
# DN-X1700

## Professional Digital DJ Mixer

"Cutting-edge" and "Flagship" are two terms often associated with Denon DJ. From the revolutionary spinning platter design of the DN-S5000 to the worldwide standard for mobile CD playback – the DN-D4500; Denon DJ has paved the way by applying numerous technological advances and features to products designed for the working DJ.
The new DN-X1700 is *no* exception.

At first glance, the DN-X1700 is a standard matrix club mixer consisting of 4 CD and PHONO inputs, 4 digital inputs, 2 microphone inputs, 2 master outputs, booth and recording outputs and more. But it's the levels of sound quality and incorporation of forward-thinking performance features that make the DN-X1700 Professional Digital DJ Mixer the ultimate performance tool for top-flight professionals.


www.denondj.com

## ADVANCED FEATURES

**High-reliability Design Features tailored for Professional Use and Ease of Operation**
From the minute you power up the DN-X1700, you obviously notice that this is no ordinary DJ mixer. A large, bright 3.5 inch color LCD ensures that all information can be quickly and easily identified in any condition from low-light club atmospheres to festival stages in bright daylight. Additionally, the headphone amplifier employs its own discrete transistor and provides high output power of 400mW at 40 ohms to deliver surefire monitoring in any loud environment.

Each channel is complete with a 6 position Matrix source selector enabling the use of any of the 4 input sources per channel and a high-quality 60mm throw, long-life conductive plastic fader. Each input channel also incorporates isolator equalizers wherein crosspoint frequencies can be assigned for each band in the preset menu.

**USB Audio and Midi Interfaces**
Ensuring that the DN-X1700 is a fit for every DJ is its USB Audio and Midi control. Utilizing Denon DJ's low latency ASIO driver, not only can the DN-X1700 be used as a traditional DJ mixer, it can also be utilized as a top-notch 96 kHz digital audio sound card (8 in / 8 out (4 stereo channels)) for any of today's top DJ software suites.

Each channel has a single button that allows immediate switching of each channel input from the traditional audio signal to the USB computer audio input.

Also available is a Midi layer function for controlling the mixing capabilities of todays DJ software mixers, on a channel by channel basis. Midi output is available for almost all operations and functions of the DN-X1700's top panel controls.

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# DN-X

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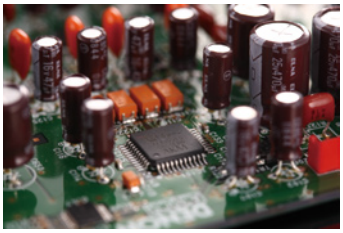
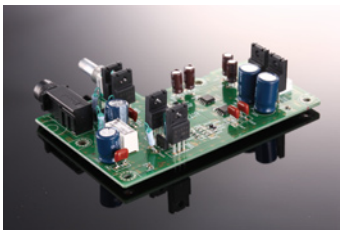
## Unique Design Features, Oriented Towards Achieving the Ultimate in Sound Quality

At the core of the new Denon DJ DN-X1700 is a circuit design utilizing the latest in Digital Audio Conversion (DAC) and Digital Signal Processing (DSP). The DN-X1700 features a 96kHz/32-bit floating digital signal processor and 32-bit digital-to-analog converter (at the Master Out) providing sound quality that is true and faithful to the original source and delivered with the highest degree of accuracy. And it doesn't end there...

Every detail was considered and no corners cut in designing the DN-X1700 and its accurate sound representation. The mic amp, with its own discrete transistor configuration, incorporates a low equivalent input noise of 127 dB while even the phono amplifier has a 89 dB signal-to-noise ratio, all due to its own discrete FET circuit configuration. And at the heart of it all, the power. The DN-X1700 employs two extremely high-end, low-noise R-core power transformers for the analog circuit with Denon DJ custom designed electrolytic capacitors. Furthermore, film capacitors designed to enhance sound quality and high-precision metal film resistors round out the power circuit, resulting in sound quality that is overwhelmingly high and breathtakingly accurate.



Unlike any other DJ mixer in its class, the DN-X1700 is equipped with a high performance 32-bit DAC (digital analog conversion) at the audio output stage. Even the world's best-selling DJ mixers, CD / DVD players and home theater systems boast only 24-bit DA conversion; 32-bit conversion provides additional "headroom" in the conversion process, providing an analog output signal with greater resolution and frequency response. The resulting ultra wideband output signal makes the DN-X1700 one of the best sounding pieces of digital audio equipment ever made for the DJ market.

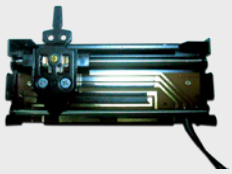


Headphone monitoring and the output sound, power it produces are essential for all DJs alike, which is why no costs were spared in this important area either. The X1700 offers a very High Power and Ultra Clean Headphone Circuit with Built-In Discrete Transistor Push-Pull drive. This low Impedance drive buffer circuit is generally found in very expensive studio boards, which covers an array of Pro Headphones on the market with an impressive spec of 400mW @ 40 ohms.

