

microsol resources corporation
214 west 29th street
new york, ny 10001
tel: 212.465.8734
fax: 212.967.0910

419 merion road
turnersville, nj 08012
tel: 856-228-2990

www.microsolresources.com



registered AIA/CES provider

Methods for Fixing Corrupt Drawings and Helping to Prevent Future Corruption

Created by the technical support staff of Microsol Resources

Autodesk has technical support documents on their website that address these issues:

<http://support.autodesk.com/getDoc.asp?id=TS67106>

<http://support.autodesk.com/getDoc.asp?id=TS67088>

The most common cause of drawing corruption is limited computer resources. This can happen if there is a low amount of ram, 64k for example, or if other programs are using up a lot of ram. Low free disk space is another culprit.

If you ever see an error dialog box appear that tells you that you are running low on virtual memory you should immediately save your work, shut down your computer and restart. If you are unable to save your work you may be able to save as another file name or in another folder or drive.

Real Player is a common ram hog - you should use WinAmp (www.winamp.com) instead if you like having music playing while you draft. The popular live chat programs such as MSN Messenger and AOL Instant Messenger also use up enough ram on a computer with low resources to have an effect on performance with AutoCAD running. Norton System Doctor and other programs that run continuously in the background, such as system restore programs and file indexers can impact memory usage and performance. The point is that non-essential programs such as CD players can use up enough memory to become problematic to AutoCAD or any other large program. Imagine how much memory you will use if you are using HTML for your desktop with live connections to streaming stock tickers, news and music and a screen saver that can kick in while AutoCAD is open - you are asking for trouble if you do that and run AutoCAD at the same time on a computer with a low amount of ram.

It may be possible for you to improve your ram usage by changing the parameters of your swap space. The controls for these settings can be found in different places on different operating systems, but in general they are accessible through Start / Settings / Control Panel / System. A good setting is 2x your physical ram for the minimum setting and 4x your physical ram for the maximum setting. Consult your operating system's documentation for more details.

You should have plenty of free space (lots of gigabytes free) on the drive where the AutoCAD programs are installed, and on the drives that are designated in the Temporary Drawing File Location and Temporary External Reference File Location settings in Tools / Options / Files.

Windows 98 has a setting that enables you to shut it down quickly by closing any running applications. However, this can result in drawings that are open in an active session becoming corrupt. To disable the Fast Shutdown feature in Windows 98:

Select the Start button > Programs > Accessories > System Tools > System Information. From the Tools menu, select System Configuration Utility. In the General tab, choose the Advanced button. Check Disable Fast Shutdown.

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You should consider other possible causes of drawing corruption, such as incompatible graphics drivers, pointing or plotting drivers, the presence of conflicting applications in memory, or an incorrect date or time setting on the computer. Specifically, these other causes include (but are not limited to):

- Outdated versions of Wintab digitizer drivers
- Outdated versions of mouse drivers
- Outdated versions of, or incompatible graphics card display drivers
- Virus scanning software
- Non-VCPI compliant memory manager programs

There are a couple of AutoCAD settings that can help prevent corruption. In all full versions of AutoCAD 2000 or higher, click Tools / Options / Open and Save. Change the setting for Incremental Save Percentage to 0. This disables AutoCAD's Partial Save feature, forcing a full save each time the Save command is used. You should also make sure that Full-Time CRC Validation is checked. This causes AutoCAD to verify what it writes to the hard drive, helping to prevent errors in what it writes.

Recover/Audit

If you can open the corrupt drawing, enter Audit at the AutoCAD command prompt, otherwise enter Recover at the AutoCAD command prompt and specify the drawing that you can't open.

Insert into a New Drawing

Open a new drawing from scratch or using a template drawing that you are certain is free of corruption and insert the corrupt drawing exploded (or the newly wblocked drawing if you used one of the above methods first) into the appropriate layout. Inserting a drawing exploded is not the same thing as inserting a drawing and then exploding it. Inserting a drawing already exploded helps to prevent the spread of the corruption because it will contain less baggage, and it tends to remove drawing imperfections, especially in cases where the drawing was originally created in an older version of AutoCAD. You may have to recreate the layouts in the new drawing before you can do the inserts. When you insert a block exploded that contains a viewport, that viewport will be inserted Off by default, and you will not be able to view model space through it. If your insertions contain any viewports you must follow the block insertion with the MView command, specifying the ON option, and selecting All.

