



SPEA Software AG
3D-Win Online Help

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[Release: 1195.5](#)

This online help for SPEA's 3D-Win (3D Viewer for Windows) package is designed to help you inform yourself both quickly and extensively about the functions of SPEA 3D-Win. Use the 'Search' button to look for special topics or to pick a certain menu option (see below) for a detailed description of the individual menu functions.

Note for Windows NT Users:

Small differences in the functionality of this software are marked accordingly in this help file!

Use the mouse to get online help for 3D-Win!



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Credits for [SPEA 3D-Win](#)



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Release: [1195.5](#)

3D Win Overview

The following diagram shows you the basic elements of 3D-Win.
Use the mouse to get online help for 3D-Win!

Screen build may take a few seconds, please wait!



Menu bar

File

Mode

Style

Export

Walk

Layer

Teach

Flic

Help

SR1

By moving this slider you can change the view or clipping plane. The exact function of the slider depends on the current view mode (selected in the 'Mode' pulldown menu).

SR2

By moving this slider you can change the view. The exact function of the slider depends on the current view mode (selected in the 'Mode' pulldown menu).

This slider is deactivated for the following views:

- Distance
- Twist
- Zoom

and all clipping views.

Value box for SR1

This area shows you the current value for SR1. By clicking here it is possible to manually enter a value for SR1 without moving the sliders (more precise).

Value box for SR2

This area shows you the current value for SR2. By clicking here it is possible to manually enter a value for SR2 without moving the sliders (more precise).

The buttons in the toolbar correspond to the options in the different pulldown menus. In order to help you find the correct button quickly a description is displayed in the toolbar information line when the cursor is moved over the button. Note that not all buttons are constantly available!

In order to help you find the correct button quickly a description is displayed in the toolbar information bar when the cursor is moved over the button.

This area shows you the system clock.

This area shows you the current mode and style. The first letter (or first 2 letters) of each option in the corresponding pulldown menu is used to identify the function.

Example:

CA = Camera

W = Wireframe

R = Displayed when 'Rotate as wireframe' is active.

2. Stufe: Einzelne Context-Strings - Ende

General Information about 3D-Win

What is SPEA 3D-Win?

3D-Win is a 3D software package running under Windows used for the presentation, visualisation and animation of 2D or 3D construction data from AutoCAD or any other layer-oriented application which can create DWG, DXF or 3DS format files (e.g. CorelDraw). SPEA 3D-Win is a compact, independant Windows application which can be used independantly of SPEA graphic boards or AutoCAD. The software can thus be run on any common Windows accelerator board.

What can SPEA 3D-Win do?

SPEA 3D-Win offers various display modes for 3D constructions such as Flat, Gouraud and Phong shading. It does this without the need for any additional equipment and makes online rotations on all 3 axes (X, Y, Z) available at the click of a mouse. Objects can be enlarged, scaled down and moved at will. SPEA 3D-Win permits you to switch layers on and off, import light sources from the CAD application and make animations using the construction. The realisation of professional animation sequences is possible with this 3D software using camera position and movement definitions. Camera movements (WALKs) can be recorded in a flic file and replayed using a Flic Player or other animation programs (e.g. Autodesk's Animations Player for Windows or other shareware programs such as PVLITE). The manipulation of the drawing in the 3D-Win window can also be recorded in a 'Teach' file (in ASCII format) and replayed later like a flic file.

A further use of SPEA 3D-Win is the possibility to pass the altered viewing data of an AutoCAD drawing back to AutoCAD's perspective or parallel views.

The most outstanding features of SPEA 3D-Win are the clear and realistic 3D display and the calculation of the viewing data virtually in realtime.

System-Recommendations for the effective use of 3D-Win

You must fulfill the following system requirements:

- 386 PC, 40Mhz with 8 MB system memory
- Hard disk with at least 4 MB free space
- Graphics board which supports 256 colors
- Windows 3.x or
- Windows® 95 (AutoCAD 13 required!)
- Windows NT (AutoCAD 13 required!)

