# Numark

CDN88
PRO

Numark

GROUND RULES

1. Make sure all items listed in the BOX CONTENTS section are included in the box.
2. **READ SAFETY & WARRANTY INFORMATION BOOKLET BEFORE USING THE PRODUCT.**
3. Study the connection diagram in this guide.
4. Place CDN88 PRO and mixer in an appropriate position for operation.
5. Make sure all devices are turned off and all faders and gain knobs are set to "zero."
6. Connect all stereo input sources as indicated in the diagram.
7. Connect the stereo outputs to power amplifier(s), tape decks, and/or other audio sources.
8. Plug all devices into AC power.
9. Switch everything on in the following order:
   - CDN88 PRO and other audio input sources (i.e. turntables, CD players, etc.)
   - Mixer
   - Last, any amplifiers or output devices
10. When turning off, always reverse this operation by:
   - Turning off amplifiers
   - Mixer
   - Last, CDN88 PRO and other audio input sources

CONNECTION DIAGRAM

A typical connection with a mixer is illustrated below.

1. Mount the units in your console or rack with 19" EIA rails.
2. The transport should be mounted not to exceed an angle of 15 degrees (Fig. A).
3. Your CD player can be affected by excess vibration so mount the units in a secure environment if possible.
4. Connect the supplied Control Cables (Fig. B) between the CD Remote and CD Transport unit.
5. Connect the line output connections using the supplied audio cables (Fig. C) from the CD Player to the line inputs of your mixer.
6. You may use fader start cables (Fig. D, optional) to connect your CD player to a similarly equipped DJ mixer. *(This connection can also be used with a remote switch.)*
7. Connect the IEC power cord to an appropriate power source. In the US and Canada, be sure to use a polarized power cord and outlets.


Fig. A, *Fig. B* CONTROL CABLE, *Fig. C* AUDIO CABLE, *Fig. D* FADER START

3

Numark
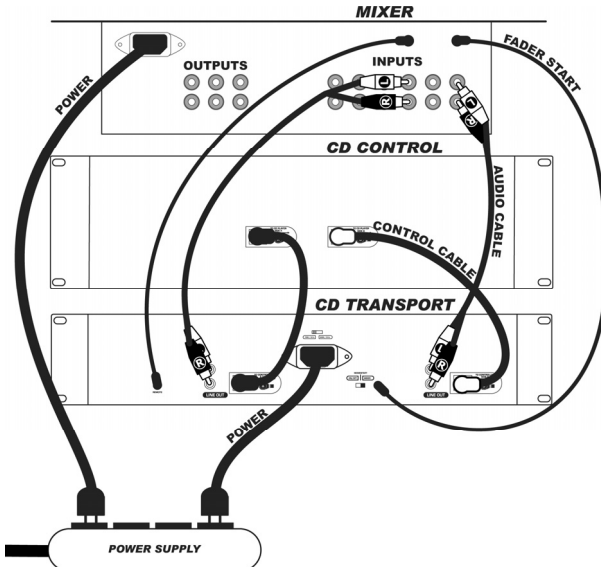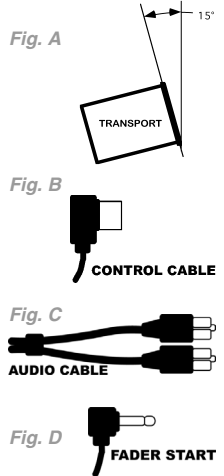
FRONT PANEL FEATURES
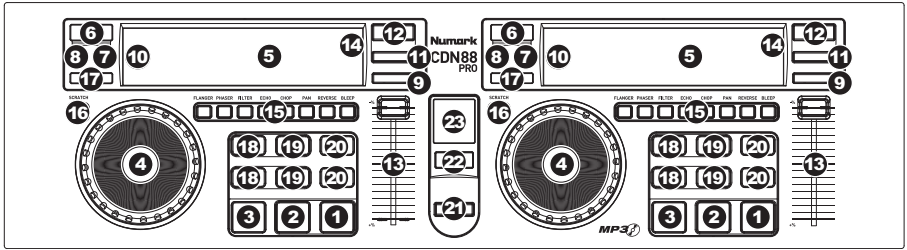
1. **PLAY –** Starts the music from the initial cue point.

2. **PAUSE –** Pauses the music.

3. **CUE –** Moves the music to the cue point and previews the selection.

4. **JOG WHEEL –** Used for various functions such as cueing, scratching, pitch bend, searching, and effect control.

5. **LCD –** Indicates all the functions, as they are occurring, with the CD.

6. **EJECT –** Press this button to eject the CD.

7. **SNGL –** Sets play mode in single or continuous play.

8. **TIME –** Switches the time display between elapsed playing time and remaining time on the track and remaining time on the entire audio CD.

9. **PROGRAM –** Use this button to set a program – a specific sequence of tracks to be played without interruption. To set a program, press this button and "P – 1" will appear on the LCD, indicating that you can select the first track of your program. Select the first track you want in your program by turning the TRACK KNOB and press PROGRAM to enter it. "P – 2" will appear on the LCD, indicating you can select the second track of your program. Repeat this process to add more tracks to the program. (You can program up to 99 tracks.) Press PLAY to start the program. To erase the program, hold the PROGRAM button down for more than 2 seconds. Holding down the PROGRAM button allows you to access secondary button features (see the Reference Manual for more information).

10. **TRACK –** The TRACK knob functions differently depending on the kind of CD that is loaded:

    - When playing an audio CD, turn the TRACK knob to browse through the tracks, and push the knob to play the selected track. (Pressing while rotating this knob will skip to every tenth track.)

    - When playing an MP3 CD, push the TRACK knob to enter Folder Mode. In Folder Mode, turn the TRACK KNOB to browse through your available folders, and push the knob to enter the selected folder. You are now in File Mode. When in File Mode, turn the TRACK KNOB to browse through the files, and push the knob to play the selected file. To return to Folder Mode, do not adjust any controls for 5 seconds; the LCD will return automatically to the initial playback window where you can press TRACK to re-enter Folder Mode. (Pressing while rotating this knob will skip to every tenth track or folder.)

