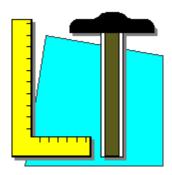
README.DOC -- November 22, 1993



AutoCAD® LT for Windows "Read Me"

This document contains last minute changes and instructions that could not be included in the printed manuals.

Table of Contents

- 1.0 Other Important "Read Me" Documents
 - 1.1 External References (XREF) Demo
 - 1.2 Printed Tutorial
 - 1.3 On-Line Tutorial
- 2.0 AutoCAD LT General Information, Errata, Tips and Tricks
 - 2.1 Dimensioning
 - 2.2 Deleting Non-Essential Files
 - 2.3 Tips and Tricks
 - 2.4 Known Problems
- 3.0 Notes for Generic CADD Users
- 4.0 General AutoCAD LT Questions and Answers

1.0 Other Important "Read Me" Documents

1.1 External References (XREF) Demo

For instructions on how to run the XREF demo, please see the file "xrefdemo.txt" in the AutoCAD LT directory.

1.2 Printed Tutorial

We included a printed tutorial in the AutoCAD LT package and encourage new users to try it. Thanks to Rusty Gesner of New Riders Publishing for creating this tutorial.

1.3 On-Line Tutorial

We have also included an innovative on-line tutorial with AutoCAD LT. The on-line tutorial runs in a separate window alongside AutoCAD LT. The on-line tutorial is divided into three sections:

- Architecture and Construction
- Mechanical Drafting
- Facilities Management

Double-click the on-line tutorial icon in the AutoCAD LT Program Group to start the tutorial. Then choose the section that interests you from the Main Menu. If you like, you can start AutoCAD LT from within the tutorial.

2.0 AutoCAD LT General Information, Errata, Tips and Tricks

2.1 Dimensioning

To create Dimensions in paper space that describe model space geometry:

1. From paper space, enter:

Command: <u>DIM1</u> Dim: <u>DIMLFAC</u>

Current value \leq (New value Viewport): \underline{V}

Select viewport to set scale: <u>Do so.</u>

DIMLFAC set to value

This automatically adjusts the dimension length scale factor (DIMLFAC setting) to the zoom scale factor of the selected model space viewport. (Sets the "Scale in Paper Space only" box and computes the value in the "Length Scaling" edit box for "Basic Units" in the "Text Format" dialog).

The option to select a Viewport is only available from paper space.

2. Use object snap modes to snap to points in model space from paper space.

Note: This method doesn't work for ordinate dimensions.

To see differences between a named dimension style and the current style:

Use the RESTORE dimensioning command and precede the dimension style name with a tilde character (~) as in the following example:

Dim: RESTORE

Current dimension style: DOT-BELOW

?/Enter dimension style or RETURN to select dimension: ~DOT-

ABOVE

Differences between DOT ABOVE and current settings:

DOT-ABOVE Current Settings

DIMBLK Dot

DIMTAD On Off

This lists all settings in the named style that differ from the current style.

11/22/93 4

2.2 Deleting Non-Essential Files

If disk space is at a premium and you are an experienced AutoCAD LT user, you may want to delete the following files from the directory where AutoCAD LT is installed:

del tbk*.* (deletes quick tour files)
del *.tbk (more quick tour files)
del tutorial.hlp (on-line tutorial)

This will free about 2 MB of disk space.

2.3 Tips and Tricks

1) How can I customize my icons for the Toolbox or Toolbar?

You need a Windows resource editor such as the Borland Resource Kit or Whitewater Resource Kit. These will let you add and modify the bitmaps in the "aclttb16.dll" and "aclttb24.dll" files. (Be sure to save the original files.)

2) Why do I get the message "WATCOM Win386, Not running on a 386 DPMI implementation" message when starting AutoCAD LT?

This message indicates that you need to run Windows in 386 enhanced mode. Consult your Windows manual for more information on running Windows in enhanced mode.

3) I have both AutoCAD and AutoCAD LT on my computer (or network). How can I get AutoCAD LT to start up when I double-click on a drawing in File Manager?

This choice is presented to you during installation of AutoCAD LT. If you later change your mind, you can use the Regedit program to add an entry for "AutoCAD Drawing" or "AutoCAD LT Drawing". The command line should point to the "aclt.exe" file for AutoCAD LT or to "acad.exe" for AutoCAD. From File Manager, you then need to change the association for files with a DWG extension.