The following system configuration is highly recommended:

- 486 PCI or VESA Local Bus or Pentium system
- 66 Mhz (Pentium: 60 Mhz) or faster
- if possible 16 MB system memory or more

Mode

Camera

Target

Distance

Zoom

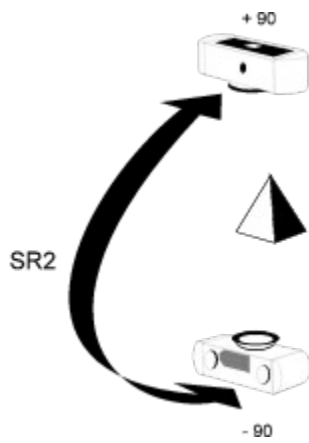
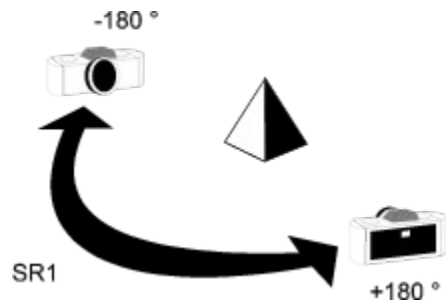
Twist

Plane

Camera

Moves the camera around the target.

The camera can be moved horizontally and vertically around the target.



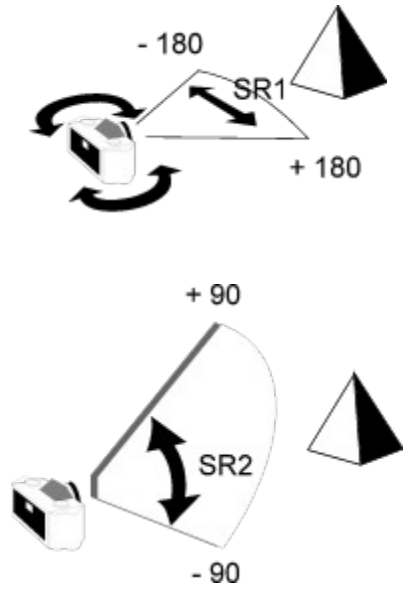
SR1: Value range: -180° to $+180^\circ$ (horizontal)

SR2: Value range: $+90^\circ$ to -90° (vertical)

Target

Moves the target around the camera.

The target can be moved horizontally and vertically around the camera.

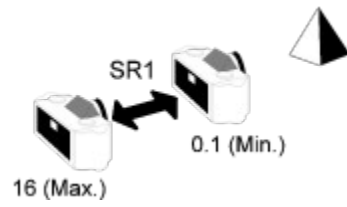


SR1: Value range: - 180° to + 180° (horizontal)

SR2: Value range: + 90° to - 90° (vertical)

Distance

Changes the distance from the camera to the target.



SR1: Value range: 16 to 0.1

SR2: deactivated

Zoom

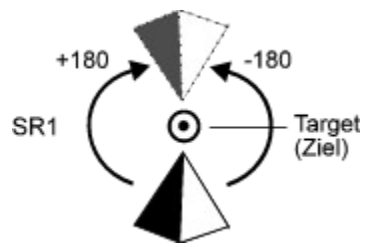
Changes the focal length of the camera.
The camera zooms into, or out of the drawing.



SR1: Value range: 0.1 (further away) to 16 (closer)
SR2: deactivated

Twist

This function rotates the object around the target (anti-clockwise or clockwise).



SR1: Value range: - 180° to + 180°
to the left: rotates clockwise
to the right: rotates anticlockwise
SR2: deactivated

Plane

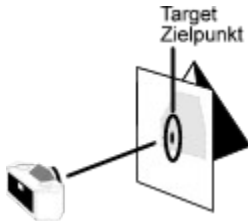
This option is intended for use with 3D objects only. It is used to define a cross section (plane) within a 3D construction. Using the right mouse button you can then select a target point on this clipping plane and in turn use this for WALKs. When you click on the 'Plane' option, the object in the drawing is placed in a three-dimensional box. The mouse is transformed into a crosshair cursor.

Select a clipping plane beither either moving the lower slider to the left (100 ... 0.1), or click on the value shown in the lower left corner to open a dialogue box for manual entry. The three-dimensional image will be clipped to this depth. Use the right button to pick a target on this plane. You can use the left mouse button to change the distance to the target.