11. **PITCH RANGE –** Activates and sets PITCH SLIDER range. Press it to toggle through the PITCH SLIDER settings – 6%, 12%, 25%, 100% or "off." Hold PITCH RANGE down for 2 seconds to activate/deactivate Key Lock. While Key Lock is enabled, adjusting the pitch of the music playing on the deck will only influence its tempo independent of its musical pitch.

12. **– /+ –** Press and hold either of these buttons to bend the pitch of the track. If you hold down PITCH RANGE and press either of these buttons, you can adjust the musical pitch of the track by semitone increments.

13. **PITCH SLIDER –** The pitch can be changed by pressing the PITCH button so a PITCH LED is lit, then moving the sliding fader. The pitch will not be changed if the PITCH LED is off.

14. **PITCH RANGE LED –** Indicates current pitch range of the PITCH SLIDER.

15. **EFFECT BUTTON –** Used to determine desired effect. When an effect is selected, you can turn the JOG WHEEL to make fine adjustments to its parameter, or you can hold that EFFECT BUTTON and turn the JOG WHEEL to make coarse adjustments to its parameter.

16. **SCRATCH –** Turns Scratch Mode on or off. If Scratch Mode is on, the button will light up and the JOG WHEEL will scratch like a turntable when you spin it. If Scratch Mode is off, the JOG WHEEL will pitch-bend when you spin it.

17. **SEARCH –** When engaged, Search Mode will allow you to use the jog wheel to quickly scan through the current track. If you do not touch the wheel for 8 seconds you will automatically exit Search Mode.

18. **LOOP IN –** Sets a new cue point or the start point of a loop (a "Loop In" point) during playback.

19. **LOOP OUT –** Sets the end point of a loop (a "Loop Out" point) and starts playing the loop. While playing a loop, press LOOP OUT to release it from the loop and continue normal playback.

20. **RELOOP / STUTTER –** Plays the track immediately from the beginning of a loop (and reactivates the loop).

21. **RELAY –** Used for setting alternating play start (relay play) between attached units.

22. **TAP –** Tap this button in time with the beats of the music on that deck. This will enter a new BPM ("beats per minute") reading for that track. Tap this button once only to reset the downbeat of the music at that point without entering a new BPM. Holding the button for 2.5 seconds will cause the BPM counter to reset and recalculate.

23. **MARCHING BAR GRAPH –** Tracks the beats and measure position of music.

Numark

CD PLAYER & REAR PANEL FEATURES
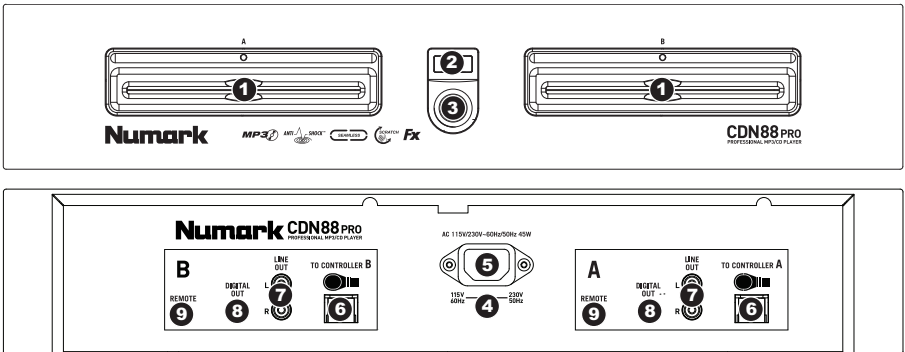
1. **CD SLOT –** Load the CD you want to play into this slot. This unit is designed to play commercially available CDs, MP3 CDs and properly burned and finalized CD-Rs. Due to variances on the specification of certain CD burners and CDs, some homemade CDs may not play properly. We recommend burning CDs at the minimum speed possible for the best performance.

2. **EJECT –** Press this button to eject the CD.

3. **POWER SWITCH –** Turn the machine on and off with this button. The unit should always be shut down with this button first before any external power is removed. Typically it is recommended that the CD player is powered on before amplifiers and powered off after amplifiers.

4. **VOLTAGE SELECTOR –** Set this switch to the voltage for your location.

5. **IEC POWER PLUG CONNECTOR –** Plug your supplied power cord in here.

6. **CONTROL CABLE CONNECTOR –** Plug in the 8-pin cable included in here to connect the remote control and main CD unit together.

7. **RCA AUDIO CONNECTORS –** Connect your CD player to your mixer from this line level output.

8. **DIGITAL OUTPUT –** The format is type 2, form 1, also known as S/PDIF (Sony/Phillips Digital Interface Format). To active digital output, hold down "PROG" followed by "PITCH RANGE". This allows digital audio information to be sent. Some CDs also have information encoded in the original audio output such as CDG graphic CDs for Karaoke. *If you adjust the pitch, other devices may not read the digital output properly because the sampling rate changes.*

9. **REMOTE START CONNECTOR –** Use this connector to plug into your "fader start"-compatible mixer or remote switch. Press and hold PROGRAM and press TIME to select your fader start / remote settings.

   • To use this connector for fader start, connect a fader start cable to a fader start-compatible mixer. Every time you move the crossfader on the mixer over to the side that the unit is on, it will automatically start playing. When you move the fader away from that side, the unit will stop. Moving the fader back to the unit side will start play again.

   • Foot switches can also be attached to this jack for creative mixing techniques and can be found in most music shops. Connector plugs are often 1/4" and an adapter to 1/8" will be needed for connection. There are also two types of footswitches that will work with this connector. The first is a typical, on/off pushbutton switch and are generally used for switching channels on guitar amps. The second switch is a momentary footswitch and is usually used for keyboard sustain pedals.