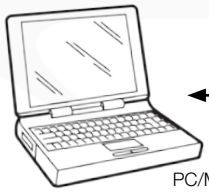
R-core is unique rectangular and compact type of transformer developed by Japanese engineers. It has the ability to mutually cancel each other's magnetic flux by means of balanced, symmetrical winding of the coils. With this winding method the leakage flux can be kept to a minimum amount. As a result, the core's magnetic resistance is very low, it has absolutely no gap in its magnetic paths and the cross section is uniform. This permits the Denon DJ engineers to place this very efficient transformer close to critical electronic components that are noise sensitive without any negative electrical effect.

## FLEX FADER

Cross and Channel Fader, quality, feel, performance and reliability is critical in a design of this caliber. That's why we chose the studio quality 60-mm Alps K Series for the channel faders, which offers a silky smooth, but balanced firm feel. The cross fader which we call, FLEX FADER is one that has been proven in previous Denon mixers. The tension of the FLEX FADER can be adjusted to your desired feel directly from the front panel.



## Construction Profile – Crossfader Tension Adjustment

PC/MAC Compatible

# X1700

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## Two Built-in Effects Processors

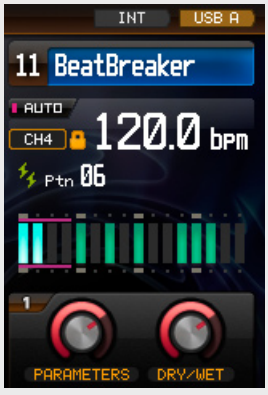
Adding to the digital realm of the new DN-X1700 is its two built-in digital effects processors. Specific parameters for each of the 11 different effects can be linked to the beats per minute (BPM) of every track passing through the mixer. Each effects processor offers its own set of controls such as, Dry/Wet, Parameter, Low/High pass filter, Beat or Time adjustments, TAP, Manual and Auto BPM, Pre Efx Cueing and ON/OFF. In addition to the new Beat Breaker effect, each effects processor has other popular effects including delay, transform, flanger, filer, phaser, reverberation, looping, reverse looping and pitch shift.

Each channel has two effects sends (1 and 2) which allows audio from a single channel to be routed to each effects processor, individually. In addition, you can use an external effects unit and route the Send/Return signal through either effect 1 or 2.

## Effect Menu

| No. | Effect | Description of effect |
|---|---|---|
| 1 | Delay | Adds an audio effect where previously passed signals are played again, delayed by the time of the beat setting |
| 2 | Echo | Adds echo signals which have been delayed by the time of the beat setting |
| 3 | Trans | Cuts off the signals at the time of the beat setting |
| 4 | Flanger | Effect where the original signal is mixed together with a delayed version of the same audio, resulting in a wide sweeping comb-filter effect |
| 5 | Filter | Varies the filter cut-off frequency |
| 6 | Phaser | Similar to a Flanger, Phaser produces a wide sweeping effect that is based on a filtered audio signal rather than a delayed audio signal |
| 7 | Reverb | Adds additional audio signals making the passed-through audio sound larger |
| 8 | Loop | Loop initiates a sampled effect that repeats the passed-through audio over and over on time and length parameters set by the BPM and user |
| 9 | Reverse Loop | Initiates the reverse play processing of the above loop signals |
| 10 | Pitch Shift | Shifts the pitch of the input signals and outputs the results |
| 11 | BeatBreaker | Separates and repeats the attack signals of the input beats as per the beat pattern ***see below illustration and in-depth explanation** |
| 12 | SEND/RTN | Sends the signals whose effects have been assigned to an external effector and returns those modified signals<br>* EFX 1 and EFX 2 cannot be selected at the same time. |

**What the BeatBreaker effect does**
This effect modifies the beat of the music signals by breaking down each quater note of musical bar into 4 separate sections, based on the BPM setting. Each pattern, consisting of 4 beats, results in 16 individual sections. BeatBreaker replaces each of the four sections with the selected pattern and copies the attack signals accordingly.




**Details of operation**
The beat patterns consist of 16 blocks, and when these blocks are lit in the display, the sound will be replaced by the initial sound of the beat.

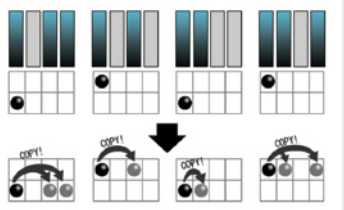
When this effect is ON, the blocks that are active light up blue.

Example:

❶ Pattern

❷ Snare
Kick

❸ Snare
Kick



In the case of pattern ❶ shown in the figure, when the music signals ❷ are input, the sound of signals are copied and modified, as indicated in the pattern and the resulting sound ❸ is produced.

## Effect Profile – Beat Breaker

# DN-X1700

## OTHER FEATURES continued

**Preset Storing**
Another innovation applied to the DN-X1700 is the Preset Import/Export feature. A feature found in many of today's top digital live consoles, this process allows the user the ability to store all of the settings of their personal device to a USB thumb drive or external hard drive and then reupload those settings to any other DN-X1700 they ever gig on, drastically cutting down on setup time prior to a performance.

