

LLK5

optical sound laser film recorder

The LLK5 is a new type of optical sound recorder which enables substantial improvements in quality of optical sound recording by applying „state of the art“ laser technology.

It simplifies the production of the sound negative significantly since no mechanical moving parts are employed in the optical recording path, and offers exceptional proven operational reliability.

The exposure of the analogue mono or stereo sound track is carried out by a focused and scanned beam of a HeNe laser, emitting green light at a wavelength of 543 nm. The laser beam is deflected perpendicular to the film transport direction in relationship to the audio signal by acoustic-optical modulators and deflectors. The beam records equidistant light application tracks with a width of 5-7 μm , the envelope of which corresponds to the contours of the analogue optical sound track.

The constant distance of the scan tracks on the film is ensured by triggering the beam movement through a rotary encoder on the sprocket sound drum. This technique also facilitates the excellent wow and flutter characteristics of the LLK5 because the recording is independent from the film speed due to the digital buffer storage of the sound within defined limits.

Features

- high reliability
- easy to use
- excellent sound quality
- simultaneous recording of analogue mono/stereo sound, optional DTS, DOLBY SR*D and SDDS
- master and slave bi-phase coupling
- insensitive to frequency and level overload
- very low wow and flutter
- substantially improved frequency response
- almost no ground noise even with critical Source material.
- complies with RoHS directive



LLK5 Main Specifications

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| Format: | Optical sound, stereo on 35mm negative film according to DIN 15503 and ISO 7343 , DTS Time code Track, SR*D and SDDS optional |
| Exposing system: | Green HeNe Laser beam < 0,5mW/ 192 kHz scanning frequency |
| Frequency response over positive: | Adjustable equalizer 20 Hz – 16 kHz +/- 1db |
| Selectable audio inputs: | 1. Two channel analogue, transformer balanced, Input level 0 db – 20 db, level meter and limiter 2. AES/EBU, 48 kHz sampling frequency |
| DTS-control signal input: | Opto Coupler for DTS-Generator |
| Output control signal for DOLBY SR*D: | Opto Coupler 96 Hz, adjustable phase reference |
| Audio monitoring output: | Max. level 10V/ 300Ohm 1. Headphone: 6,3mm jack 2. Line: XLR (transformer balanced) |
| VU- meter monitoring: | 0 db/ -10 db/ -20 db |
| Servo control: | Microprocessor controlled stepping motors, master/ slave coupling via bi-phase signal according to DIN 15573/2 |
| Synchronous film speed: | 24 frames/s |
| Wow and flutter weighted to DIN 45507 (IEC 386): | <0,01% |
| Run-up time: | < 2 s |
| Max. film cassette capacity: | 600m (1.970 ft) |
| Power requirement: | 220/ 240VAC, 50Hz (110VAC, 60Hz optional) |
| Power consumption: | approx. 400W |
| Operating temperature: | 15° C - 35°C (60°F – 95°F) |
| Dimensions: | 1800 mm (H) x 725 mm (W) x 800 mm (D) (6 ft x 2,4 ft x 2,6 ft) |
| Weight: | approx. 150 kg (330 lb) |