Numark

LCD FEATURES
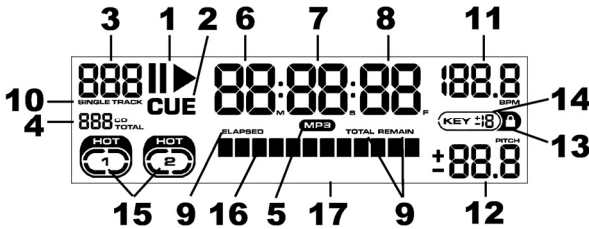
1. **PLAY / PAUSE –** This shows when the unit is playing or paused.
2. **CUE –** Flashing when the unit is setting a cue point. Lit continuously when the unit is paused at a cue point.
3. **TRACK NUMBER –** Shows the current track number.
4. **TOTAL TRACKS –** Shows the total number of tracks on the CD.
5. **MP3 –** Indicates when there are MP3s present on the disc.
6. **MINUTES –** Shows the minutes elapsed or remaining depending on mode setting.
7. **SECONDS –** Shows the seconds elapsed or remaining depending on mode setting.
8. **FRAMES –** The CD player breaks down a second into 75 frames for accurate cueing. This shows the frames elapsed or remaining depending on mode Indicates whether the time shown on the LCD is the elapsed time for the track, remaining time for the track, or total remaining time for the entire CD.
9. **TIME MODE –** Indicates whether the time shown on the LCD is the elapsed time for the track, remaining time for the track, or total remaining time for the entire audio CD.
10. **SINGLE –** Shows when the unit is set to play just one track at a time (Single Play Mode) or continuously, without stopping (Continuous Play Mode). This function is controlled by the SNGL button.
11. **BPM –** The tempo, which is indicated in BPM (beats per minute).
12. **PITCH –** Shows the percentage change in pitch.
13. **LOCK –** Indicates when Key Lock Mode is engaged.
14. **KEY –** The number next to the lock icon indicates how far away the track's current key is from its original key (in semitones).
15. **LOOP –** Indicates when a loop is programmed. When the indicator is flashing, a loop is currently playing.
16. **TIME BAR –** Shows either time remaining or elapsed depending on the setting of the TIME button.
17. **TEXT DISPLAY –** Displays folder names, CD information, and MP3 tag information.

Numark

BASIC OPERATIONS

PLAY: Starts the music from either the first set Cue Point or the last point at which it was paused. If the deck is paused, pressing PLAY will start playback and set a new Cue Point. If the deck is playing, pressing PLAY will restart playback from the last Cue Point, creating a "stutter" effect.

To adjust the speed at which playback starts hold down PROGRAM, press PLAY, and rotate the JOG WHEEL until the desired seconds are shown on the LCD. After this, you can toggle between a playback start time of "0" ("off") and the time you just set ("on") by holding down PROGRAM then pressing PLAY. *This setting will be remembered at power down.*

PAUSE: Pauses playback. Pressing PLAY while the deck is paused sets a new Cue Point. (While the deck is paused, you can turn the JOG WHEEL to search for a new Cue Point, then press PLAY to set it and resume playback.)

To adjust the braking time – the speed at which playback stops – hold down PROGRAM, press PAUSE, and rotate the JOG WHEEL until the desired seconds are shown on the LCD. After this, you can toggle between a braking time of "0" ("off") and the time you just set ("on") by holding down PROGRAM then pressing PAUSE. *This setting will be remembered at power down.*

CUE: Returns to and pauses the music at the last set Cue Point. The Cue Point is the last place in which the track was paused and then PLAY was pressed. Pressing and holding CUE will start playback from this point. The deck will return to the Cue Point and pause once you release CUE.

You can edit the Cue Point by turning the JOG WHEEL. As you rotate the JOG WHEEL, you will hear it "stutter" through the audio of the track. Stop the JOG WHEEL and press PLAY to set the new Cue Point and start playback from there.
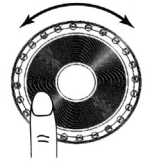
TIME: Switches the Time Mode on the LCD between elapsed playing time ("ELAPSED"), remaining time on the track ("REMAIN"), and remaining time on the entire CD ("TOTAL REMAIN"). *This setting will be remembered at power down.*

SINGLE: Toggles between Single Play Mode (playback will stop when a track ends) and Continuous Play Mode (when a track ends, the next track will play and the CD itself will restart when the last track has played). *This setting will be remembered at power down.*

TRACK SELECTION: The TRACK SELECT knob functions differently depending on the kind of CD that is loaded:

- When playing an audio CD, turn the TRACK SELECT knob to browse through the tracks, and push the knob to play the selected track.
- When playing an MP3 CD, push the TRACK SELECT knob to enter Folder Mode. In Folder Mode, turn the TRACK KNOB to browse through your available folders, and push the knob to enter the selected folder. You are now in File Mode. When in File Mode, turn the TRACK KNOB to browse through the files, and push the knob to play the selected file. To return to Folder Mode, do not adjust any controls for 5 seconds; the LCD will return automatically to the initial playback window where you can press TRACK SELECT to re-enter Folder Mode.

To skip through the tracks/folders ten at a time, hold down the knob while rotating it.

SEARCH: Pressing the SEARCH button puts the JOG WHEEL in Search Mode, which will remain active while the JOG WHEEL is being moved and for 10 seconds after. In Search Mode, rotating the JOG WHEEL will let you search rapidly through the track.
There are three search speeds – 15, 30, and 60 seconds. Select the speed by holding PROGRAM and pressing SEARCH to toggle through the settings, then release PROGRAM to select one. Each setting represents how many seconds you will skip through the track with one full revolution of the JOG WHEEL. (For example, if you select 30 seconds, a full clockwise revolution of the JOG WHEEL will move you ahead 30 seconds in the track.)
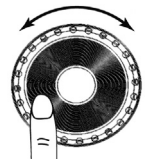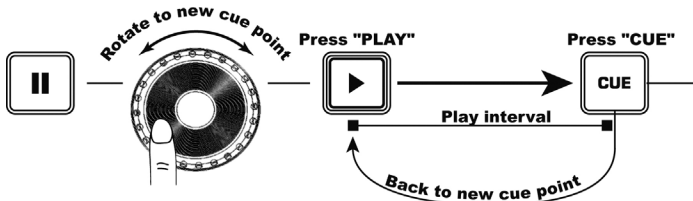
SETTING CUE POINTS
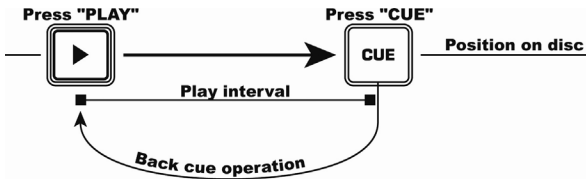
PLAY and CUE: Pressing PLAY starts playback. Pressing CUE will return the track to the last place playback was started. This is called the Cue Point. By alternately pressing PLAY and CUE, the track may be returned and played from the Cue Point any number of times. This is called "back cueing."
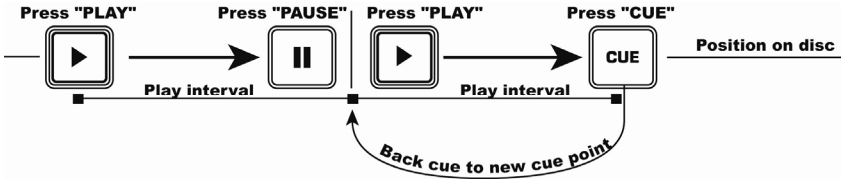

