

# FENIX Laser Marker



## Unsurpassed marking performance at an amazingly low price!

Think laser marking is too expensive for your budget? Think again! An unprecedented combination of high performance and low cost, Synrad's new Fenix laser marker represents a breakthrough in laser marking technology. Priced at just \$15,900\*, Fenix offers all the features of other laser marking systems on the market - at a fraction of the price!

### High marking performance

The Fenix laser marker creates crisp, indelible marks on a wide range of materials, including plastics, paper, metal, wood and more.

Alphanumerics, graphics, and bar codes can be marked at speeds up to 180 characters per second. Fenix's high-frequency laser control results in smooth, continuous marks at high speeds - even when magnified! High resolution images can be laser marked at up to three times the speed of typical laser engravers.

### Advantages of laser technology

Fenix is powered by a 25 watt Synrad sealed CO<sub>2</sub> laser. Designed to withstand the toughest industrial environments, a Synrad laser can be expected to operate for tens of thousands of hours, virtually maintenance-free.

Lasers offer improved reliability and throughput over other marking technologies, such as inkjet printers, pen plotters, and mechanical engravers. There are no expensive and messy inks to replace, and no hazardous solvents to dispose of. Because laser marking is a non-contact process, there is no tool wear, which adds up to less downtime and added cost savings.

### Send us your samples!

Find out if laser marking will work for you by taking advantage of our **FREE** process evaluation. Just send us a description of your current process, an example of a "finished" product, and some unmarked samples. You'll receive a Synrad SamplePak containing your marked samples, along with a written materials evaluation and additional information on implementing laser technology.

### Easy to operate

Operating Fenix couldn't be more simple with Synrad's own Windows®-based software. WinMark Lite, included as standard with Fenix, enables users to perform a wide variety of marking functions with ease. For advanced industrial applications, such as bar coding, automation, and serialization, users can upgrade to the feature-rich WinMark Pro™. With familiar toolbars, pull-down menus and dialog boxes, WinMark Lite and WinMark Pro intuitively guide users through the set up and execution of any marking application.

Users can also execute some marking commands directly from Fenix's control panel. Features include a test mark button, power increase/decrease function, laser on/off command, and emergency stop.

### Easy to integrate

The first complete laser marking system that can truly be considered a component, this rugged, self-contained system is as easy to set up and operate as a light bulb - just plug it into the wall, connect it to a standard, user-supplied PC, and Fenix is ready to start marking!

### Low cost

Lasers have always offered long-term cost savings, but, until now, their initial price was often too high for many companies' budgets. Priced about 1/3 less than comparable systems on the market, Fenix makes all the benefits of laser marking more affordable than ever!



## Marking Specifications

	Focusing Lens Size			
	370mm	200mm	125mm	80mm
Field Size, typical (mm)	200 x 200	110 x 110	70 x 70	27 x 27
Spot Size, 1/e <sup>2</sup> (µm)	540	290	180	116
Working Distance <sup>1</sup> , typical (mm)	368	201	128	81
Depth of Field, typical (mm)	±10	±2.5	±1.5	±0.4
Incident Angle, max	19	16	12	5
Marking Speed <sup>2</sup> (characters / sec, max)	180	180	180	180
Position Accuracy (mm)	0.05	0.03	0.02	0.01
Position Resolution (µm)	<15	<9	<6	<3
Repeatability (mm)	0.063	0.038	0.025	0.015
Settling Time, Small Step - 1% of field (ms)	<0.8	<0.8	<0.8	<0.8

<sup>1</sup>The exact distance is marked on each individual focusing lens mount since the working distance may vary from lens to lens within ±10 mm. For this reason, it is important to provide a Z-axis adjustment between Fenix and the marking surface.

<sup>2</sup>Based on character height of ~2mm (character size dependent on lens used).

### Input Requirements

Input Power	85-132 VAC / 170-264 VAC, 1φ (Universal Mains Voltage)
Input Fuse Rating	10A, 250 VAC

