CD PLAYER

While playing a disc on PLAYER 1 load a disc into PLAYER 2 and select your next track, match its pitch to the track playing on PLAYER1 and when you are ready use the crossfader on your mixer to fade from PLAYER 1 to PLAYER 2.

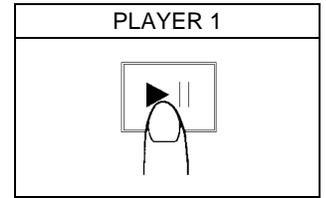
Load a disc in PLAYER 1 and select the track and press PLAY.



Load a disc and press the OPEN/CLOSE button.

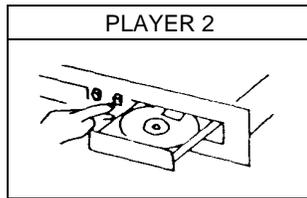


Select the track to be played.

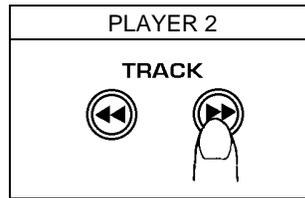


Press the PLAY button

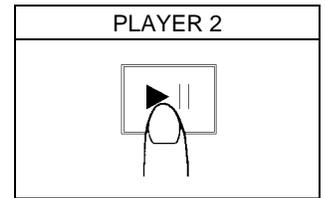
Load a disc in PLAYER 2 and select the track then play.



Load a disc and press the OPEN/CLOSE button.

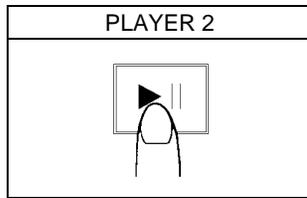


Select the track to be played.

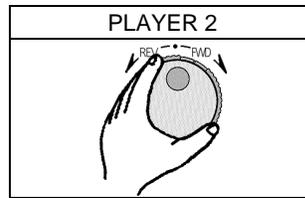


Press the PLAY button

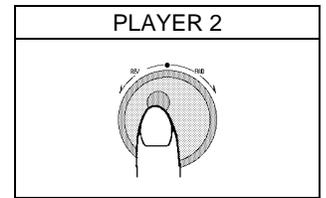
Set and edit a start cue point on PLAYER 2



Press the Pause button of PLAYER 2.

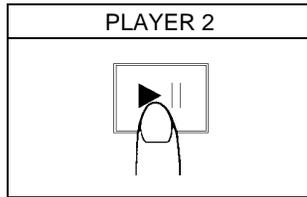


Rapidly search for a cue point using the outer wheel

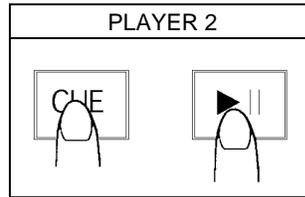


Slowly set the right point using the inner wheel

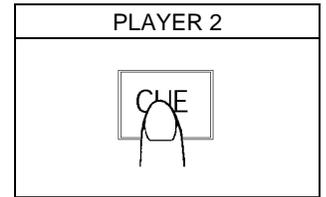
Check you new cue point



Listen with the monitor and press the play button.

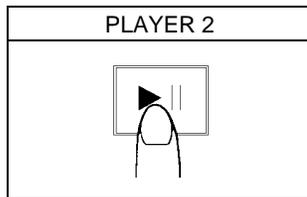


Press the cue button then play to be sure of the set cue point.

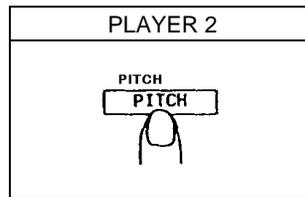


Set the player to the Cue point by pressing Cue

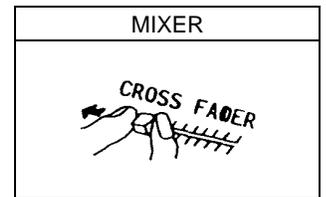
Do a MIX!



With a matching downbeat from Player 1 press the play button.



If you are beat mixing turn on your Pitch adjust and follow the directions for beat matching.

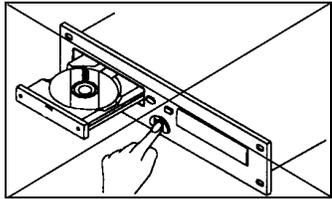


When you are happy with you mix adjust you mixer accordingly.

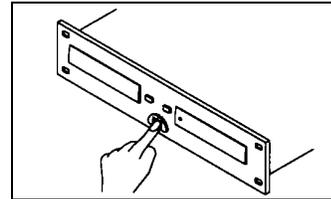
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BEFORE SWITCHING OFF THE POWER:

When you have finished using the CD player, be sure that the disc tray is closed with the “OPEN/CLOSE” button before switching off the power .



DO NOT switch off the power when the disc holder is open.



Switch off the power **after** the disc holder has been closed with the “OPEN/CLOSE” button

TROUBLESHOOTING:

Symptom	Possible Cause	Corrective Action
The power fails to switch on when the POWER switch is set to on	Poor power plug connection at the AC outlet	Insert the power plug firmly into the AC outlet and make sure connection is good in unit rear
Disc play does not start	The disc is loaded upside down The disc is too dirty	Reload the disc with the label side up Clean the disc
No sound	Improper output cable connections Improper amplifier operation	Connect the output cables correctly Check amplifier setup
Sound skips	The CD player is subject to vibrations or physical shock The disc is too dirty	Change the installation location Clean the disc
Programmed disc play will not function	The CD player is in normal disk play mode	Hold down the Program button for 3 seconds then program the tracks
Hum	Loose cable connections	Firmly connect all audio plugs

SPECIFICATIONS

TECHNICAL

Quantization	16-bit linear/channel, 3 beam laser
Oversampling rate	8 times
Frequency response	20Hz-20KHz
Channel separation	86dB
T.H.D. + NOISE	0.01%
S/N ratio (IHF-A)	94dB
Output level	2.0Vrms
Short access time	
(Play next track)	less than 1.7sec
Long access time	
(Track 1 ->Track 20)	less than 3sec
Start Time	less than 0.3 sec
Pitch control range	+/-12%
Pitch bend	+/-16%
Digital Output	type 2, form 1, S/PDIF (Sony/Phillips Digital Interface Format)

GENERAL

Dimensions:	Main Unit:	482 (W) x 88.8 (H) x 264 (D) mm (without feet) 19 (W) x 3.5 (H) x 10 3/8 (D) inches (without feet)
	Control Unit:	482 (W) x 88.8 (H) x 75 (D) mm (without feet) 19 (W) x 3 1/2 (H) x 2 7/8 (D) inches (without feet)
Weight:	Player Unit:	5 Kgs., 11 lbs.
	Control Unit:	2 Kgs., 4.4 lbs.
Power Supply:		115/230V AC, 50/60Hz
Power Consumption:		25W

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