PLAY, PAUSE, and CUE: Pressing PLAY to start playback, pressing PAUSE, and pressing PLAY again will set a new Cue Point. Pressing CUE will return the track to where it was last paused, which will become the new Cue Point.


EDITING CUE POINTS: When the track is paused, you can rotate the JOG WHEEL to locate the position for a new Cue Point. By pressing PLAY from this paused position, you will set the new Cue Point.

ADJUSTING PITCH
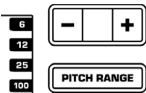
PITCH RANGE: Activates or deactivates the PITCH SLIDER and adjusts the amount of control it has on the speed of deck. You can select 6, 12, 25, or 100% or "off" as the range of the PITCH SLIDER by holding down PITCH RANGE and pressing "–/+" to cycle through the options (shown in the LCD's PITCH indicator). *This setting will be remembered at power down.*
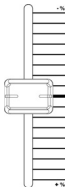
PITCH SLIDER: By moving the PITCH SLIDER down, the pitch and tempo of the music will increase. Move it up to decrease it. If the selected Pitch Range is 100%, the PITCH SLIDER's extreme positions can play the track at twice its original speed or reduce its playback speed to zero.

To match the tempos of two decks, you can either monitor the music of both decks by ear or use the automatic BPM indicators and shift the PITCH SLIDER so the BPMs match. (You may still need to align the beats of the two tracks after the tempos are matched.) See MATCHING BPMs for more information.
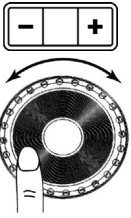
PITCH BEND and JOG WHEEL: These controls temporarily change the tempo of the music so the beats of the two decks can be aligned. The faster you rotate the JOG WHEEL or the longer you hold the "–/+" buttons, the greater the change in tempo. When the button or wheel is released, the deck will return to its usual tempo. (You can also adjust the musical pitch of the track without affecting the tempo by holding PITCH RANGE and pressing either of the "–/+" buttons. This will adjust the track's musical pitch by semitone increments.)
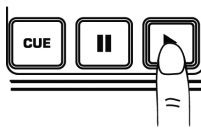
MATCHING BPMs (BEATS PER MINUTE)

You can match the tempos of the two decks either by ear or by looking at the BPM indicator on the LCD and adjusting a deck's pitch with the PITCH SLIDER until they match. If the deck whose tempo you want to match is faster, increase the tempo with the PITCH SLIDER on the opposite deck. If the deck whose tempo you want to match is slower, decrease the tempo with the PITCH SLIDER on the opposite deck. (You may still need to align the beats of the two tracks after the tempos are matched.)

The following example describes how to match the pitch of Deck B to the pitch of Deck A.
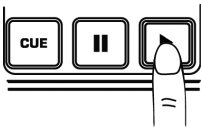
Press PLAY on Deck A

Press PLAY on Deck B. Listen to Deck B or look at the BPM on the LCD.

If Deck B is faster than Deck A, slow down Deck B.

If Deck B is slower than Deck A, speed up Deck B.

MATCHING BEATS WITH PITCH BEND

Even when the BPMs (beats per minute) are matched, you may still need to synchronize drums beats of the two tracks. To do this, you will need to adjust the tempo/pitch of a track temporarily with the pitch bend buttons ("–/+") or with the JOG WHEEL.

The following example describes how to sync the beats of Deck B to the beats of Deck A. After matching the BPM's, adjust the pitch temporarily as follows:
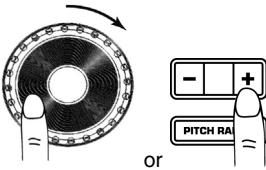
or

If Deck B is behind, rotate its JOG WHEEL clockwise or press "+" to bend the pitch up until its beats are synced with those of the other deck.
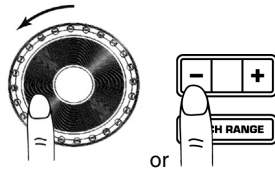
or

If Deck B is ahead, rotate its JOG WHEEL counterclockwise or press "–" to bend the pitch down until its beats are synced with those of the other deck.

The faster you rotate the JOG WHEEL or the longer you hold the "–/+" buttons, the greater the change in pitch. When you release the JOG WHEEL or "–/+" buttons, the deck will return to its usual tempo.

Numark

BEATKEEPER

The CDN88 PRO includes the Numark-patented Beatkeeper™ technology. The Beatkeeper automatically tracks beats based on the frequencies and rhythmic patterns in the music. It detects and displays the track's BPM in the LCD and displays four-count information (i.e., where you are in a four-beat measure) in the MARCHING BAR GRAPH.

MARCHING BAR GRAPH: Most dance and rock music is structured around four-beat increments called measures. The MARCHING BAR GRAPH's bottom LED is for the first beat of a measure – the "downbeat." Most music starts on the downbeat so the music will begin from this point. Occasionally this may not be the case, or you may wish to reset it. To reset the downbeat, simply press the TAP button once where you want to set the new downbeat as the music is playing or paused.
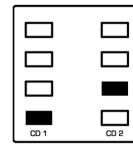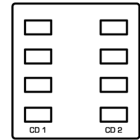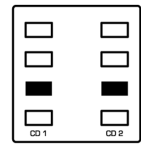
Beats Not Matched   Beats Matched

TAP: This button can recalculate a track's BPM or reset its downbeat.
- To recalculate a track's BPM: tap the TAP button on the downbeat of a measure (during playback) and hold it for four seconds. The Beatkeeper will automatically detect the track's BPM. You can also tap the TAP button in time with the beats of the track, which will manually enter a new BPM (this BPM reading will be based upon the average of your last eight taps).
- To reset a track's downbeat: press the TAP button once on the downbeat during playback.

