

# UGA-42 Firefly

## Point Scanning Device for Photomanipulation

The UGA-42 Firefly is a galvanometer based system designed for fast, dynamic illumination of points or user defined regions of interest (ROIs) in the field of view of the microscope.

### APPLICATIONS

*Optogenetics*

*Photoactivation*

*Neural Mapping*

*Photostimulation*

*Photoconversion*

*Photoswitching*

*Photolysis / Uncaging*

*Photobleaching / FRAP*

*Temperature Jump*

*Ablation /  
Microdissection*





## SYSCON-SOFTWARE

Runs independently of and in parallel with 3rd party software (e.g. imaging, electrophysiology)

Communication protocols for Metamorph, ZEN Blue/2/Black, Nikon Elements, µManager

Control of multiple lasers within the same experiment

- Digital & analog modulation for Rapp and 3rd party laser systems (if supported by the laser)

“Click & Fire” mode

- Real time photomanipulation
- Spots & user-defined ROIs are illuminated at the click of the mouse
- User-defined exposure times

“Sequence” mode

- Programmable sequential illumination of multiple locations
- User-defined ROIs
- User-friendly ROI and timeline editor

In/Out TTL-triggers for synchronization

- Manual or TTL-triggered sequence start
- Separate triggers for single events within the sequence
- User-defined TTL-outputs to control other devices

## FEATURES

Integrated, add-on photomanipulation system

Programmable, computer controlled point illumination

Spot size as small as submicron

Real-time photomanipulation in “Click & Fire” mode

Sequential illumination of points and ROIs in “Sequence” mode

Precise, user-defined spatio-temporal control

Simultaneous photomanipulation and image acquisition

Two TTL inputs and two TTL outputs

Up to 4 lasers independently controlled in one experiment

Wide choice of laser wavelengths available (UV/VIS/NIR from 266 up to 1470 nm)

