



## GIX Microplotter® II

### Compact, precise picoliter printing

#### Key Features

- Noncontact deposition
- Features as small as 5µm
- Viscosities up to 450 cP
- True contiguous lines, arcs, and bends
- Consistent spot size and shape with coefficients of variability as low as 10%
- 3-axis positioning with 5 µm resolution
- Integrated digital video capture
- Automated surface calibration
- Interchangeable holding platen for a variety of substrate sizes
- SonoGuide™ software for full automation and control
- SonoDraw™ software as a CAD layout tool

#### Applications

- Rapid prototyping
- Graphene / carbon nanotube printing
- Additive repair
- Polymer microstructure fabrication
- pOLED printing
- High-density protein microarrays
- Patterning of live cells

#### For More Information

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The SonoPlot® GIX Microplotter II is a precision picoliter fluid dispensing system for the microarray and polymer electronics markets with significant advantages over existing products in deposited feature size and type, regularity of volumes dispensed, and flexibility for the user.

The core of the Microplotter is a dispenser that uses controlled ultrasonics to deposit fluid in a noncontact manner. This patented technology can produce picoliter droplets that form features on a surface as small as 5 µm wide. When combined with automatic surface height calibration, coefficients of variability for deposited feature diameters as small as 10% can be achieved. A wide range of fluids can be used, including aqueous solutions and many organic-solvent-based mixtures. Fluids that other dispensers struggle with, such as saturated solutions for MALDI-ToF matrices, or fluids with viscosities up to 450 cP, can be deposited with ease. The ultrasonic pumping action is also an efficient cleaning mechanism for quickly depositing many solutions sequentially.

In addition to spots, the GIX Microplotter II can draw true continuous features, such as lines, arcs, and bends. These are uniform elements, not made from overlapping droplets like other technologies, and are particularly well-suited to the polymer electronics field.

#### Technical Specifications

<b>Feature size</b>	5 µm - 200 µm
<b>Feature types</b>	Droplets and contiguous lines, arcs, and bends
<b>Deposition volume</b>	≥ 0.6 pL
<b>Deposition variability</b>	As low as 10%
<b>Viscosity</b>	≤ 450 cP
<b>Positioning</b>	31 x 30 x 7 cm (X, Y, Z axes) 5 µm resolution
<b>Calibration</b>	Automatic surface height calibration
<b>Camera</b>	FireWire® with digital video capture
<b>Computer</b>	Included, running Mac OS® X
<b>Software</b>	SonoGuide and SonoDraw, preinstalled on computer
<b>Dimensions</b>	70.6 x 64 x 55.9 cm (27.8 x 25.2 x 22 in.)
<b>Weight</b>	59 kg (130 lbs)
<b>Power</b>	3.0 A for 100-120 V or 1.5 A for 220-240 V