SR1: Value range: 0.1 to 100

SR2: deactivated



Setting a Target

Style

Wireframe

Hidden surface

Flat

Gouraud

Phong

Quick

Rotate: wireframe

Wireframe

The construction is displayed as a wireframe model, i.e. without shading or filled polygons. Polygons that are backfacing are therefore visible.

This style only requires minimal calculations and is therefore the quickest display style. For this reason it is advisable to select this as the style used during object rotations (see [Rotate: wireframe](#)).

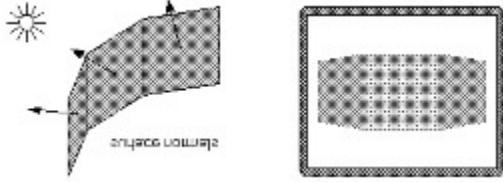
Hidden Surface

The construction is displayed as a wireframe model, but the polygons are filled with the background color (normally black). Polygons that are backfacing are therefore **not** shown unless you rotate the object.

This style requires a relatively moderate number of calculations and is therefore executed quite quickly (backfacing polygons are not calculated, called 'face culling').

Flat

The construction is displayed with polygons filled with the color of the polygon wiremesh. Polygons that are backfacing are therefore **not** shown unless you rotate the object or change the corresponding setting in the 'Preferences' menu.

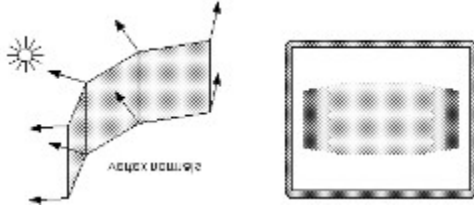


The construction seems more realistic than with wireframe but it still appears very unnatural. This is due to the fact that the shading of the entire surface of each polygon is calculated according to their surface normals. For this reason, curved surfaces (comprised of numerous polygons) appear more 'cornered' than in reality.

This style needs a little more time to implement than 'Hidden surface'.

Gouraud

The construction is displayed as a wireframe model, but the polygons are filled with the color of the polygon wiremesh. Polygons that are backfacing are therefore **not** shown unless you rotate the object or change the corresponding setting in the 'Preferences' menu.

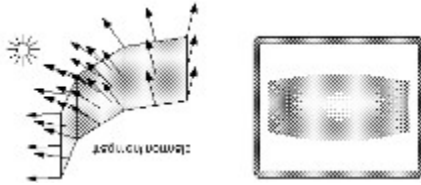


The construction appears more realistic than with Flat shading because new vertex normals are placed on the corners of each polygon. These are then used to calculate the lighting conditions which in turn allows curved surfaces to appear more rounded and natural than is the case with Flat shading.

This style requires more time to implement than Flat shading and is a good compromise between the best but slowest style 'Phong' and the quicker, but less realistic 'Flat' style.

Phong

The construction is displayed as a wireframe model, but the polygons are filled with the color of the polygon wiremesh. Polygons that are backfacing are therefore **not** shown unless you rotate the object or change the corresponding setting in the 'Preferences' menu.



The construction appears photorealistic because new vertex and surface normals are calculated for the corners and surfaces of the polygons. These are used in an optimal way to calculate the lighting conditions allowing curved surfaces to seem completely rounded and natural. The light beam of a light source which is directed onto a polygon surface is reflected correctly.

This style requires more time to implement than 'Gouraud' and gives the best optical results. If you have a fast PC and wish to create impressive animations, then you should be using this shading style.

Quick

This (AutoCAD) shading style is a close relative of the 'Flat' style. The construction is shown as a wireframe model but the polygons are filled with the color of the wiremesh. Polygons that are backfacing are therefore **not** shown unless you rotate the object. The wiremesh lines themselves are drawn in black (the background color).

The construction seems more realistic than with wireframe but it still appears very unnatural. This is due to the fact that the shading of the entire surface of each polygon is calculated according to their surface normals. For this reason, curved surfaces (comprised of numerous polygons) appear more 'cornered' than in reality.

This style needs about the same time to implement as 'Hidden surface'.

