

# Educational Workbench Solutions

## **Engineered To Boost Your** Capability And Performance

The right tools can really make a difference especially for educators who must make every dollar count. Highperformance, value-priced technical education solutions from Roland really go the distance. Time-tested, engineered for simplicity, yet fine-tuned to deliver the power and features you need to really make education come alive for your students.

#### MDX-15 Product design and manufacturing educational bundle.

The MDX-15 product design and manufacturing educational bundle is a state-of-the-art training module that teaches students how to transform their ideas into real products. It focuses on creative problem solving and product design rather than G-code programming, making learning fun with easy-to-use tools. Students learn how to create multiple models using Rhino<sup>™</sup> CAD software, generate manufacturing tool paths within Roland MODELA Player<sup>™</sup> CAM software, and mill real prototypes out of wax. The Design & Manufacturing bundle is a complete semester worth of materials,

Including:

- Roland MDX-15 milling machine with work holding clamp
- Rhino CAD (Computer Aided Drafting) software
- Roland MODELA Player CAM (Computer Aided Manufacturing) software, Roland Virtual MODELA<sup>™</sup> CAM simulation software, Dr. Engrave and 3D Engrave software
- Teaching Guides (Teacher and Student versions)
- Nine lessons developed by a veteran educator 40 Pieces of machineable wax and 2 end mill tools

#### **MDX-40** The performance SRP<sup>TM</sup> (Subtractive Rapid Prototyping) machine of choice.

- 15,000 rpm spindle
- Roland Active Piezo Sensor technology for reverse engineering
- Large 12" x 12" x 4.12" work area
- · Bundled with MODELA Player CAM software, MODELA 3D Design software, Dr. Engrave, 3D Engrave, Dr. PICZA<sup>™</sup> scanning software and Virtual MODELA CAM simulation software

#### Take a look under the hood of the mid-range MDX-40 performance milling machine and see why

it's the ultimate choice for desktop prototyping, precision models and CO<sub>2</sub> car competitions. The high-speed 15,000 rpm spindle is perfect for prototyping parts in a wide variety of engineering plastics. Rotary four-indexed axis design makes unattended two through four-side milling fast and simple. An optional 3D scanning head using innovative Roland Active Piezo Sensor technology is ideal for reverse engineering.

LPX-250 Laser Scanner The advanced rotary and plane scanner in one.

The LPX-250 has revolutionized 3D laser scanning. Combining both rotary and plane scanning in a single machine, the LPX-250 comes complete with powerful software and the lowest price in the industry. The LPX-250 is the ideal input device for CAD, allowing you to digitize objects quickly, economically and accurately, right on the desktop.

- Plane scanning captures side cuts and cavities at up to 0.008" resolution
- · Rotary scanning quickly scans entire objects

at up to 1800 steps per revolution

- · Fast and accurate non-contacting laser sensor
- 16" height x 10" diameter
- Easy Scan mode makes it easy to transform a 3D object into a four-surface scan
- Pixform<sup>™</sup> software included for decimating, editing, and healing scanned data
- Bundled with Dr. PICZA3 scanning and Pixform reverse modeling software























#### EGX-300 The choice for versatility and performance.

Proven technology, functionality, and versatility in one of today's most advanced computerized engraving systems available. The EGX-300 makes it easy to engrave a wide variety of surfaces, from awards to ADA signage. The EGX-300 features an emergency stop switch and a safety cover with an interlock switch which automatically pauses the machine when opened. Enjoy a large enough work area for a diverse range of projects, yet small enough

to fit on any desktop.

- 30-watt, 15,000 rpm spindle
- Create and import reliefs from any source
- Emergency stop switch and safety cover
- 12" x 9" x 1.18" work area
- Bundled with Dr. Engrave<sup>™</sup>, MODELA 3D Text<sup>™</sup>, 3D Engrave<sup>™</sup> and Virtual MODELA Player software.

### Supercharge your projects with powerful software tools.

Roland educational workbench solutions come with easy-to-use software that makes it simple to begin using your new scanning, milling, engraving, and cutting tools right out of the box. Each comes complete with step-by-step tutorials and all are designed to work with popular standards in a wide range of industries, from product design, sign- and displaymaking, and promotional engraving, to jewelry-making and animation.

**Dr. Engrave** gets you started fast, automatically sizing your job to fit the specified material. It comes with Windows<sup>®</sup> TrueType<sup>T</sup> fonts and can convert them to single-line fonts for optimal engraving. Plus, it gives you the ability to import Excel<sup>T</sup> and CSV database files — useful for nametags and nameplates.

**MODELA 3D Text** converts Windows TrueType fonts into MODELA Player or 3D DXF format for engraving reliefs.

3D Engrave transforms 2D graphics or bitmaps into 3D relief models.

**Virtual MODELA** simulates finished 3D models and accurately estimates machining production time. Add lighting effects, material color, and bitmap overlays to represent the finished product quickly and easily.

**MODELA Player** makes it possible to scale 3D images uniformly and select milling direction, depth and speed. MODELA player accepts DXF, IGES, and STL files from all popular CAD/CAM software.

**MODELA 3D Design** gives you the ability to create and add color to 3D objects, such as cylinders and spheres. Import files directly or export MODELA files in 3D DXF format.

**Rhinoceros**<sup> $\bowtie$ </sup> is a 3-D modeling software capable of modeling any shape you can imagine, with all the accuracy to design, prototype, engineer, analyze, and manufacture anything from airplanes to jewelry. Best of all it is compatible with all your other CAD/CAM, rendering, animation, and illustration software.

**Dr. PICZA** is comprehensive, dedicated scanning software that reduces data volume by minimizing resolution on all or part of the captured data. It can also rescan part of the object at a finer scanning pitch and automatically combine it with the original data. It supports an array of data formats, including DXF, STL, 3DMF, gray scale BMP, and can export as IGES files.

**Pixform™ and Pixform Pro.** Pixform, included with the LPX-250, enables you to decimate, edit, and heal scanned data. Convert a polygon solid to a NURBS surface in one easy step, then export it as an IGES file to industry-standard MCAD software. Pixform Pro, bundled with the LPX-1200, makes it easier and more efficient to edit 3D models. It enables you to merge scans for increased quality, change shapes around curved surfaces, sharpen edges, extend shapes, add thickness, and perform Boolean operations on polygon surfaces.

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