

# Northlight scanner datasheet



The classic elegance of Northlight

Highest quality, pin-registered, digital film mastering

**Northlight has been adopted across the industry and is in use today at all premier studios across the globe. After six years in the marketplace, the Northlight scanner is still the benchmark for quality.**

## Northlight 1

Installed in over 40 high-profile studios worldwide, Northlight 1 handles any output format, crop, or aspect ratio up to 6K resolution. Robust engineering ensures an exceptionally long service life, plus on-site upgrades allow all Northlight 1 users to enjoy the powerful new features of Northlight 2.

## Northlight 2

The Northlight 2 matches – and surpasses – the requirements of the feature film industry as it embraces 4K workflow and digital cinema projection. Northlight 2 delivers up to six times the scanning speed of Northlight 1, with a native scanning resolution of 8K.



Northlight 2

## A workhorse and a precision instrument

We've designed Northlight for a very long service life. You'll find this in every detail including the marble surface, a non-static, rock-solid optical bench that also acts as a thermal stabiliser, and which gives each machine a unique character. Northlight is also built so that it can be upgraded in the field when new developments are released.

## Up to any job, without compromise

We built the Northlight with capability for 16 and Super16mm, and all 35mm formats including 2 perf, 3 perf and VistaVision. Format changes take just a few seconds. Any output format and aspect ratio or crop can be defined as well as anamorphic squeeze/unsqueeze.

Optional 16mm and 35mm keycode readers capture information at any transport speed, including while the transport is stationary. Automatic scanning from a keycode list is supported – Northlight embeds the keycode in the image header to assist downstream post-production.

## Dust busting

The scan capability on both the Northlight and the Northlight 2 enables automatic downstream dust busting processes using 3rd party software products.

The error map is encoded as a second image element into the DPX file to aid automatic dust busting packages.

Northlight's unique, vertical film transport is also specifically designed to minimise dust falling onto the film during the scanning process.

## EDL-based scanning

The Northlight can import CMX C-mode or **FilmLight** EDLs, both with optional handles. EDL functionality is fully compatible with the Baselight system and allows insertion of scan control commands like format change, exposure setting and scan orientation. An integrated film stock database allows automated scanning of select rolls containing a variety of film stocks.

Like all other Northlight control features, EDL operation can be driven either from the command line, using scripts, or from the graphical user interface. Single events, groups or entire lists can be processed as required.

## Keycode reader

The custom designed Northlight keycode reader is capable of capturing perf accurate keycodes whether the film is shuttling at full speed or scanning frame by frame. It is fully integrated into the scanning process, allowing keycode search, frame accurate keycode-based operation and simultaneous embedding of keycodes and timecode into DPX files.

## 16mm option

Film scanning becomes a viable alternative to telecine transfer with the 16mm option for Northlight, providing superb, dual-pin registered stability and up to 4K resolution. Scanning at the highest quality captures the full detail available on the latest 16mm stocks, enabling both the best fidelity in terms of HD transfers and digital 35mm blow-up for theatrical release. With a format changeover and setup of a few minutes, Northlight caters for all common stocks.

## Archive and restoration

New archive and restoration tools place Northlight firmly in the emerging high-end film restoration market; these include pinless scanning with extended image area (including perfs), handling shrunken film and recombining separations.

## DCI-ready

Northlight integrates with other **FilmLight** or third party applications to produce definitive, DCI-compliant masters without dither or noise.

## Features

### Northlight 1 & Northlight 2

- Scanning speed
 

| Northlight 2           | Northlight 1           |
|------------------------|------------------------|
| 4K 35mm 0.8 sec/frame  | 4K 35mm 4.7 sec/frame  |
| 2K 35mm 0.5 sec/frame  | 2K 35mm 2.6 sec/frame  |
| 2K S16mm 0.4 sec/frame | 2K S16mm 2.1 sec/frame |
- Embedded defect map option assists with automated dust-busting
- True 16-bit colour depth
- Ultra low noise linear motor scan action
- Revolutionary, pin-registered projector design with fast spooling
- Easy to load, safe transport with push button re-racking
- Unique projector action allowing all current film formats – 16mm, Super16mm, 2/3/4/8 perf 35mm
- 8 perf VistaVision and 3 perf gate options
- Stable 700W metal halide diffuse illumination system
- Up to 8K 35mm or 4K 16mm
- Academy/scope/full-gate/user-defined crops as required
- Full resolution oversampling at all output resolutions
- Full pin registration with exchangeable pin blocks
- Fully indexed for scanning frame-accurate to EDLs
- 2000' roll capacity
- Automatic generation of high quality proxy images
- Outputs 10-bit or 16-bit log DPX/Cineon files to standard file system

- Designed to allow unattended roll end-to-end operation
- Optional 16mm and 35mm keycode readers
- Ability to output monochrome DPX files

### Northlight 2

In addition, Northlight 2 also has the following features:

- Speed enhancements provide a scan time at 4K resolution of 0.8 seconds per frame
- New reflective lens design with a diffraction limited optical resolution of over 200 line pairs/mm
- 8K CCD line arrays provide true alias-free 4K resolution



Northlight's pin-registered film transport

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**FilmLight**