KEYLOCK & KEY CHANGE

The CDN88 PRO uses exclusive technology to lock the key of the music in place at the current pitch or change it from the current position. This is different than "master tempo" often found on many modern units because KEYLOCK locks to whatever the current pitch position is (rather than the "0%" pitch position). This means you can lock the track to any musical pitch – not just its original key – then change the tempo of the song without changing its musical pitch.

KEYLOCK: Pressing and holding the PITCH RANGE button for 2 seconds activates or deactivates KEYLOCK, which holds a track's musical pitch in place while allowing you to adjust its tempo independently. The LCD will show a "lock" icon to indicate the current key is locked. If the tempo is changed with the PITCH SLIDER, the key of the track will remain unchanged (though you can change it with the "–/+" buttons; see "KEY CHANGE" below). If KEYLOCK is engaged and the deck's track changes, the track will be locked at 0%. If KEYLOCK is deactivated when the deck is paused, the deck's pitch will reset to match the current pitch position.

KEY CHANGE: While holding down the KEYLOCK button you can press the "+" or "–" buttons to change the key. The key can be raised up to one octave above the original key or lowered as many as five octaves below the original key. The KEY indicator in the LCD will show the key change up to 12 half-steps above or 19 half-steps below the normal key; any key below 19 half-steps will be denoted by an "L" in the display.
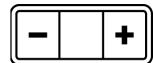
RELAY PLAY

This function will automatically start play on the opposite deck after the music on the currently playing deck is finished. To activate Relay Play, set both decks to the same Play Mode (Continuous or Single) and press the RELAY button. The LCD will read "RELAY: ON." When the first deck has finished playing, it will send a signal to the opposite deck to start playback. That opposite deck will start automatically and the original deck will pause and cue to the beginning of its next track.

In Continuous Play Mode, Relay Play allows one to play the full CD before the opposite is allowed to play. In Single Play Mode, each deck will play one track before switching to the other.

You can designate how much time Relay Play takes to switch from one deck to the other by holding down PROGRAM and pressing the RELAY button. From here, you can:

- select "0" to relay playback immediately after the track
- select "1," "2," "3," or "4" to add that many seconds between playback of the decks
- select "-1," "-2," or "-3" to assign the next deck to start playing that many seconds *before* playback on the first deck has ended (creating an automatic segue)

To deactivate Relay Play, press the RELAY button so the LCD reads "RELAY: OFF."

Note: This feature will also work in Program Mode, but if both decks are also in Single Play Mode, the number of tracks programmed should be the same on each deck (to ensure playback does not stop prematurely).

FADER START / REMOTE SWITCH START

This function allows for CD player control using most standard fader start-compatible mixers and switches. First, follow the directions for connecting to your fader start-compatible mixer or switch.

1. Hold down PROGRAM and press TIME to toggle through the following options:

    - **REMOTE FADER START:** The deck will activate with fader start. If you move your mixer's crossfader toward that channel, the attached deck will start playback. When the crossfader is moved away the unit will cue or pause depending upon CD player setting.

    Note: You can also use a momentary switch in the "ON-OFF" setting. In this case, the deck will play only while the switch is depressed. When it is released, it will either cue or pause depending upon the mode.

    - **REMOTE ON – OFF:** The deck will activate with an on/off push-button switch (typically used for switching channels on guitar amps).

    - **REMOTE ON – ON:** The deck will activate with a momentary switch (typically used for keyboard sustain pedals).

2. Hold down the TIME button for two seconds.

    - **REMOTE PAUSE:** The deck will pause when stopped.
    - **REMOTE CUE:** The deck will pause and return to the Cue Point when stopped.

Numark

LOOPING OPERATIONS

LOOPING

A loop is any area of a CD that you choose to repeat with no breaks ("seamless"). On the CDN88 PRO, you can set up to two loops per deck.

LOOP IN: The Loop In Point is where you want the loop to start.   The track's initial Cue Point is also the default Loop In Point for both loops and a Stutter/Hot Start Point. To set a new Loop In Point, press LOOP IN at the desired point while the track is playing. The LOOP IN button will light up, indicating a new loop is set. The RELOOP button will light up and "HOT" will be shown in the LCD, indicating a point has been set and is accessible for stuttering. (By default, the Loop In Point also becomes the Stutter/Hot Start Point.)
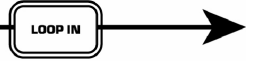
Note: The deck will always remember a new set point as the Loop In or Stutter/Hot Start Point until you actually set a new Loop In Point or load a new CD. The new point will be accessible until you eject the CD. If you change tracks and you previously set a Loop In Point on another track, pressing RELOOP *will jump to that point .*

LOOP OUT: The Loop Out Point is the end point of a loop.   The first time you press LOOP OUT while playing a track, the LOOP OUT button will flash as the song automatically returns to the Loop In Point and continues to play.   When the song reaches that Loop Out Point, it will return to the Loop In Point and repeat. (The LOOP IN button will also be flashing during a loop.)
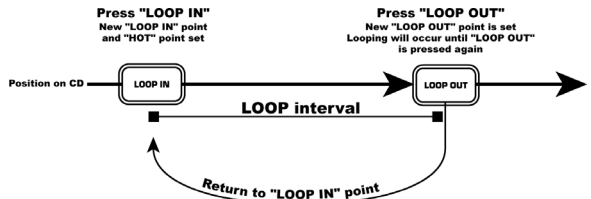
To release the loop, press LOOP OUT while in the loop. Playback will continue forward when the track passes the previously set Loop Out Point. The LOOP OUT button will be lit solid indicating that the loop will be remembered if RELOOP is pressed.