4) How can I troubleshoot "General Protection Fault" errors?

GPFs generally indicate a memory corruption. The first place to look is at your Windows display driver. Try configuring for plain VGA and repeat the offending AutoCAD LT commands to see if the problem goes away. If so, you may need to

get an updated display driver from your display card vendor. Otherwise, disable any TSRs, memory managers, and Program Manager shell replacements, and try to repeat the error.

5) Why doesn't my plot fill up my entire paper size?

One of the more frequent causes of this problem is that the paper size setting in AutoCAD LT's plot configuration must match that of the page size setting in the Windows printer setup.

6) Why does Norton Desktop for Windows give the following message when files are dragged and dropped onto an AutoCAD LT session?

"No association exists for file."

Norton Desktop for Windows doesn't support drag-and-drop for AutoCAD LT. You must use the Windows File Manager. Creating associations in Norton Desktop or File Manager will have no effect on the drag-and-drop capabilities of Norton's drive windows.

7) After customizing the buttons in the Toolbar (or Toolbox), the following error occurs when clicking on an icon button:

"Unknown command. Press F1 key for help."

The command string associated with that button is not a valid AutoCAD LT command. To correct this problem, enter the "Toolbar (or Toolbox) Customization" dialog by right-clicking on the icon in question. Correct the command string displayed in the edit box at the bottom of the dialog.

8) I customized my Toolbar (or Toolbox) to add the CANCEL button, and now it won't work. What can I do?

The CANCEL button must have the characters "\3\3"; instead of the word CANCEL on the command line. It should be noted that not every image name in the Toolbox customization list corresponds to an AutoCAD LT command. Some of these image names must be changed on the command line by the user. Consult the Users manual or on-line help for information on valid command names.

9) How can I make AutoCAD LT remember its window sizes?

If you want AutoCAD LT to remember the size and position of its text and graphics windows for re-use the next time you start it, do the following:

- Position and size the text and graphics windows as you like. From the File menu, choose Preferences. 1.
- 2.
- Choose "OK" in the resulting dialog box.

10) How can I make AutoCAD LT remember the location of the floating Toolbox?

Do the following:

- 1. Pick the Toolbox icon in the Toolbar until the Toolbox is visible and floating. (The button cycles through Floating, Left, Off, and Right.)
- 2. Move the Toolbox to the desired location.
- 3. Right-click on any icon in the Toolbox, and choose "OK" in the resulting dialog.

11) Can I change the size of the buttons in the Toolbar?

Yes. To do so, enter:

Command: <u>SETENV</u>

Variable name: ToolBarSize

Value < current>: 24

You can make the buttons smaller or larger by using values in the range of 6 to 30. You can experiment with different sizes to find the one that looks best on your display. The change takes effect the next time that you start AutoCAD LT.

12) Why did my installation take so long?

If SMARTDRV (or other suitable disk caching software) is not installed, installation may take up to 45 minutes. With SMARTDRV, normal install time is around 5 minutes. The decrease in time comes from floppy disk read caching.

2.4 Known Problems

1) Quick Tour on COMPAQ QVision Display

The Quick Tour does not display correctly on COMPAQ QVision display adapters when the "Large Fonts" setting is used.

2) HPGL Plotting

Most new Hewlett-Packard print/plot devices support HPGL/2 as their graphics language. Some older HP plotters only support HPGL. Devices such as the HP 7550 plotter are driven by HPGL. The HPGL Windows printer driver exhibits some problems; we are working with HP to try and resolve them.

3.0 Notes for Generic CADD Users

A separate conversion utility is available for Generic CADD users to convert existing GCD files into DWG format. The instructions for this routine are contained on the floppy in the file "readme.cvt". This floppy is only included for Generic CADD users who have transferred to AutoCAD LT. If you need this utility, in the US or Canada, call Autodesk customer service at (206) 487-2233. Outside the US and Canada, call or fax a request for information to:

