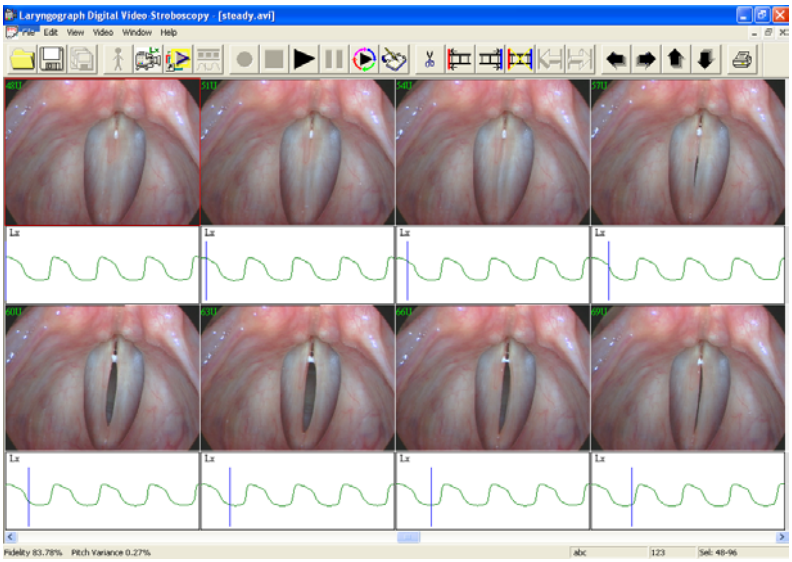
LxStrobe3

Ultimate image quality

LxStrobe3 combines Laryngograph's 3rd generation precision stroboscopy software with the high power **Lx Light Source** and broadcast standard video hardware to provide a digital, state of the art, software controlled stroboscopy system. Uncompressed RGB video provides the ultimate in diagnostic image quality.



The Laryngograph waveform is marked at the precise phase where the flash was fired. In the case above one complete period is represented by eight video images, which have been displayed with their associated flash markers in blue superimposed on the Laryngograph waveform.

LxStrobe3 will create stroboscopic sequences for even the most difficult subjects, with fast capture, review and animation options.

Synchrony markers displayed on the triggering waveforms permit critical evaluation of the validity of the stroboscopic sequences. They also provide a context for the interpretation of image sequences, even where vibration is irregular and a false impression might otherwise be gained of the real motion of the vocal folds.

Features

Choice of uncompressed RGB video for the ultimate in image quality or compressed video for reduced file size.

Variable intensity light source for best quality images with rigid or flexible laryngoscope.

Footswitch control to start/stop recording, mark sections of interest and start playback.

Single flash per video field avoids blurring due to multiple exposures. Full software control of light source and stroboscopic functions.

Rapid animation of simulated vocal fold cycles.

No videotape means instant access to digital video images.

Easy archiving onto DVD.

Synchronised side-by-side replay of vocal fold cycles for evidence based outcomes e.g pre- and post-surgery.

Cross correlation of stroboscopic, Lx (EGG) and speech processing techniques and measures.

Option to add Speech Studio, a voice analysis and outcome measurement system.

Pitch extraction from Laryngograph for superior tracking of fundamental frequency and unsmoothed calculation of triggering point.

Laryngograph

ISO9001:2000
ISO13485:2003
FM73968

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Specifications

Light source

Lamp	High efficiency xenon lamp with integral mirror. Maximum input 300W. Variable input energy 0.5J - 2J/flash at 50 Hz. UV rejection coating.
Flash duration	10µs
Colour temp.	12,000 K, for stroboscopic illumination mode
Lamp life	> 100 million flashes at 1 J/flash (> 550 hours at 50 Hz)

PC

- P4 processor, 512 Mb RAM, 300 GB SATA HDD, DVD+RW
- Broadcast standard RGB framegrabber card
- 3 way footswitch – Record start/stop, Mark/Grab, Playback

Laryngograph Processor

Microphone	Omnidirectional (pressure sensitive) electret, +/- 2dB 100Hz to 10kHz noise level 26dB (SPLA), dynamic range 88dB
Laryngograph	Gold plated electrodes in small, medium and large sizes
Bandwidth	+/- 1dB, 1Hz to 10kHz
Gain	0-22.5dB, software adjustable

USB Interface

Analog inputs	4 channel, +/- 5V, 16-bit A to D, 90dB dynamic range
Sampling rate	24, 16, 12kHz
PC Interface	USB 2.0

LxStrobe3 Software

Live camera mode

- generates flash triggers to light source
- captures video to hard disk simultaneously with speech and Laryngograph (Lx) waveforms with choice of compressed (MJPEG) or uncompressed quality
- mark good sections during recording with footswitch
- snapshot mode to grab 1, 2 or 4 images direct to printer (no capture)

Movie player

- replay recordings simultaneously with speech and Lx waveforms
- instant access to marked sections
- edit recordings
- write clinical notes

Edit mode

- multiple image view with marker on Lx waveform indicating the phase of the flash
- montage view of a complete slow motion cycle
- animation of a complete slow motion cycle
- side-by-side phase synchronized comparison of stroboscopic recordings
- generate reports

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