Note: The Loop Out Point will be erased if LOOP IN *is pressed or if a new Cue Point is set* **after** *the Loop Out Point. If this happens,* RELOOP *will not be possible.*

MOVING LOOP POINTS

The Loop In Point can be moved while the music is playing by pressing LOOP IN wherever you want to set it. The next time the Loop Out Point is reached, the track will return to this new Loop In Point. If LOOP IN is pressed after the Loop Out Point, it will clear that Loop Out Point.
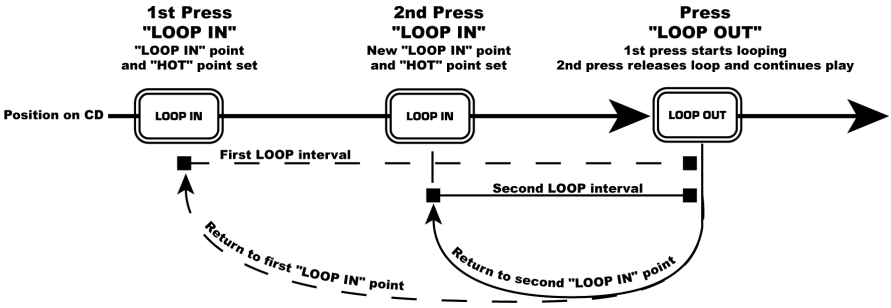
The Loop In Point can also be edited while paused by holding down CUE, pressing LOOP IN, then rotating the JOG WHEEL to search for a new Cue Point location. Press LOOP IN again to set the new Loop In Point at this location. (You can check your Loop In Point by pressing RELOOP.)

The Loop Out Point can also be moved while a loop is playing. Press LOOP OUT to release the old Loop Out Point and press it again at the new desired point.

Numark
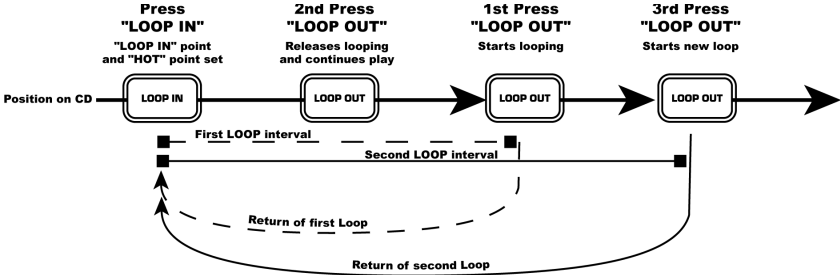
RELOOPING / STUTTERING

The RELOOP button performs two different functions, depending on the loop setting:

RELOOP

Reloop: This function can only be used if Loop In and Loop Out Points are set. RELOOP automatically returns the track to the Loop in point and will play the loop until it is released with the LOOP OUT button.
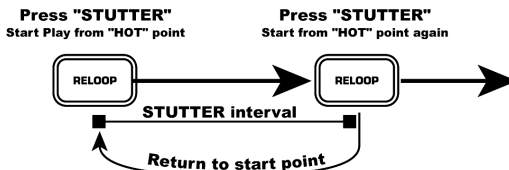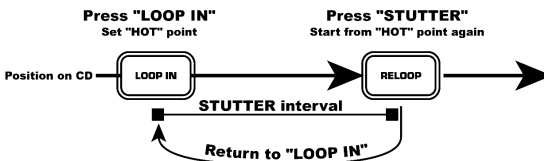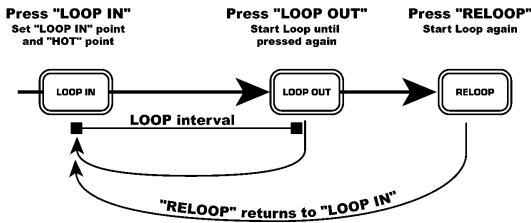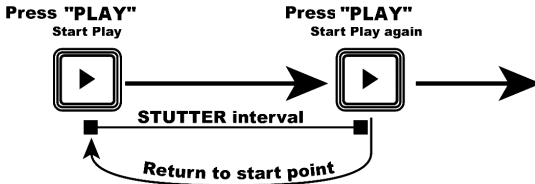
Stutter: This function starts playback from previously set Stutter/Hot Start Points. Set your Stutter/Hot Start Point the same way you would set a Loop In Point. This function lets you set three Stutter/Hot Start Points. One allows you to return to the Cue Point (from which you can "stutter" using the PLAY button); the other two use the Loop In Points (from which you can "stutter" using the RELOOP button).

Press "PLAY"
Start Play

Press "PLAY"
Start Play again

STUTTER interval

Return to start point

Press "LOOP IN"
Set "LOOP IN" point
and "HOT" point

Press "LOOP OUT"
Start Loop until
pressed again

Press "RELOOP"
Start Loop again

LOOP interval

"RELOOP" returns to "LOOP IN"

Press "LOOP IN"
Set "HOT" point

Press "STUTTER"
Start from "HOT" point again

Position on CD — LOOP IN

RELOOP

STUTTER interval

Return to "LOOP IN"

Press "STUTTER"
Start Play from "HOT" point

Press "STUTTER"
Start from "HOT" point again

RELOOP

RELOOP

STUTTER interval

Return to start point

Note: The deck will always remember new Stutter/Hot Start Points until you actually set a new Loop In Point or load a new CD. The new point will be accessible until you eject the CD. If you change tracks and you previously set a Loop In Point on another track, pressing RELOOP *will jump to that point.*

SCRATCHING & EFFECTS

SCRATCHING

CDN88 PRO's JOG WHEEL allows you to scratch your music as you would on vinyl while using a DJ turntable. To engage Scratch Mode, press the SCRATCH button and move the JOG WHEEL as desired to scratch over the current track.

The JOG WHEEL can scratch in several different styles. To select the style, press and hold PROGRAM and press SCRATCH to toggle through the various settings. When you have selected the setting you want, release the PROGRAM button.

The various styles of scratching are described below:

VINYL – The classic vinyl-scratching sound.

FORWARD – Only clockwise ("forward") movements of the JOG WHEEL will produce a scratching sound. Movements in the opposite direction will not be heard.

