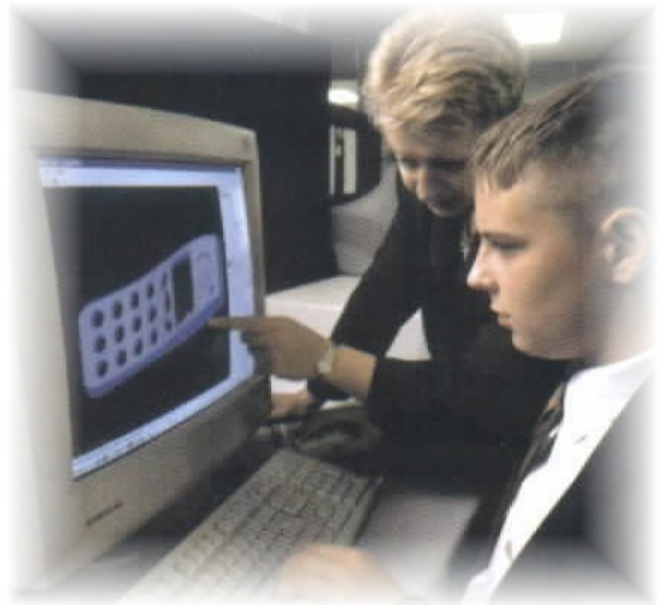


# RAPID PROTOTYPING SYSTEM

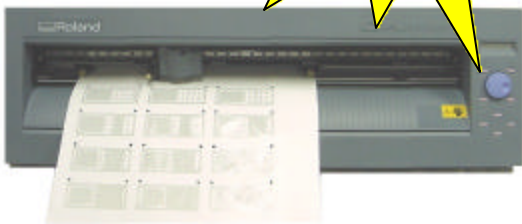
Using our state-of-the-art Rapid Prototyping systems, your students can create a model from their 3D design. Whether you design in AutoCAD Inventor, Pro-Desktop or any other 3D design package, our Rapid Prototyping systems can quickly and easily manufacture your design, at a very low cost. Our systems include the software, hardware, and supplies required to get started. As with all of our teaching systems, we provide on-site service, support, and training. And if you are already using one of our systems, feel free to attend our no-cost, hands-on workshops.



Popular classroom uses:

- Computer Aided Design
- Design and Production
- Pre-engineering
- Manufacturing
- Technology Education
- Art
- Science

Starting at  
\$3,999



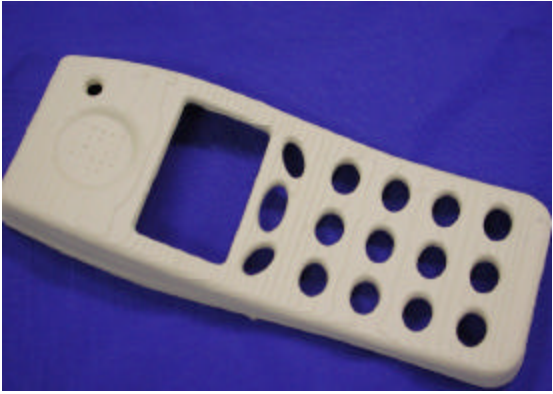
Rapid Prototyping packages include:

- **Rapid Pro** software, single or site license
- **Roland CX** series vinyl cutter
- **Rapid prototyping** starter supply kit
  - Squeegees
  - Coating agent
  - Hobby knives
  - Tweezers
  - Cutter protection strip
  - 250 sheets prototyping paper 15.75" x 22.5"
  - Brushes
  - Masking tape
  - Mounting pegs
  - Online & print user tutorials
- On-site installation and training
- **Free** workshop attendance

Crystal Creations  
3746 Heritage Drive  
Billings, Montana 59102

Phone: 800-575-5321  
Fax: 406-652-5954

Be sure to visit us on the web @  
[www.crystalcnc.com](http://www.crystalcnc.com)



**Rapid prototyping** systems all work on the principle of slicing a solid model into layers. The creation of the prototype begins with three-dimensional CAD data, such as an **.STL** file created from a **3D CAD** system. Once the CAD model is formed, it is sliced into thin slices. These slices then become the layers from which the prototype is grown. The tools and the materials used, vary widely across the technology.

**Rapid Pro** is an affordable approach to **Rapid Prototyping** technology that will give schools a chance to be exposed to an otherwise un-obtainable technology. Using **Rapid Pro** software, a standard vinyl sign cutter, and a few sheets of prototyping paper, students can begin creating complex and detailed scale prototype models.

**Rapid Pro** allows students to create working prototypes from designs created using any **3D CAD** system capable of saving files in **.STL** format. This is a common format in the CAD world and most of the popular **3D CAD** systems such as Pro/DESKTOP™, Pro/ENGINEER™, SolidWorks®, Rhinoceros®, Mastercam®, think3™, think-design™, CADKEY®, and AutoCAD® are all capable of exporting an **.STL** file.

The **Rapid Pro** “wizard” will walk the students through the process of importing their **3D CAD** file. Once imported, the wizard slices the model, and then cuts the slices in the prototyping paper, placing as many slices as possible on a single sheet of paper. To further minimize the material usage, the wizard will allow the model to be scaled to any size.

## Rapid Pro Overview

Insert the rapid prototyping paper into the sign cutter, and plot the sheet from Rapid Pro.



Once finished, remove the cut sheet from the machine.



Remove the excess paper from the model slices and discard.



Continue removing excess paper from every slice. Tape down the first frame with masking tape.



Insert pegs into the first frame to create a base for stacking the layers.



With the base layer taped to the desk, begin stacking the first layer.



Continue stacking layers. The model will get thicker as you proceed.



More detail is building at this point and the model will begin to take shape.



The entire number pad has now taken shape. Only a few layers remain.



Our model is complete at this point, ready to cut.



Using a hobby knife, the model is removed from the frame.



Coating agent is added to harden the model. Allow to dry and finish.

