



Pioneer PD-2000 95,000yen(October, 1988 release)

Description



The compact disk player which attained high-quality sound-ization more by attaining simple-ization thoroughly while inheriting the high-quality sound-sized technology of PD-3000.

In order to lessen Denso Roth as much as possible and not to receive the influence of the from else, compact-disk direct construction is adopted and it has arranged simply and straight along with the fluence of a signal from a pickup to a lineout. The printed circuit board of digital one/servo, and an analog circuit is made to gain separate independence first. And by low-impedance-ization of a grounding, seal dead PCB (double-sided printed circuit) from which the shielding effect effective in flying from a digital system to an analog system is acquired is extensively adopted with the digital system, the analog system, and the power source. Moreover, an analog substrate also attains shortest-ization from an input to an output, and makes it simultaneously the symmetrical structure of the right-and-left independency.

The cross interference between signals is reduced by this compact-disk direct construction-ization.

Furthermore, shortest-izing of a transmission route and the parallelization of } power source were attained, and it has connected with the power-source line of the analog substrate from a power-source substrate direct even in the power circuit.

The digital filter of 18 bits of 20-bit operations output is adopted as a digital filter.

The sampling frequency of 44.1kHz is raised to 352.8kHz, 8 times, and the Bata Wace 3 order low pass filter excellent in the phase response and the frequency ripple is used for the analog stage.

The real 18 bitD/A converter of a right-and-left independent stream composition is adopted as a D-A-conversion part, and an 18-bit operation is performed on all the level from the Dainyuu power to the small input. This has eliminated the cross interference and phase gap between channels.

Moreover, the linear envelope system (glitch less type) which is an original technology of Pioneer is adopted, by rectifying the error of a upper bit to a proper value, a D-A-conversion precision is raised and zero cross distortion is decreased. Moreover, the D-A-conversion precision support of double Mie, such as a coil only for a digital analog converter, an exclusive power source, and a low-impedance guarding linking, is raising the reproductivity of minute level.

The clean laser pickup in which Pioneer did proprietary is carried in the pickup.

By reducing optical components, such as a collimator lens, the power loss of optical system is decreased sharply, and also the aberration in an optical path decreases, and little clean and distorted pickup is enabled.

Moreover, by adopting the photodetector with built-in I/V transducing head amplifier which amplifies a several microampere minute signal to about 200mV, the occurrence of the Jitter by a reading error or disturbance is suppressed in combination with an Accu Focus system.

Furthermore, the engineering plastic pickup body which divided the pickup body into about 1000 member, and repeated and developed the intensity analysis is adopted, and difficult precision form is made possible in the conventional die-casting.

First class push pull FET buffer amplifier is adopted as two stages of the lineout of the analog stage, and the I/V amplifier stage, respectively. The more exact waveform transmission which is not influenced by the load intensity connected by this is made possible.

From the vibration proof of the pickup treating minute level to the vibration proof of PCB (double-sided printed circuit), the multi-Resonance absorber (MRA) which is a technology of no vibrating and absent-resonance-izing of type corresponding to the unnecessary oscillation frequency covering all the bands is developed and carried.

As the 2nd base that ranks second to a honeycomb chassis, the float base is newly installed and the unnecessary oscillation is suppressed by carrying out the floating of the circuit board and the pickup.

The magnet scheme disk stabilizer which suppresses an unnecessary oscillation of a disk is adopted as a pickup part. Furthermore, after making few newly developed linear motor servo mechanisms of an oscillating occurrence into a low centroid structure, it supports firmly by the high rigidity and a Takauchi part loss FRP Mechanism-base, and absent-resonance-ization is attained by mounting this on a multi-Resonance absorber.