Country	<u>Telephone</u>	<u>Fax</u>
Asia/Pacific:		(415) 491-8398
Austria:	+43 72 42 68 46 5	+43 72 42 67 99 4
Benelux:	+31 76 71 01 25	+31 76 71 09 25
Czech Republic:	+42 23 16 47 77	+42 23 16 44 56
France:	+33 16 00 71 41 4	+33 16 00 76 91 8
Germany:	+49 89 54 76 90	+49 89 54 76 94 00
Hungary:	+36 11 36 36 27	+36 11 36 36 27
Israel:	+97 23 57 55 87 5	+97 23 57 55 93 1
Italy:	+39 25 75 10 05 0	+39 25 75 10 10 5
Latin America:		(415) 491-8303
Russia:	+70 95 26 16 36 3	+70 95 26 79 92 7
South Africa:	+27 11 88 66 21 2	+27 11 88 61 38 1
Spain:	+34 34 73 33 36	+34 34 73 33 52
Sweden:	+46 31 40 03 50	+46 31 40 29 32
Switzerland:	+41 61 81 11 41 4	+41 61 81 11 45 0
United Kingdom:	+44 48 33 03 32 2	+44 48 33 04 55 6

Autodesk European Headquarters (Geneva, Switzerland): +41 22 78 82 12 1 +41 22 78 82 14 4

4.0 General AutoCAD LT Questions and Answers

Q1: What is AutoCAD LT for Windows?

AutoCAD LT for Windows is a new software product from Autodesk. It is a powerful CAD solution for the Windows 3.1 operating system and includes many features that will appeal to both experienced and first time CAD users.

Q2: Who should buy AutoCAD LT for Windows?

Architects, contractors, designers, engineers, field professionals, managers, and design and drafting students working alone or with others who need powerful 2D and basic 3D CAD at an affordable price should buy AutoCAD LT. Firms using AutoCAD that have designers, engineers, field professionals, and senior reviewers who are part of a design and production process but currently only work with paper, pencils, or printed drawings should buy AutoCAD LT. Also, AutoCAD users who want to work on AutoCAD drawing files (DWG) at home or in the field on a laptop should buy AutoCAD LT.

Q3: When will AutoCAD LT for Windows ship?

AutoCAD LT for Windows will be available in mid-December 1993 in English. Other language versions of AutoCAD LT for Windows are scheduled to ship in early 1994.

Q4: What are some of the features of AutoCAD LT for Windows?

AutoCAD LT for Windows includes powerful 2D and basic 3D drafting and designing tools based on the world renowned leader of CAD, AutoCAD. In addition, AutoCAD LT includes the following:

<u>Windows graphical user interface</u>: pull down menus, dialog boxes, accelerator keys, and icon toolbar and floating toolbox.

<u>AutoCAD</u> commands and user interface: similar command syntax and user interface to AutoCAD.

<u>3D CAD features</u>: 3D extrusions, 3D line creation, hide, shade, paper space, user coordinate system, multiple views (side, elevation, etc.), and the ability to view and modify all 3D drawings in DWG format.

<u>Perfect AutoCAD drawing file (DWG) compatibility</u>: AutoCAD LT drawings are saved in the native AutoCAD format (DWG) and therefore can be exchanged with AutoCAD users with no data loss or errors.

Performance: fast redraw, pan and zoom speed, important for large drawings (a display list driver is an integral part of AutoCAD LT).

Clipboard support: copy and paste AutoCAD LT images and Windows Meta Files (WMF files) into AutoCAD LT drawings through the clipboard. Also, use the clipboard to copy AutoCAD LT drawings for pasting into other applications, and import text to be pasted into AutoCAD LT drawings.

Customization	support.
Customization	Support:

Command scripts Scripts are ASCII text files containing sequences of AutoCAD LT commands that are used repeatedly.

AutoCAD LT's menus can be customized to suit user Menus

needs, and support simple DIESEL expressions.

Short aliases are provided for many built-in commands; these Command aliases

can be modified or augmented by the user.

Libraries of hatch patterns and dash/dot linetypes are supplied Hatch patterns

in text files that can be modified and augmented by the user. The and linetypes

file formats are the same as used by full AutoCAD; third-party vendors

can supply additional patterns and linetypes as well.

Symbol libraries Any AutoCAD LT drawing can be inserted in other drawings,

so it's easy to create parts or symbols for re-use. Windows Metafiles (.WMF) can also be imported. Symbol libraries for various disciplines

are available from third-party vendors.

