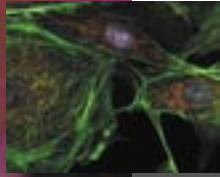


# BioPoint 2

Motorized Stages for Upright and Inverted Microscopes

*“Raising the standard for value priced automation”*



Leadscrew Drive

High Resolution Stepper Motor

Universal Microscope Mount

Ergonomic Design



Ludl Electronic Products Ltd.

# “Raising the standard for value priced automation”

## BioPoint 2

The BioPoint 2 is the second generation value priced automation solution from Ludl Electronic Products. Specifically designed for productivity enhancement, the stage system is carefully designed to provide high performance for routine applications at a reasonable cost. Unique design features that were specifically developed for the BioPoint 2 stage improve the repeatability, resolution and ease of use. The BioPoint 2 stage features a Teflon coated leadscrew with a proprietary drive nut for long life, reduced hysteresis and higher repeatability. In utilizing the Teflon coated leadscrew, maintenance is virtually eliminated.

The hard-anodized finish on the stage resists wear from daily use and is resistant to discoloration from chemicals or harsh environments.

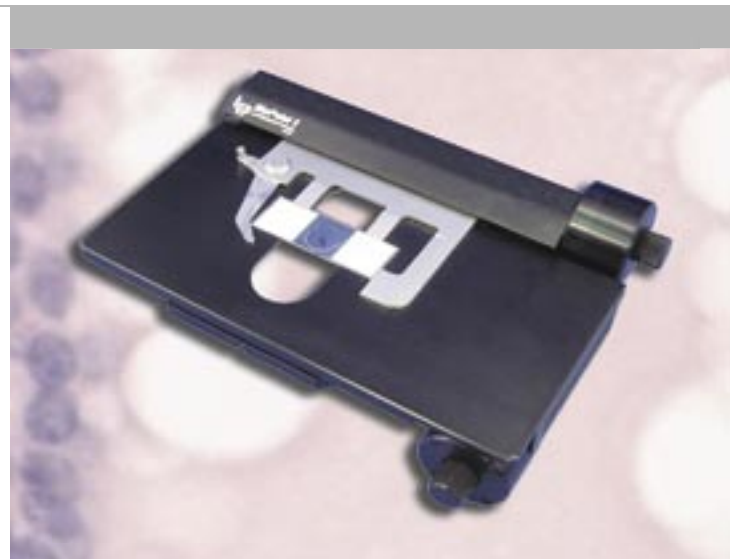
The BioPoint 2 systems are based on the popular MAC 5000 controller system. The MAC 5000 controller provides enhanced modularity and flexibility for the addition of accessories such as programmable focus drives and filter wheels.

The ease of use, integration and expandability make the BioPoint 2 system a high value automation system and an intelligent choice for microscope automation.

## For Upright Microscopes

The BioPoint 2 upright stage provides smooth, reliable positioning without interfering with conventional microscope operation. The design of the stage allows full access for specimen placement; microscope controls and adjustments are also easily accessible. The very low profile of the stage eliminates interference with microscope objective lenses; even the large diameter, short working distance, with high numerical apertures.

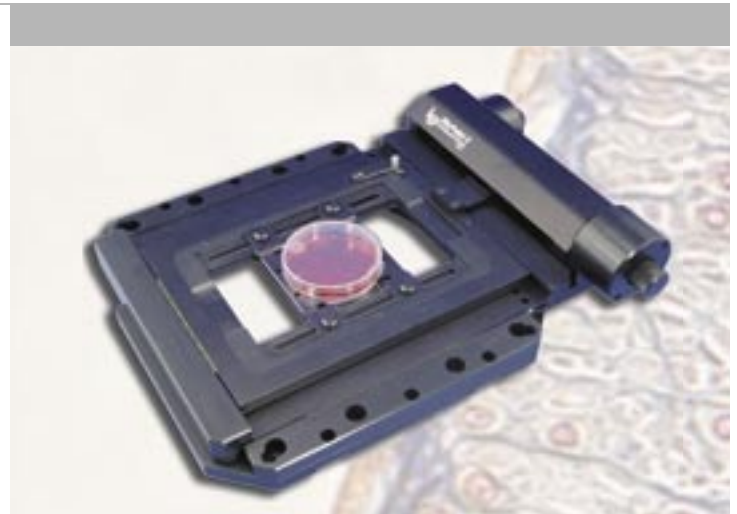
The universal mounting system mounts the stage to nearly any commonly available microscope. The exchangeable mounting ring provides the correct mounting and clearance to ensure that the condenser can be properly focused and adjusted.



