

This section describes the purpose and benefits of Accucadd, lists the equipment required for using it, and directs you to the instructions for setting it up.

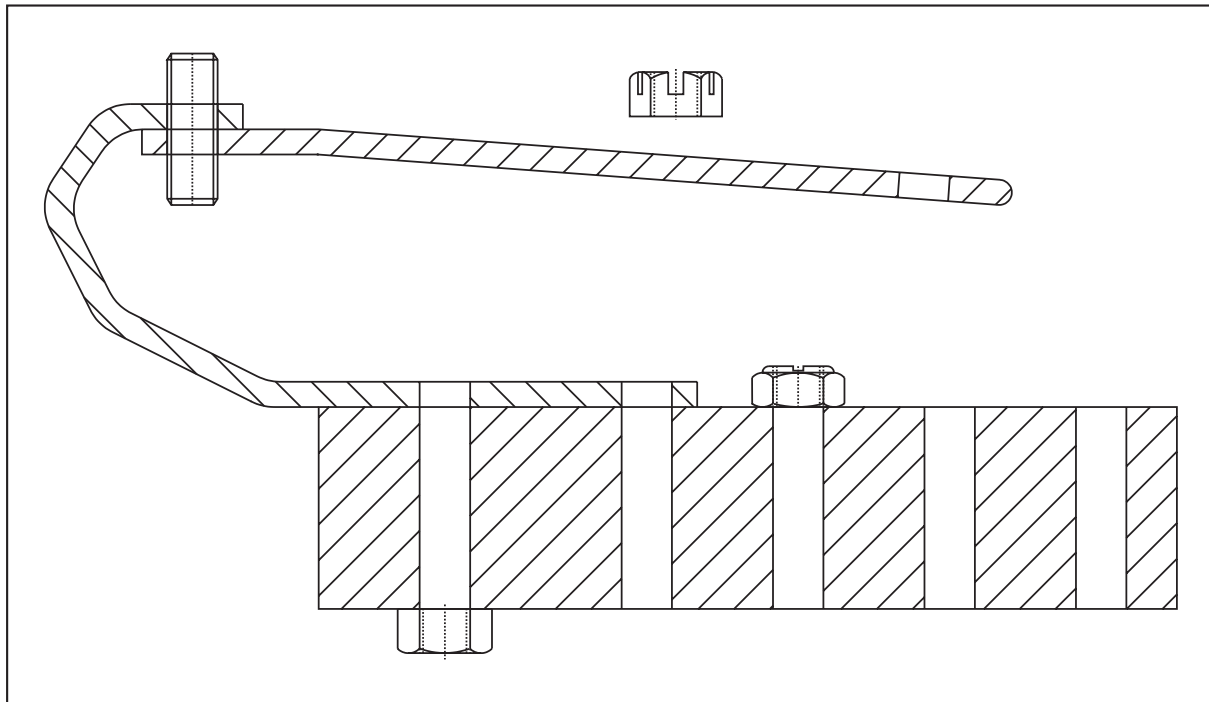
Accucadd is a Computer-Aided-Design software package. Previous RoboCAD products established their reputation as the friendliest available; Accucadd embodies major improvements, and has been completely rewritten for 32-bit Windows platforms.

Accucadd is a professional 2-D drafting package, replacing the draftsman's drawing board, giving far greater power and flexibility and the capacity for complex drawings.

**About this manual** This manual describes the Accucadd 2-D drafting program. It is a "What's this?" manual: when you are using Accucadd and you want to know more about what something is or details about what it does, this is the place to look. This is not a "How to" or tutorial manual. The Accucadd Quickstart Tutorial manual provides a good tutorial in using Accucadd.

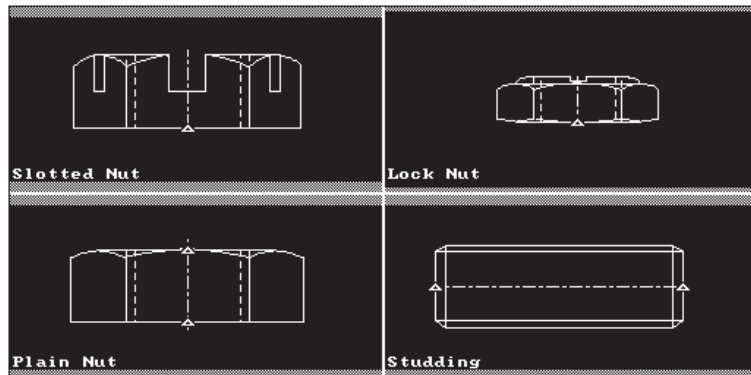
**Compatibility** Accucadd can work with files and drawing libraries created with older Robo Systems products, such as RoboCAD 20.