Text fonts AutoCAD LT supports the same text fonts (SHX files and

Adobe Type-1 PostScript PFB files) as used by full AutoCAD; third-

party vendors supply a wide variety of additional fonts.

AutoCAD LT supports an optional toolbar which includes buttons to Toolbar and toolbox

execute common commands. The commands and button icons can be

customized by the user. The optional toolbox has similar

customizaable buttons, but its layout and screen position can be

customized as well.

Object linking and embedding: link or embed AutoCAD LT drawings into other Windows applications, like Microsoft Word for Windows or Excel.

Aerial View: a separate, smaller Window within the AutoCAD LT graphics screen that displays a view of the entire drawing or a magnified view of a small portion of the drawing.

On-line help: hit the F1 key at any time and receive on-line help for the current AutoCAD LT command or pull-down menu. On-line help is also now available for all pull-down menus and commands. This help is context-sensitive, with hypertext links to related topics, and is always available to the user, even in the middle of a command sequence.

Quick Tour: under Help, the quick tour describes the AutoCAD LT user interface and common AutoCAD LT CAD operations.

Drag and drop: drag iconized files from the File Manager onto AutoCAD LT to load them automatically. AutoCAD LT will load or execute the following file types when they are dragged and dropped onto the AutoCAD LT graphics window: DWG (insert block), DXF (load drawing),

LIN (load line type), SCR (run script), SLD (display slide), and TXT (load text).

Q5: What are a few of the benefits of AutoCAD LT for Windows to the NEW user?

Familiar user interface: AutoCAD LT's use of the Windows Graphical User Interface (GUI) allows new CAD users to apply their experience and knowledge of other Windows applications to learning AutoCAD LT quickly.

<u>Abandon the drafting board and enjoy the competitive advantages of CAD</u>: create and update drawings quickly and accurately, reuse old designs over and over, insert common symbols in seconds, and transfer drawings electronically across the room or across the world.

Access to customers demanding drawings in DWG file format: AutoCAD LT saves drawings in the industry standard AutoCAD DWG file format without any translation or conversion and, therefore, without any data loss. Only Autodesk can deliver a product that fulfills this promise completely.

Comfort, security, and a broad range of compatible design automation solutions: Autodesk is the world's leading supplier of design automation software with products developed to meet the varying needs of all design professionals. If a user needs more power than is available in AutoCAD LT, they can move up to AutoCAD Release 12 and use the same data and interface immediately.

Q6: What are the benefits of AutoCAD LT for Windows to an EXISTING AutoCAD user?

<u>Work at home</u>: AutoCAD LT for Windows only requires 4MB RAM, a perfect fit for many home PCs. The perfect DWG file compatibility ensures there is no data loss when AutoCAD drawings are edited in AutoCAD LT and vice-versa.

Work with DWG drawings in the field: take AutoCAD drawings to a work site on a laptop running AutoCAD LT and make updates or new drawings on the spot.

Q7: What are the benefits of AutoCAD LT for Windows to firms or organizations currently using AutoCAD?

Training: AutoCAD LT's ease of use and learning features make it a great training package for non-CAD users moving to AutoCAD or AutoCAD LT.

Extend the power of AutoCAD: bring non-CAD, pencil-based engineers, designers, and managers into the development process by giving them the ability to create and modify drawings prepared by AutoCAD users.

<u>View/redline/plot</u>: for users who only need to view, redline, or plot AutoCAD drawings, AutoCAD LT is an affordable solution.

Q8: What are the major differences between AutoCAD Release 12 for Windows and AutoCAD LT for Windows?

AutoCAD LT for Windows is designed to be an out-of-the-box solution for users new to CAD who want an easy to learn yet powerful CAD program. AutoCAD Release 12 for Windows is a comprehensive design and drafting engine. R12 for Windows has many features not available in AutoCAD LT. The following is a partial list of features that are included in R12 Windows and NOT available in AutoCAD LT.

- High end drawing and editing tools (e.g. advanced geometry creation options)
- Full 3D drawing and editing tools
- AutoCAD Development System (ADS) support
- AutoLISP programming language
- Dialog box programming
- Digitizer support (mole mode)
- Plotter and accelerated display driver support (No ADI in AutoCAD LT)
- Extended entity data support
- Region modeling
- Multiple sessions
- Geometry calculator
- Dynamic Data Exchange (DDE)
- Advanced Modeling Extension (AME) support
- AutoCAD SQL Extension (ASE)
- Open Database Connectivity (ODBC) support
- AutoCAD Visualization Extension (AVE)
- Render Window and Multiple Document Interface (MDI)
- Raster and PostScript Import

Q9: Why should an existing Generic CADD DOS user switch to the Windows operating system?