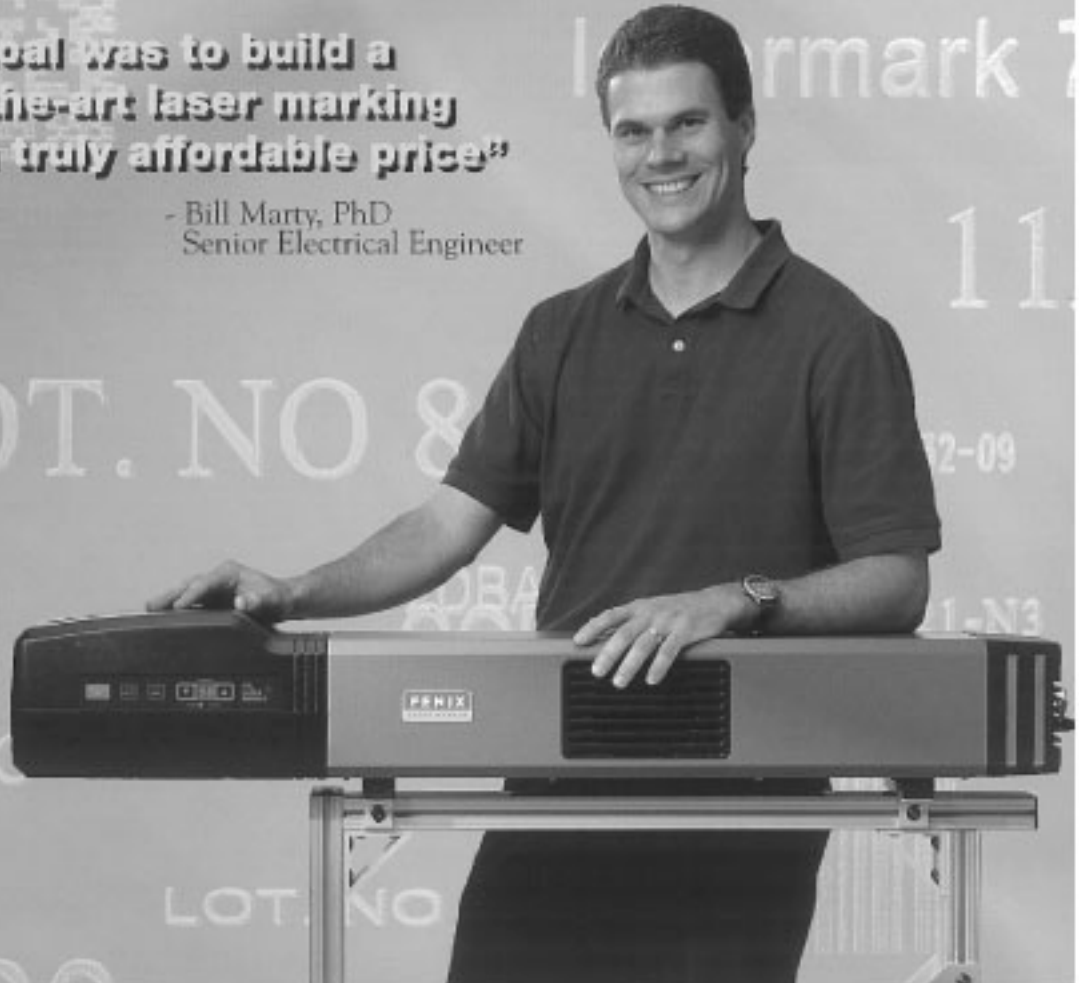
### Dimensions

Length x Width x Height (mm)	1185 x 245 x 188
	(in) 46.67 x 9.66 x 7.39
Weight (kg)	28.1 (~62 lbs)

Specifications subject to change without notice

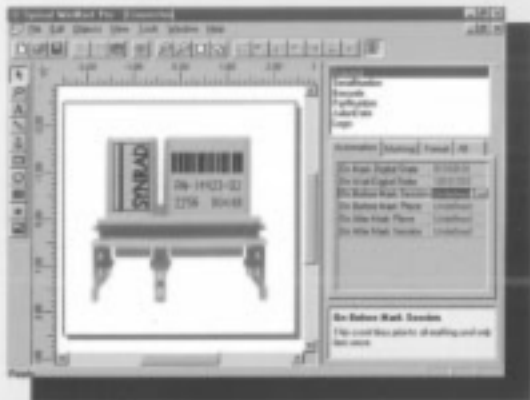
**"Our goal was to build a state-of-the-art laser marking system at a truly affordable price"**

- Bill Marty, PhD  
Senior Electrical Engineer



# Laser Marking Made Simple

## WinMark<sup>pro</sup>



The familiar Windows format of Synrad's laser marking software makes marking your product a simple task!

## WinMark<sup>lite</sup> for FENIX LASER MARKER

Fenix operates from Synrad's easy-to-use Windows<sup>®</sup>-based software, WinMark Lite or WinMark Pro™. Both offer flexibility, reliability, and intuitive ease-of-use to every user.

WinMark Lite, included as standard with Fenix, allows you to choose from thousands of TrueType fonts, create shapes in its powerful drawing editor, and import logos and graphics. You can even use WinMark's Virtual Laser Marking to accurately position marks over an image of your part.

For more complex industrial applications, upgrade to WinMark Pro, and add bar coding, serialization, and automation capabilities. It's never been easier to integrate laser marking with parts handling and information systems. With WinMark Pro's ActiveMark™ technology, you can create laser marking applications in Access, Microsoft Office, Visual Basic, and other popular programs.