**Accucadd Overview** Like almost any modern computer-aided-design program, you will create drawings with Accucadd by "drawing" on the computer screen with a mouse. Accucadd makes this process simpler by a more "intuitive" design, and through better drawing organization.



Most engineering drawings are composite drawings, made by drawing unique parts, and then adding drawings of standard components (e.g., nuts, washers, resistors, windows, etc). The example shown here is very simple, but the technique applies to all drawings.

Accucadd's visual libraries exploit this idea, to make drawing work easier and faster.



**A library index** When you start a drawing project, you will draw the special components needed for the project, and save them onto a library index (like the one above). When you start work on a `real' drawing, you will draw outlines and construction lines, and then add (`Insert') components from the library.

**New Data** When you are drawing, the data you are creating as you draw is known as the `New Data'. It consists of the lines, arcs, labels, dimensions and so on that you have drawn, and which you can edit. New Data is very easy to understand, but if you worked only with New Data, your drawings would grow very large, and could be correspondingly slow.

**Inserts** When you Insert a drawing of a component into your drawing, Accucadd doesn't add the data making up the Inserted drawing to the New Data. Instead, it notes where in the library the Inserted drawing came from. This note, an Insert Record, takes up far less space in the New Data than a copy of the Inserted drawing would.

**Why use Inserts?** All CAD systems offer ways to use drawings of components, but Accucadd's library and Insert technique has several advantages:

It keeps down the size of the New Data, so that Accucadd works faster. ( Accucadd has no fixed drawing size limit, other than the size of your computer's hard disk.)

It makes it easy to update all your drawings, when the design of your components changes. Simply draw the new version, and use it to replace the old version in the library, and you will update all your drawings using that component.

Thousands of standard components and symbols are provided with Accucadd. These save you time and money, and make exchanging drawings with other organizations simpler.

You can *change* your drawing's structure by turning parts of it into Inserts (Imploding), or by 'exploding' an Insert, transforming it into New Data.

For more details on working with Inserts, see the description of EDIT: ISOLATE and Appendix D in this manual.

**Drawing** Accucadd's basic facilities allow drawing and editing of lines, arcs, circles and boxes, and hatching of selected items or regions. More advanced features include spline and Bezier curves, polygons, parallels to any path through a drawing, and concentric circles.

Accucadd uses high-precision floating-point data for even higher accuracy than RoboCAD.

**Labeling** The Accucadd Text Editor is a window on the drawing screen. It offers full editing facilities, and automatic incrementing of sequences of drawing labels. A full range of text fonts and justifications is provided, including automatic isometric text. Drawing attributes can be created in any desired format.

**Layers and Colors** To allow organization within large drawings, Accucadd uses 'Layering'. Layers behave like transparent sheets, with parts of your drawing on them. For example, you might put outlines on one Layer, Labels on another and dimensions on a third. Layers always stay in register, and can be hidden, or displayed in special ways. Tables of Layer definitions can be loaded and saved, allowing you to customize the layers for different drawing projects.

Your drawing can be displayed in color, without restricting the drawing to a particular type of display. 1000 Layers (numbered 0 to 999) and 256 color codes (numbered 0 to 255) are available. You may use all of the colors on any Layer, or choose to restrict a particular layer to one color.

**Editing** The editing functions enable you to work with any part, block, area, or path from a drawing. You can alter colors, layers, line styles and line widths. Any part of the drawing can be moved, copied, stretched or isolated. There is a powerful UNDO and REDO facility. Two drawing pages (and a 'scratchpad') are available to work with two drawings at once, such as a master and derived version, or for simple cut/copy and paste from one drawing into another.

**Networking/Machine-sharing** With a network, libraries can be shared by many users. The drawing booking system allows control of drawings and protection of reference drawings. An on-line log of changes to drawings is maintained. Without a network, the booking system allows control of several users

sharing one computer. You must be able to “Log On” to your computer to make use of these features.