AutoCAD LT for Windows provides important productivity enhancing tools not available in Generic CADD.

For example, object linking and embedding (OLE) allows AutoCAD LT for Windows drawings to be linked seamlessly with other Windows-based application programs. Compound documents comprised of AutoCAD LT drawings, spreadsheets, and text can all be linked together to ensure the latest revisions from all applications are included in a customer report. Clipboard support (the ability to copy and paste geometry) and the Aerial Viewer are also not available in Generic CADD.

In addition, the AutoCAD LT for Windows graphical user interface (GUI) provides commonly used commands at a single mouse click, and the use of pull-down menus and dialog boxes helps new users in an organization get up to speed easily. Because mastery of one Windows-based application provides a solid foundation for quickly learning other Windows-based applications, non-CAD users familiar with Windows will be able to learn AutoCAD LT quickly.

Moving up to AutoCAD Release 12 is easy once AutoCAD LT has been mastered. AutoCAD LT commands are similar to AutoCAD Release 12 commands.

Q10: How much does AutoCAD LT for Windows cost?

The suggested new unit price for AutoCAD LT for Windows is SRP US\$495. The introductory price for a platform transfer from Generic CADD to AutoCAD LT is SRP US\$129. The introductory price for a transfer from AutoSketch to AutoCAD LT is SRP US\$199. Prices in other countries will vary.

Q11: Where can Generic CADD and AutoSketch users purchase a transfer to AutoCAD LT for Windows?

In the U.S. and Canada, transfers from Generic CADD and AutoSketch to AutoCAD LT are only available direct from Autodesk. Customers interested in such transfers should call 1-800-435-7771. Transfer policies and procedures in other countries will vary.

Q12: Is there an upgrade policy for customers who wish to move from AutoCAD LT for Windows to AutoCAD Release 12?

There is no upgrade policy in the U.S. and Canada at this time. For information on whether there are upgrade policies in other countries, please contact your dealer or distributor.

Q13: Will there be a Generic CADD for Windows product in the future?

No. AutoCAD LT for Windows and AutoSketch 2.0 for Windows are Autodesk's only planned Windows-based CAD products under SRP US\$500.

Q14: How does Generic CADD fit into Autodesk's product family?

Generic CADD 6.1 provides 2D drafting tools and the ability to read and write AutoCAD DWG drawing files. Autodesk will continue to sell and support Generic CADD for customers who prefer a DOS or Macintosh-based affordable CAD solution.

Q15: Will there be a DOS or Macintosh-based version of AutoCAD LT in the future?

There are currently no plans to develop a DOS or Macintosh-based version of AutoCAD LT. However, if there is sufficient customer demand, a DOS or Macintosh-based version of AutoCAD LT may be developed in the future.

Q16: Will Autodesk provide direct customer product support for AutoCAD LT for Windows?

In the U.S. and Canada, AutoCAD LT for Windows users will receive 90 days of free telephone support. After the first 90 days, customers will be able to purchase direct support from Autodesk. Support policies in other countries will vary.

Q17: What are the system requirements for AutoCAD LT for Windows?

- IBM 386/486 or 100% compatible
- An 80287, 80387 or 80487 (required with an 80486SX) math coprocessor
- Microsoft Windows 3.1 (enhanced mode)
- MS-DOS 3.31 or higher (MS-DOS 5.0 Recommended)
- 4MB RAM (minimum requirement)
- 8MB free hard disk space (2 MB additional required to install all symbol files)
- Permanent swap file 2 to 4 times RAM
- Windows-supported VGA or higher
- Windows pointing device (e.g., mouse)
- Windows system printer or plotter

Q18: Is AutoCAD LT for Windows compatible with Microsoft's Windows for Workgroups and Windows NT?

Yes. However, AutoCAD LT for Windows does not support any Windows for Workgroups or Windows NT unique functionality. Microsoft claims that all Windows 3.1 applications will run as is with Windows for Workgroups and Windows NT, and our testing has confirmed that AutoCAD LT is compatible with these environments.