CUE – Whenever the JOG WHEEL is moved to start scratching, the track will jump to the last set Cue Point. This is useful if you want to set a Cue Point near a sound that is suitable for scratching.

CUE-FORWARD – This setting combines the Forward and Cue scratch settings: whenever the JOG WHEEL is moved to start scratching, the track will jump to the last set Cue Point, and only clockwise ("forward") movements of the JOG WHEEL will produce a scratching sound. (If the JOG WHEEL is moved in the opposite direction, its movement will not be heard and the track will jump to the Cue Point.)

BLEEP – After scratching and releasing the JOG WHEEL, the audio will jump ahead to the point where the music would have been if it had not been interrupted (similar to the Bleep effect). For example, if you start scratching at 3:10 in a track and stop scratching five seconds later, instead of the audio resuming wherever the JOG WHEEL was released, it will resume at 3:15.

BLEEP-FORWARD – This setting combines the Forward and Bleep scratch settings: only clockwise ("forward") movements of the JOG WHEEL will produce a scratching sound, and after releasing the JOG WHEEL, the audio will jump ahead to the point where the music would have been if it had not been interrupted. For example, if you start scratching at 3:10 in a track and stop scratching five seconds later, instead of the audio resuming wherever the JOG WHEEL was released, it will resume at 3:15.

EFFECTS

To select and activate an effect, press its button. It will light and the effect will be indicated in the LCD. To deactivate an effect, tap it again.

Once an effect is engaged, rotate the JOG WHEEL to fine-tune the desired parameter for that effect. The parameter setting will be shown in the LCD's TEXT DISPLAY and will be "remembered" if that effect is disengaged then reengaged. *(**Note:** For all effects except Reverse, the* JOG WHEEL *will not be able to pitch bend while adjusting parameters, so you must use the "–/+" buttons to pitch bend in these cases.)*

PHASER – Creates an effect similar to the sound of an airplane taking off. Press and hold the PHASER button and turn the JOG WHEEL to select the rate of phasing by time division (as it relates the track's BPM) – 16/1, 8/1, 4/1, 2/1, 1/1, 1/2, 1/4, 1/8, 1/16, 1/32. Turning the JOG WHEEL without holding the PHASER button allows you to fine-tune the rate of phasing.

FLANGER – Creates a rushing, "flanging" sound. Press and hold the FLANGER button and turn the JOG WHEEL to select the rate of flanging by time division (as it relates the track's BPM) – 16/1, 8/1, 4/1, 2/1, 1/1, 1/2, 1/4, 1/8, 1/16, 1/32. Turning the JOG WHEEL without holding the FLANGER button allows you to fine-tune the rate of flanging.

ECHO – Adds echo or delay to the music. Press and hold the ECHO button and turn the JOG WHEEL to select the length of echo by time division (as it relates the track's BPM) – 1/1, 1/2, 1/4, 1/8, 1/16, 1/32, or 1/64. Turning the JOG WHEEL without holding the ECHO button allows you to fine-tune the length of echo. At "1/1," the echo will last for one full measure (four beats). If you deactivate then reactivate Echo, the last set parameter will be remembered.
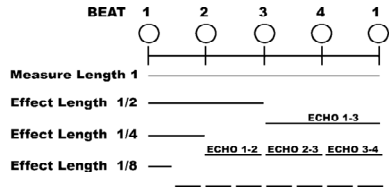
CHOP – Chop breaks up the music by muting and unmuting the track at regular intervals. Press and hold the CHOP button and turn the JOG WHEEL to select the rate at which it will "chop" the track (as it relates the track's BPM) – 1/1, 1/2, 1/4, 1/8, 1/16, 1/32, or 1/64. Turning the JOG WHEEL without holding the CHOP button allows you to fine-tune the "chop" rate. If you deactivate then reactivate Chop, the last set parameter will be remembered.
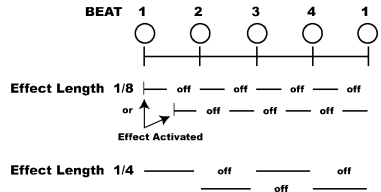
PAN – Pan alternates between playing right and left audio channels at regular intervals. Press and hold the PAN button and turn the JOG WHEEL to select the rate at which it will "pan" the audio (as it relates the track's BPM) – 1/1, 1/2, 1/4, 1/8, 1/16, 1/32, or 1/64. Turning the JOG WHEEL without holding the PAN button allows you to fine-tune the panning rate. If you deactivate then reactivate Pan, the last set parameter will be remembered.
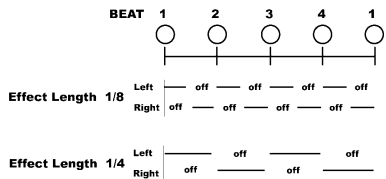
REVERSE – Plays the music backwards until it is deactivated. There is no limit to the amount of time you can reverse.

BLEEP – A temporary "forward reverse" function for "bleeping" obscene lyrics or creating interesting effects. Once BLEEP is pressed, the music will play backwards from buffer until Bleep is deactivated or until the buffer runs out. At that point, the music will play forward from the point where the track would have been if BLEEP had never been pressed.
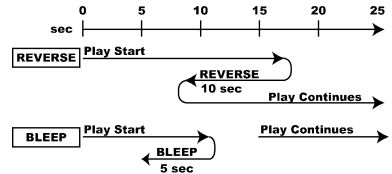
For example, if Bleep is activated for five seconds at the 0:10 mark of a song, you will hear the audio from 0:05 – 0:10 in reverse. When you deactivate Bleep, normal (forward) playback will resume at 0:15.

Note: The buffer time allotted for this operation varies with the number of loops set and anti-shock buffer available.

Numark

PROGRAM FUNCTIONS

The PROGRAM button provides several functions depending upon the combination of other buttons used.

Track Sequence Programming – Use the PROGRAM button and TRACK knob to set a program – a specific sequence of tracks to be played without interruption. To set a program:
1. Press PROGRAM and "P – 1" will appear on the LCD, indicating that you can select the first track of your program.
2. Select the first track you want in your program by turning the TRACK KNOB and press PROGRAM to enter it. "P – 2" will appear on the LCD, indicating you can select the second track of your program.
3. Repeat Step 2 to add more tracks to the program. (You can program up to 99 tracks.)
4. Press PLAY to start the program. To erase the program, hold the PROGRAM button down for more than 2 seconds.