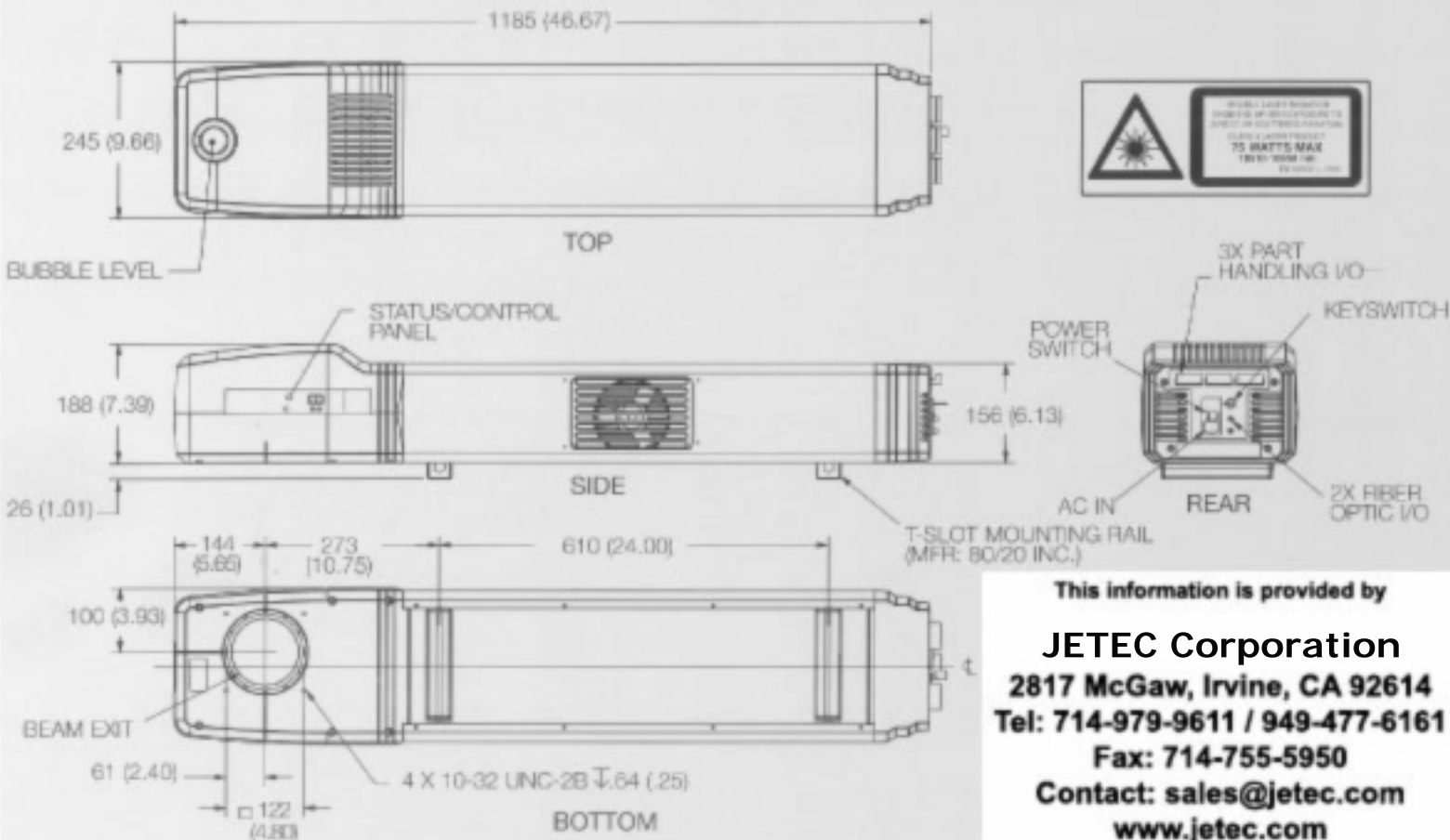
WinMark Lite and WinMark Pro offer the following features:

- Thousands of TrueType fonts supported
- Fast stroke fonts for high speed marking
- Import numerous raster formats
- Import numerous vector formats
- Create lines, polygons, circles, and more
- Powerful property-driven user interface
- WYSIWYG drawing editor
- Adjustable field size
- Velocity control by object
- High positional precision
- Launcher application included for quick launching of mark programs
- Virtual Laser Marking

Upgrade to WinMark Pro to include the following capabilities:

- Bar Code Marking
- Process Automation
- Serial number marking (alphanumeric and fixed characters)
- Configurable date code text
- ActiveX / OLE Automation

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dimensions are in millimeters (inches)

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