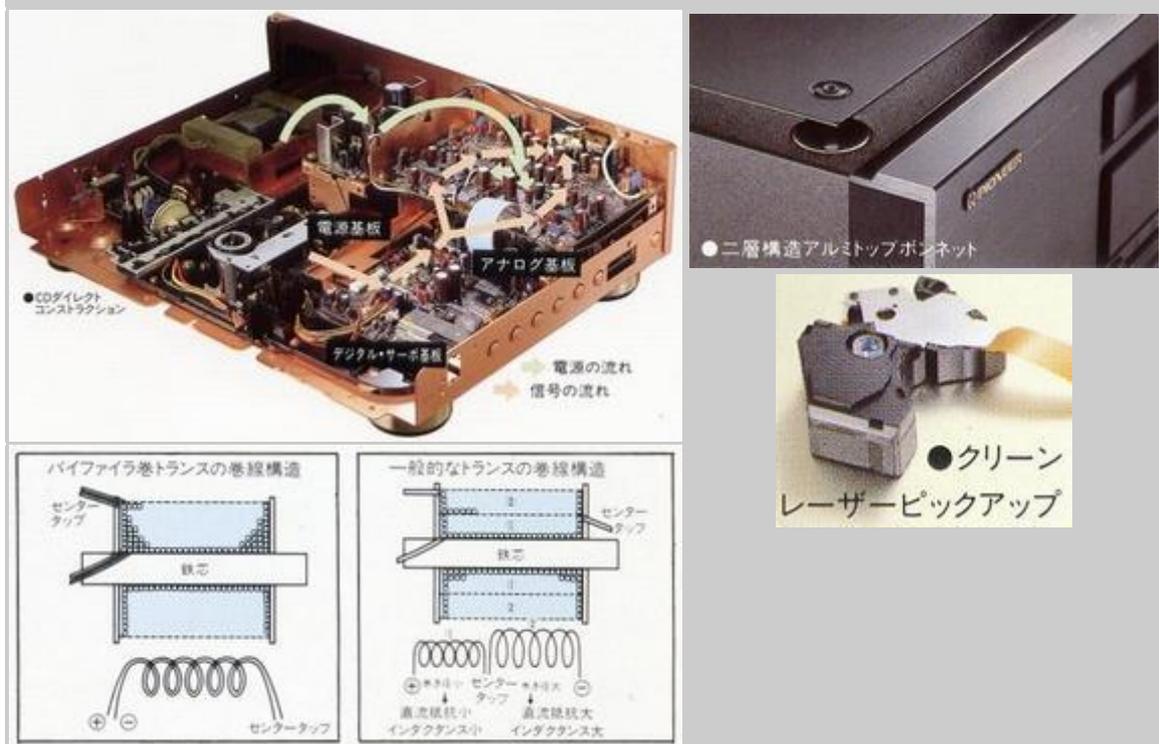
The aluminum panel of 4mm thickness is adopted as the front panel, and also in order to improve absent-resonance-izing and rigidity of a bonnet, the dual structure aluminum top bonnet is adopted. Moreover, by adoption of a copper plating honeycomb chassis or a large-sized honeycomb insulator, the system is supported firmly.

The core size has adopted as a power transformer the mass transformer of the lamination top core fabric which is about 3 or more times of a required capacity, and stops a magnetic distortion, an oscillation, and leakage flux. The by filer twist volume which reduces the improvement in the degree of balance of installation of an Output voltage, a noise and an oscillation, and also stray capacity is adopted as this transformer.

Moreover, the audio system, the D-A-conversion system, the digital system, the display-device window, etc. have employed 4 independent coil, 4 independent-source circuitries, and 7 regulator so that each part may get the powering stabilized without affecting it. Furthermore, in the audio circuitry, the implementation of a highly precise clean power source, such as stationing the discrete push pull regulator who shows the transient response property which was excellent to the load variation, is aimed at.

The OFC very-thick 4 core power cord with \diamond polarity window is adopted as a power cord.

It operates, only when the operation key is pressed, and the clean microcomputer which prevents a scanning noise is carried. Moreover, the scanning noise at the time of display-device putting out lights is also considered, the display-device off switchpoint is carried, and the noise occurrence is suppressed.



Rating of a mode

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| Form | Compact disk player |
| Pickup | 3 beam semiconductor laser scheme |
| D-A conversion | A 16-bit linear line and 18 bits of digital operations |
| Frequency characteristic (EIAJ) | 2Hz-20kHz \pm 0.3dB |
| SN ratio (EIAJ) | 111dB or more |
| Dynamic range (EIAJ) | 99dB or more |
| Channel separation (EIAJ) | 108dB or more |
| Wow and flutter (EIAJ) | Below a limit of measurement (\pm) 0.001% W.PEAK) |
| THD (EIAJ) | 0.0022% or less |
| Output voltage (EIAJ) | 2.2V \pm 0.3V |
| The number of channels | Two channels (stereo) |
| Digital output | Coaxial output: 0.5 Vp-p/75ohm Optical power: -15dBm--20dBm (wavelength of 660nm) |
| Power source | AC100V, 50Hz/60Hz |
| Power consumption | 14W |
| Dimensions | Width 420x height 127x depth of 320mm |
| Weight | 8.5kg |
| Adjunct | Remote control |