You can activate the following functions by holding down the PROGRAM button then pressing the appropriate button:

* This setting will be remembered at power down.

PAUSE: Braking Time *
To adjust the braking time – the speed at which playback stops – hold down PROGRAM, press PAUSE, and rotate the JOG WHEEL until the desired seconds are shown on the LCD. After this, you can toggle between a braking time of "0" ("off") and the time you just set ("on") by holding down PROGRAM then pressing PAUSE.

PLAY: Startup Time *
To adjust the speed at which playback starts hold down PROGRAM, press PLAY, and rotate the JOG WHEEL until the desired seconds are shown on the LCD. After this, you can toggle between a playback start time of "0" ("off") and the time you just set ("on") by holding down PROGRAM then pressing PLAY.

RELAY: Relay Time *
You can designate how much time Relay Play takes to switch from one deck to the other by holding down PROGRAM and pressing the RELAY button. From here, you can:
- select "0" to relay playback immediately after the track
- select "1," "2," "3," or "4" to add that many seconds between playback of the decks
- select "-1," "-2," or "-3" to assign the next deck to start playing that many seconds **before** playback on the first deck has ended (creating an automatic segue).

TIME: Remote Start *
This will let you decide the fader start or remote switch start settings for the deck. See FADER START / REMOTE SWITCH START for more information.

PITCH BEND – : Sleep Mode *
The unit will automatically enter Sleep Mode after 15 minutes of inactivity. In this mode the unit will still start instantly from its buffer, but the CD player's laser will turn off to extend its life. (This feature can be turned off.)

PITCH RANGE: iD3 Tag Info *
When playing an MP3 CD, the LCD will display the files' Artist, Album, or Track iD3 tags.

SNGL: Preset Clear
This will return CDN88 PRO's settings to its factory defaults. This includes settings mentioned in this section.

LOOP IN: Save Cue Points
When playing an audio CD, this will save any Cue Points you created to CDN88 PRO's internal memory for later usage. (See CUE / LOOP POINT STORAGE & RECALL for more information.)

LOOP OUT: Fetch Cue Points
When playing an audio CD, this will recall (or "fetch") any Cue Points you stored in CDN88 PRO's internal memory. (See CUE / LOOP POINT STORAGE & RECALL for more information.)

RELOOP: Delete Cue Points
When playing an audio CD, this will delete any stored Cue Points from CDN88 PRO's internal memory and any Cue Points set on the current disc.

Numark

CUE / LOOP POINT STORAGE & RECALL

To SAVE Cue and Loop Points on the current AUDIO CD:

1. With an audio CD (with Cue and Loop Points) loaded, hold PROGRAM and press LOOP IN.
2. The LCD will show "CUE STORE" for one second, indicating your Cue and Loop Points are saved.

To RECALL Cue Points on the current AUDIO CD:

1. Hold PROGRAM and press LOOP OUT.
2. The LCD will show "CUE FETCH" to indicate Cue Point loading. (If the audio CD doesn't have Cue Points stored on the CD player, then the LCD will show "NO FETCH.")
3. All Cue and Loop Points will be restored in addition to BPM and downbeat information for immediate access to Beatkeeper functions.

Notes:

- *If over 1024 audio CDs have Cue Points written, the oldest Cue Points will be overwritten.*
- *If new Cue Points are detected on an audio CD, this new Cue Point data will overwrite the old Cue Point data.*

UPGRADING YOUR UNIT

This CDN88 PRO contains the latest software available at the time of manufacturing. Our engineering staff will be working hard to improve and offer additional features in the future. The software has been designed to be easily updated by you through supplied updates from Numark. To obtain the latest software version, visit us on the web at **http://www.numark.com**.

To check your unit's software version press PROGRAM then the "+" button. Your unit's software version will be shown in the LCD.

AUDIO CD PROGRAMMING PROCEDURE

1. Go to **www.numark.com** and download the latest version of the CDN88 PRO's software.
2. Load the file onto a computer and burn the file onto a CD. (**Note:** Do not burn it as a disc image, like an .ISO file.) We recommend burning the CD at the slowest speed possible to ensure its accuracy. Remember to finalize the CD.
3. With CDN88 PRO off, hold PROGRAM and press the POWER BUTTON to turn it on.
4. Insert the CD you burned.
5. You will be prompted to confirm that you want to upgrade the software. Press PLAY to confirm. The unit's buttons will begin flashing.
6. Once the buttons are done flashing, your unit has been upgraded to the latest software. Turn CDN88 PRO off before using it with the latest software.

Note: *CD burning is dependent on the recording equipment and the CD player's ability to read the burned information. If the unit ejects the CD during the procedure, remove the CD and try again. If it fails, try re-burning the CD.*

Numark

SPECIFICATIONS

DISC TYPE:	Redbook CD, CDR, CDRW
TIME DISPLAY:	Track Elapsed, Track Remain, Total Remain
QUANTIZATION:	1-bit linear/channel, 3-beam laser
OVERSAMPLING RATE:	8 times
SAMPLING FREQUENCY:	44.1 kHz
FREQ RESPONSE:	20 Hz – 20 kHz
THD+N:	< 0.01%
SNR (IHF-A):	> 82 dB
DYNAMIC RANGE:	> 85 dB
OUTPUT LEVEL:	1.2 V RMS
START TIME:	$\leq$ 0.006 sec.
PITCH CONTROL RANGE:	± 6, 12, 25, 100%
DIMENSIONS:	**Controller:** 482 mm x 132 mm x 76 mm
	Main Unit: 482 mm x 89 mm x 257 mm
WEIGHT:	**Controller:** 2.2 kg
	Main Unit: 5.0 kg
MAXIMUM TILT ANGLE:	15º
POWER SUPPLY:	115/230 V AC, 60/50 Hz
POWER CONSUMPTION:	45 W

* Specifications are subject to change.

www.numark.com

MANUAL VERSION 1.2