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WBlock Whole Drawing to a New Drawing

The benefit of using this approach over the ‘WBlock Selected Objects to a New Drawing’ method is that it will enable you to do the whole cleanup in one operation. The drawback is that it is not as certain to remove baggage that could be causing the corruption. Use the WBlock command. Specify the same name as the open drawing along with a suffix, as in DrawingName-2. Select the objects by clicking Entire Drawing as the source. Open DrawingName-2 without saving DrawingName. You may want to follow this with the instructions for ‘Insert into a New Drawing’, which follows below.

WBlock Selected Objects to a New Drawing

This is a more thorough method than ‘WBlock Whole Drawing to a New Drawing’ method, but you have to repeat it for model space and for each layout. Unlock, turn on and thaw all of the layers in the drawing. Go to TileMode 1. Zoom V. Use the WBlock command. Specify the same name as the open drawing along with a suffix, as in DrawingName-2. Select the objects by using a normal, left to right window, not a crossing window, and not using All as a response to select objects. Open DrawingName-2 without saving DrawingName. You may want to follow this with the instructions for ‘Insert into a New Drawing’, which follows below.

Save Layouts and XRefs

DesignCenter, introduced in AutoCAD 2000, can help you save layouts (and xreferences) that are in a corrupt drawing. First insert the corrupt drawing into a new blank drawing. After you insert the corrupt drawing, save the new drawing with the inserted objects. Select Tools/AutoCAD DesignCenter, and then select the Desktop icon. In tree view, locate and select the corrupt file, then click the plus sign to the left of the drawing icon. Next, select Layout Below. Existing layouts should appear in the DesignCenter window. Select them and drag into the current drawing. Run the Audit command after adding each layout, in case the inserted layout caused the original drawing corruption. Also be sure to save the new drawing after each Audit command.

Move Drawing Objects Closer to 0,0

If you are drawing miles away from 0,0. AutoCAD may begin to get “confused” when it has to deal with astronomical distances and huge numbers. Sometimes you can stop certain kinds of errors simply by unlocking, thawing and turning on all layers, selecting all, and moving the objects nearer to 0,0.

AutoCAD Map Query

If you are in possession of a copy of AutoCAD Map you may be able to open a new drawing from scratch, attach the drawing and query it in. If you are able to do so, save it as the corrupt drawing name.

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XRef

Sometimes it is possible to open a new drawing from scratch, attach an XRef and explode it. First attach the corrupt drawing. If you are successful, use the Insert method of the Bind option in the XRef command, and then explode the inserted block and purge everything from the drawing.

Save as Older AutoCAD Version and Reload

If the drawing can be opened, but it appears to be corrupt, or if an error occurs after working on the drawing for a short time, you can try saving the drawing as an older AutoCAD version, and then reopen it in the current version.

Partial Open

If your drawing was last saved using AutoCAD 2000 or higher you may be able to load most of the corrupt drawing by using the PartialOpen command. This can be possible if the corruption is in some of your drawing's objects, which often can be the last few objects that you created or edited. PartialOpen allows you to limit the objects that are opened in a drawing to the objects that are on specified layers in a specified view. If you are not sure which objects are corrupt you may have to experiment with loading different views and/or layers until you are successful.

You can choose to not include Xrefs in the partial load, avoiding possible corruption in the Xrefs that could be preventing the drawing from opening. When asked, choose to unload Xrefs before the drawing loads. Then save the drawing, close it, open it again, and reattach the Xrefs as overlays. You may wish to use the 'WBlock Whole Drawing to a New Drawing' method or the 'WBlock Selected Objects to a New Drawing' method before reattaching the Xrefs.

The Escape Method

Use Recover, fixing errors. When the prompt Fixed X Objects appears, enter Regen at the command prompt and then press Enter followed as quickly as possible by the Escape key. Use the SaveAs command specifying the same name as the open drawing along with the suffix -esc, as in DrawingName-esc. Unlock, turn on and thaw all of the layers in the drawing using the -Layer command line version of the Layer command. Use the Purge command as many times as necessary to purge all unreferenced objects from the drawing. At any time, if AutoCAD tries to do a regen, press the escape key! After you press the escape key, repeat the procedure from the SaveAs command. Then save the drawing, close it and open it.

Hatch in the Xref Instead of Using an XRef as the Hatch Outline

If you getting errors due to hatches, and you are hatching using Xrefs as the hatch outline, try doing the hatch in the XRef drawing itself.