**Channel fader and Crossfader start function**

**Auto-ducking feature for both Mic inputs**

**Optional Rackmounting kit (RMDJ1700)**

## SPECIFICATIONS

### Audio

| | |
|---|---|
| **PHONO inputs:** | Unbalanced RCA terminals (Stereo x 4) |
| **Input impedance:** | 47 k Ω /kohms |
| **Level:** | -40 dBv (10mV) |
| **CD inputs:** | Unbalanced RCA terminals (Stereo x 4) |
| **Input impedance:** | 10 k Ω /kohms |
| **Level:** | 0 dBv |
| **EQ (Line):** | Band x 3 |
| **Channel EQ Range:** | |
| **HI:** | – ∞, -90 dB to +10 dB |
| **MID:** | – ∞, -90 dB to +10 dB |
| **LOW:** | – ∞, -90 dB to +6 dB |
| **RETURN inputs:** | Monoaural 1/4" TS terminal x 2 |
| **Input impedance:** | 10 k Ω /kohms |
| **Level:** | -10 dBV/ 0 dBV (Default: –10 dBV) |
| **MIC inputs:** | Monoaural x 2 |
| **MIC1:** | Balanced and Unbalanced XLR connector and 1/4" TS Terminal (1: Ground, 2: Hot, 3: Cold) |
| **MIC2:** | Balanced 1/4" TRS Terminal (Tip: Hot, Ring: Cold, Sleeve: Ground) |
| **Input impedance:** | 5 k Ω /kohms |
| **Level:** | -60 to -20 dBu |
| **EIN:** | < -127dBu (Rs = 150 Ω /ohms |
| **CMRR:** | > 80 dB (1 kHz) |
| **EQ (MIC):** | Band x 2 |
| **Adjustment range:** | |
| **HI:** | – 15 to +15 dB |
| **LOW:** | – 15 to +15 dB |
| **Digital Coaxial inputs:** | Stereo RCA terminals x 4 IEC958 Consumer (Fs: 32 kHz to 96 kHz) |
| **USB Audio inputs:** | Stereo x 4 (Monoaural x 8) 24 bit, Fs: 44.1 kHz, 48 kHz, 96 kHz USB B |
| **MASTER output:** | Stereo, Balanced XLR Terminal x 2 (1: Ground, 2: Hot, 3: Cold) |
| **DA converter:** | 32-bit 128x oversampling advanced multi-bit |
| **Load impedance:** | > 600 Ω /ohms |
| **Level:** | +4 dBu |
| **Frequency response:** | 20 Hz to 20 kHz (± 0.5 dB) |
| **THD:** | Less than 0.05% |
| **Signal to Noise ratio:** | 100 dB<br>89 dB (Phono) |
| **Crosstalk:** | < -110 dB (1 kHz) |
| **Unbalanced:** | Stereo RCA Terminal |
| **Load impedance:** | 10 k Ω / kohms |
| **Level:** | 0 dBu |
| **REC output:** | Stereo unbalanced RCA terminals |
| **Load impedance:** | 10 k Ω / kohms |
| **Level:** | -10 dBV |
| **BOOTH output:** | Stereo balanced 1/4" TRS terminals (Tip: Hot, Ring: Cold, Sleeve: Ground) |
| **Load impedance:** | > 600 Ω /ohms |
| **Level:** | +4 dBu |
| **SEND output:** | Monoaural Unbalanced 1/4" TS terminals x 2 |
| **Load impedance:** | 10 k Ω /kohms |
| **Level:** | -10 dBV |
| **Headphones output:** | Stereo |
| **Load impedance:** | 40 Ω /ohms |
| **Level:** | 400 mW |
| **Digital Coaxial output:** | Stereo RCA terminal, IEC958 Consumer (Fs: 44.1 kHz, 48 kHz, 96 kHz) |
| **USB Audio inputs:** | Stereo x 4 (Monoaural x 8) 24 bit, Fs: 44.1 kHz, 48 kHz, 96 kHz USB B |

### General

| | |
|---|---|
| **USB MIDI I/O:** | IN: 1ch, OUT: 1ch MIDI1.0, MIDI Clock USB B |
| **MIDI OUT:** | OUT: 1ch MIDI1.0, MIDI Clock 5pin DIN |
| **Channel level meters:** | PPM 16-point LEDs from –40 to +10 dB, peak display |
| **Cue master level meters:** | PPM 24-point LEDs from –50 to +16 dB, peak display |
| **Channel Fader:** | 60 mm Conductive Plastic Type fader |
| **Crossfader:** | 45 mm FLEX Fader (Fader Torque Adjustable) |
| **Dimensions:** | 320(W) x 357(D) x 90(H) mm |
| **Weight:** | 7.6 Kg |
| **Supply voltage:** | AC120V ± 10% 50/60 Hz |
| **Power consumption:** | 36W |
| **Operational temperature:** | +5ºC to +35ºC |
| **Operational humidity:** | 25% to 85% |
| **Storage temperature:** | –20ºC to +60ºC |

**Specifications subject to change without notice*



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