## For Inverted Microscopes

The BioPoint 2 stage for inverted microscopes features the most compact arrangement of the drive leadscrews of any stage. The X-axis drive is very low profile and designed to eliminate interference from both the underside of the stage and the top side. In addition, the unique design offers totally unobstructed access to the specimen holders.

The BioPoint 2 inverted stage is designed to accept standard LEP inverted stage specimen holders. The standard holders are available for slides, petri dishes, multi-well plates, and flasks. Custom designed holders can be easily accommodated.



# Fully Expandable ...

## MAC 5000 Controller System

The BioPoint 2 systems use the MAC 5000 controller. The unique stacking concept of the MAC 5000 allows expansion as automation requirements grow. Modules can be added for additional automation axes. Filter wheels, focus controls and more advanced systems such as robotic specimen handlers can all be controlled from the MAC 5000 system. The stacking concept provides for custom configuration of each system while using the smallest amount of bench space.

Wide support for the MAC 5000 command language ensures full compatibility with most popular imaging applications; including Windows, Apple Macintosh and Linux systems.



## Z-axis / Focus Control

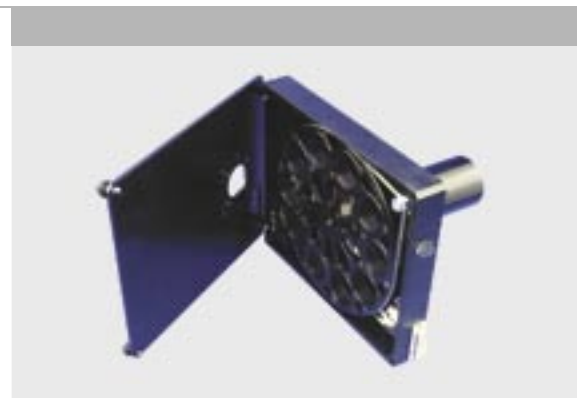
High resolution focus control is an important accessory for an automated system. With the addition of a high resolution stepper motor to the microscope focus, the system has the ability for integrating positioning in XY and Z axes. Applications include autofocus, image deconvolution, stereology and tele-imaging.

The standard focus drive motor couples to the coarse focus knob of most microscopes. This convenient mounting arrangement enables automated control of the microscope fine focus while retaining the ability to manipulate the coarse focus for specimen loading. Once engaged, manual focus control is accomplished with the joystick mounted digipot control.



## Motorized Filter Wheels

Programmable filter wheels are an essential component for automated fluorescence imaging. LEP offers several different filter wheels, each type suited specifically to the application. The basic filter wheel has a 10 filter capacity and built-in electronic shutter. Furthermore it has the unique ability to accept both 25 and 32mm diameter filter sets. In total there are six different filter wheels available to suit nearly any illumination requirement.



## Specifications

	Upright Stage	Inverted Stage
Travel Range	75mm x 50mm	120mm x 100mm
Step Resolution	0.025 $\mu$ m	
Position Repeatability	2 $\mu$ m	
Motor Type	0.9 degree stepper	
Maximum Speed	30mm/second	
Weight	1.96 kg	2.10 kg

*\*when used with LEP MAC 5000 controller system*

## Ordering Information

995054	MAC 5000 BioPoint stage controller. Includes system power supply, RS-232/USB interface, XY motor driver module, XY digipot joystick, interface cable and linecord.
99S201	BioPoint 2 stage for upright microscopes. Includes XY stage, specimen holder for 1"x2" and 2"x3" slides, connection cable and microscope specific mounting ring.
99S209	BioPoint 2 stage for inverted microscopes. Includes XY stage, connection cable and microscope specific mounting kit. Requires specimen holder.

*\* please specify exact microscope make and model when ordering*

## Inverted BioPoint 2 Accessories

99A061	Single slide holder for 1"x3" glass slides for inverted stages
99A062	Single slide holder for 2"x3" glass slides for inverted stages
99A063	Multi-well plate holder for inverted stages
99A064-n	Fixed Petri dish holders, available for 36,39,51,54,60,65,88 and 90mm diam. dishes
99A074	Adjustable petri dish/slide holder for inverted stage

*Please call for additional accessory information*

## Options

Z-axis expansion	99A400	Z-axis motor, bracket and coupling for microscope focus
	7305056	Single axis focus motor control for MAC 5000

Filter Wheel Expansion	7305081	Filter control module for MAC 5000 (required)
	99A350	Filter wheel, 10 position 25/32mm filter diameter, integral shutter
	99A351	Filter wheel, 6 position 25mm filter diameter for emission applications
	99A360	Electronic shutter, 30mm aperture

*other filter wheels and accessories available, please call for more information*

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