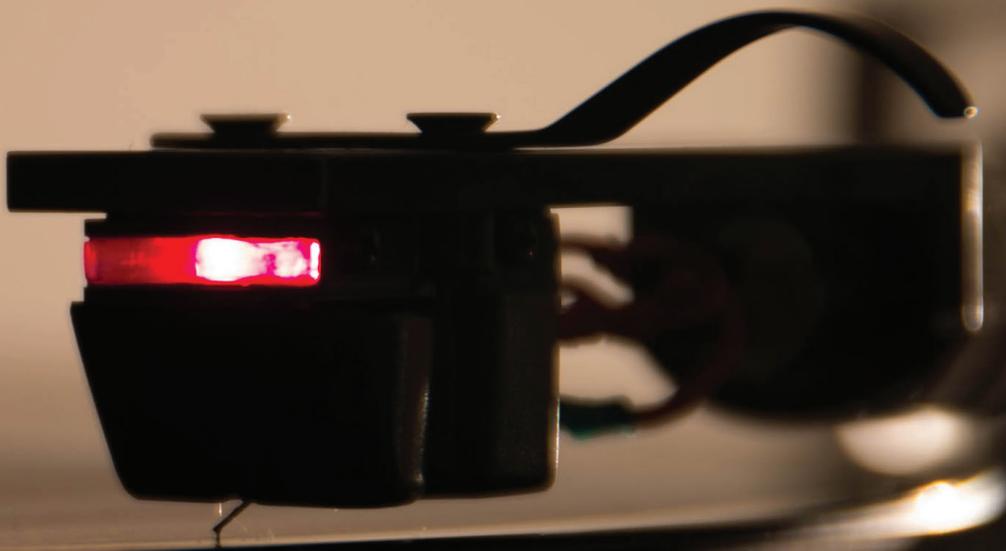


DS Audio

DS-W1 “Nightrider” Optical Phono Cartridge and Equalizer

analog
アナロググランプリ
Grand Prix
2015



DS Audio proudly announces the DS-W1 “Nightrider” — the Renaissance of the Legendary Optical Cartridge. Many audiophiles recall Optical cartridges were introduced in Japan in the 1960s with a very positive reception. Unfortunately, precision mechanisms and sophisticated optics did not exist then, making optical cartridges difficult to manufacture.

The DS-W1 is the re-creation of this legendary cartridge with State-of-Art laser optical technology. DS Audio is the newly formed audio business group of Japan’s Digital Stream Corporation (“DSC”), a leader in the laser optics market for more than 25 years. DSC is the provider of industrial laser optics systems in the optical disc market, including disk evaluation systems and various laser optical instruments. The Optical mouse was co-developed by Microsoft and DSC.

The DS-W1 Optical cartridge uses Photo-electric Conversion to generate the audio signal. It detects stylus vibration with a beam of light. The Optical cartridge uses very modern technology but there is no digital process involved in the playback of a vinyl record. The DS-W1 includes a dedicated Equalizer/Power supply. This device replaces the “phono stage,” allowing you to connect directly to a line-level input on a preamplifier.



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DS-W1 "Nightrider" Optical Phono Cartridge and Equalizer

The Advantage of Optical

Traditional MM/MC phono cartridges use electro-magnetic generators. For an MC cartridge, the stylus/cantilever moves a coil of wire within a magnetic field, and is superior to an MM cartridge due to a lower moving mass. An MC cartridge has to combine coil design, magnet strength, and generator characteristics to create real-world output without distortion and overload. Resistive loading of the MC cartridge helps adjust its performance, both mechanically and electrically.

The DS-W1 Optical cartridge is a pure analog system that detects stylus vibration by a beam of light and has extremely low moving mass. This innovative design makes it possible to eliminate the issues that intrinsically exist in any MM/MC cartridge. The DS-W1 is housed in a machined aluminum body and weighs only 6.5 grams as it does not contain any magnets. It uses a boron cantilever and Shibata stylus and tracks at between 1.3 and 1.7 grams, with 1.5 being optimal.

A Better Interface

MM/MC cartridges belong to the Velocity-proportional method where the output signal depends on how fast a magnet or coil moves within the magnetic field. At lower frequencies, it moves slowly in the magnetic field, so the output signal level is very weak. Conversely, at high frequencies, it moves faster, so the output signal becomes disproportionately strong. The phono preamp requires complex circuitry to compensate and correct Velocity-Proportional output signals in addition to RIAA equalization.

The Optical cartridge belongs to Amplitude-Proportional method where the output signal depends on how much distance the stylus is moved, and is not frequency dependent. It only requires a very simple, high-quality circuit, and uses passive RIAA EQ. The DS-W1 phono stage is manufactured with an oversize power supply using Schottky-Barrier diode for fast recovery time and increased efficiency. It is a discrete, dual-mono circuit using high performance film capacitors housed in a rigid chassis with mechanical grounding via spiked feet and spike pads.

Sound at the Speed of Light

The DS-W1 "Nightrider" Optical phono cartridge is a unique product capable of exceptional purity and dynamics. DS Audio has realized the full potential of this design with modern technology, creating a welcome addition for all serious vinyl playback enthusiasts.