Q19: Is AutoCAD LT for Windows compatible with OS/2 2.1?

Yes. However, AutoCAD LT will only run in a Windows 3.1 compatibility window under OS/2 2.1. IBM claims that all Windows 3.1 applications will run under OS/2 2.1, and our testing has confirmed that AutoCAD LT is compatible with this environment.

Q20: Can AutoCAD LT for Windows be run on a network?

Yes. AutoCAD LT for Windows will run on all networks that support and run Windows 3.1.

Q21: Is a multiple-copy network license available for AutoCAD LT for Windows?

No. Only single-use copies of AutoCAD LT for Windows are available.

Q22: Can AutoCAD LT for Windows be run in multiple, simultaneous sessions on one PC?

No. AutoCAD LT for Windows does not support multiple sessions.

Q23: Are AutoCAD LT for Windows drawings compatible with AutoCAD Release 12 386, Release 12 for Windows, Release 11 386, and Release 11 AutoCAD Extension for Windows (AEW)?

Yes. The AutoCAD LT for Windows drawing format is identical to the format for AutoCAD Release 12 386, Release 12 for Windows, Release 11, and AEW, and AutoCAD Release 12 and Release 11 on any other platform.

Q24: What happens to complex 3D drawings created in AutoCAD when they are brought into and back out of AutoCAD LT for Windows?

There is no data loss. The drawings are displayed perfectly in AutoCAD LT and all extended entity data is retained. AutoCAD LT users can zoom in and out, change the view, or perform limited editing on the 3D drawings (e.g., attach grips and stretch, add 3D polylines, dimension, snap and trim, or perform a shade). AutoCAD LT can not create new complex 3D entities (e.g., no surfaces or solids).

Q25: Can extended entity data be created, attached to an entity, modified, or viewed in AutoCAD LT for Windows?

No. AutoCAD LT for Windows can not access extended entity information at all. However, drawings created in AutoCAD with extended entity information can be imported and exported from AutoCAD LT without the loss of any extended entity data (i.e. AutoCAD LT retains extended entity information when the file is read in and writes it back to the file when saved, if it is present in a drawing file).

Q26: Will custom menus designed for AutoCAD Release 12 or Release 11 run with AutoCAD LT for Windows?

Yes, with the following limitation. The AutoCAD LT for Windows' menu file must be named ACLT.MNU (for short menu) or ACLT2.MNU (for long menu). Existing menus may be renamed ACLT(2).MNU. However, existing menus may contain commands not available in AutoCAD LT and those commands will not run. The default ACLT(2).MNU file can also be modified and AutoCAD LT will automatically load and recompile the menus each time it is started up.

Q27: Will existing AutoLISP routines run under AutoCAD LT for Windows?

No. AutoCAD LT does not support AutoLISP.

Q28: Will existing AutoCAD Development System (ADS) applications run under AutoCAD LT for Windows?

No. AutoCAD LT does not support ADS.

Q29: Is there a third party developer support program for AutoCAD LT for Windows?

No. AutoCAD LT's customization capabilities are limited and intended to let users customize AutoCAD LT to meet their needs. AutoCAD LT is not designed to support full featured, integrated applications that have been developed for AutoCAD using AutoLISP or ADS.

Q30: Which device drivers are included in the box with AutoCAD LT for Windows?

AutoCAD LT for Windows supports Windows-supported video display of VGA or greater resolution (at least 640-by-480 pixels), output to the Windows system printer or plotter, and input from Windows pointing devices (e.g., a mouse). AutoCAD LT should be compatible with all graphics cards, display drivers, printers, plotters, and point devices which are Windows 3.1 compatible. Because of the large number of these devices, we were unable to test all Windows 3.1 compatible devices with AutoCAD LT.

Q31: Will AutoCAD Release 12 386, Release 12 for Windows, or R11 AEW specific device drivers (for printers, plotters, and displays) work with AutoCAD LT for Windows?

No. AutoCAD LT does not support the Autodesk Device Interface (ADI) that AutoCAD specific device drivers require.

Q32: Does AutoCAD LT for Windows support digitizers?

No. AutoCAD LT does not support digitizers as absolute pointing devices (i.e. AutoCAD LT does not include "mole mode" support).