- Output** Accucadd can produce high-quality output from your drawings, via a wide range of pen printers, dot-matrix and laser printers and other devices. Any printer or plotter can be used, as long as you have a Windows driver for it. Accucadd can also produce files for use by Desk-Top Publishing systems, CNC programming systems and other machine tools. Accucadd’s new CNC dimensioning and data sorting facilities make preparation of CNC programs quick and easy.
- Drawing exchange** Accucadd provides the compact RDF file format for archiving drawings and moving them between drawing offices. Drawings can be imported from other drafting systems, with easy translation from standard formats to Accucadd. Drawings created within Accucadd can be converted into several standard geometry, drawing, and image formats for use with other systems.
- Viewing** You can “zoom in” on details, at high speed. Accucadd can magnify up to ten million-fold, pan sideways on a magnified view, and return rapidly to the base view. Zoom positions can be stored, recovered and printed. Intellimouse<sup>®</sup> support is provided for dynamic zoom and pan with the Microsoft<sup>®</sup> Wheelmouse<sup>®</sup> or compatibles.
- Technical drawing** Accucadd has many precision drawing facilities. Co-ordinates, lengths and angles can be entered from the keyboard with ‘hot key’ facilities and high precision. Datum points (origins) can be moved at any time. ‘Traps’ can be set so that lines can be drawn at specific angles, and lines that are supposed to meet at a given point will do just that. Accucadd also offers a wide range of automatic constructions: tangents, mid-points, arcs and circles tangent to lines and through points, and many others. The ‘part erase’ facility makes it simple to trim any line at an intersection, and automatic corner-trimming and joining are provided.
- Dimensioning** Accucadd uses special Dimension Entities, which allow dimensions to update automatically when they are stretched or edited. All the lines on a path or boundary can be dimensioned in one operation; ‘CNC’ rules allow dimensions to be measured from a datum point. ISO, ANSI, DIN and BS308 dimensioning and tolerancing standards are provided, and your own standards can be implemented and distributed. A complete set of Geometric Tolerancing symbols is included.
- How Can It Help?** Accucadd will save you time and allow you to produce and maintain complex drawings. The library facilities will save you time because there is no longer any need to redraw the same thing many times over. Just save all your commonly used items in the library and ‘Insert’ them into other drawings whenever required.



- Organization** Accucadd libraries are the solution to drawing filing problems. One index can store many drawings, thus making it easy to keep all drawings for a particular project together. Stored drawings can be retrieved, and printed as many times as you want. Using a network allows a whole drawing office to work with the same libraries, ensuring standardization and co-ordination.
- Layering** Layering allows you the same power as overlay sheets on a drawing board, but with greater speed, precision alignment and more layers than you could ever get with overlay sheets. Dividing your drawing into layers (e.g., dimensions, hatching and text) allows you to work faster and to produce specialized drawings. You can use customized layer Tables for different projects.
- Changing** Editing is quick and painless. You no longer need to draw and redraw the same thing to get it just right. With Accucadd you simply mark the parts to be removed or changed and the system does all the hard work for you — and in a fraction of the time.
- Precision** The precision drafting tools will also save you time by taking the hard work out of intricate, detailed drawing. Protractors, rulers and set squares are replaced by simple commands — the computer does the measuring, you do the drawing.
- Customization** Accucadd can easily be customized for your work, without any need for complex programming languages. You can teach Accucadd to work *your* way, by doing something once and saving the results as a “style file”. You can customize:
- Dimensioning — *your* standards will work in the same way as ISO, ANSI, DIN or BS308. Tolerances, terminators and text can all be user-defined.
  - Components — Parts and lettering can be selected from the library with a single mouse click.
  - Labeling — Using the powerful built-in text editor, a list of labels for components in a drawing can be created and used with automatic sequencing.
  - Text — All 27 fonts are available in all sizes and orientations. A complex text setup can be retrieved in one operation. Custom fonts can be created and added using RoboFONT.
- What is needed?** The recommended minimum computer configuration for Accucadd is:
- Pentium IBM-PC compatible computer, running 32 bit Windows (98, NT4, or later) and at least the recommended minimum memory for that Windows version
  - A CD-ROM drive
  - A fixed disk drive with at least 30Mb of free space

Mouse

Graphics display and monitor giving 800 x 600 x 256 color resolution

A black/white or color printer and/or plotter

Accucadd can be used with lesser computers, but this is the recommended minimum configuration. **Accucadd will not work with DOS, Windows 95, or earlier Windows versions.** Appendix B of this manual ('Installation') explains Accucadd's requirements in detail.

Networking/Machine-sharing

Your Network Administrator will set up this kind of installation; the Accucadd Network Installation guide is available for more information.

Getting Started

Install Accucadd from the CD-ROM. The installation will start automatically on most computers. (It's automatic if the CD Insert Notify property is 'ON'.) If it does not start automatically, browse to the CD drive, and double click SETUP (or SETUP.EXE).

You may also use the Control Panel Add/Remove Programs feature, which also allows you to "Uninstall" Accucadd. Changes made since installation, such as new drawings and temporary files, may need to be deleted manually after uninstalling.