Rotate: Wireframe

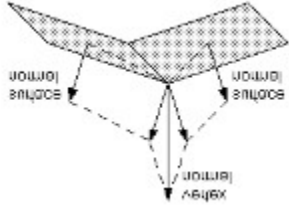
Constructions being rotated must of course also be displayed. As the act of rotating an object is normally a temporary one (usually to set a new display perspective), the construction display is normally reset to wireframe, as this is the fastest display style. This enables the rotation to be conducted much quicker.

If the function is active (default) then wireframe is used for rotations.

If the function is deactivated, then the current style (e.g. flat) is used (which will slow the rotation speed down accordingly).

How is a construction rotated?

Read the online help item [Camera](#) (in the 'Mode' menu).



File

Load

Open

Reset

Initial view

Update

Light

Setview

Preferences

Exit

Load

This option is used to load an AutoCAD for Windows drawing from an active AutoCAD session into the 3D-Win window. It goes without saying of course, that at least one AutoCAD for Windows session should already be running in the background.

If more than one AutoCAD for Windows session is running, then you will be asked to choose the source session for the drawing data.

If an AutoCAD for Windows session is not running then 3D-Win will notice this and ask whether you wish to start the application. Make sure you choose the correct AutoCAD version in the dialogue box that appears.

Note for Windows® 95 and Windows NT Users:

Note that only AutoCAD 13 is supported!

Important:

You can confirm the 'Do you want to start AutoCAD for Windows' prompt if you are sure that all the usual starting requirements for this application (e.g. batch files setting environment variables) are fulfilled. You should generally make sure that these requirements are fulfilled when you start your *system*, e.g. by entering corresponding calls in your AUTOEXEC.BAT file.

If you experience problems starting AutoCAD for Windows then check that the entry for the directory in the W3DVIEW.INI file is correct, e.g.

```
ACADDIR=C:\ACADWIN
```

Further notes

Reading light sources:

The AutoCAD dialogue box for rendering light sources can be used to create, change or delete light sources. These light sources and their colors are automatically read into 3D-Win (see also Autodesk documentation on the AutoCAD Renderer).

Note

Surfaces are illuminated from two sides. The light source used is much more intensive than that used in AutoCAD. The best results are achieved using lower light intensities. The lighting settings can however be changed (see [Preferences](#)). Windows NT users should note a restriction here (see [Preferences](#)).

Open

This option is used to read a DXF, DWG or 3DS format file into the 3D-Win window. These drawings must not be 3D ones nor must they have been created using AutoCAD (they must however fulfill the DXF, DWG or 3DS format specifications). It is possible for example, to open a CorelDraw DXF file.

Please note that the initial reading process can take a short while (the 3D-Win window shows a corresponding message in the lower bar). The delay does not depend on the size of the drawing so much as its *complexity* (i.e. the number of polygons).

Reset

This option 'undoes' the last change in 3D-Win.

Initial view

This option restores the original condition of the drawing as found when it was read into 3D-Win.

Warning!

All changes made in 3D-Win such as views, zooms, shading etc. are irretrievably lost!

Update

This option updates and redraws the 3D-Win window with the data of the AutoCAD session. This can be necessary if vectors are deleted from a drawing. The 3D-Win window may still contain these vectors whilst the main drawing is correctly shown.

Warning!

All changes made in 3D-Win such as views, zooms, shading etc. are irretrievably lost!

Light

You can use the AutoCAD Rendering dialogue box to use lights in a scene. These lights are then automatically read into 3D-Win.

Note:

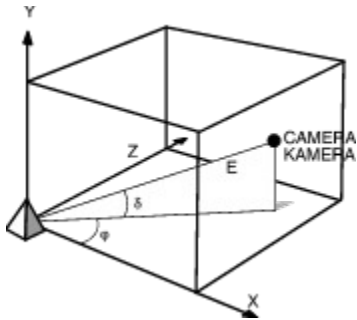
To use colored lights when rendering, note that you must use a TrueColor mode (16.7 mill. colors).

Set view

This option enables you to simultaneously set 7 parameters for an entire scene (view) on the screen.

The following parameters can be set:

X angle	Angle of the camera position on the Z axis relative to the X axis (theta)
XY angle	Angle of the camera position on the Z axis relative to the XY axis (delta)
X	Target position on the X axis
Y	Target position on the Y axis
Z	Target position on the Z axis
Twist angle	Angle for the rotation of the object around the target.
Distance	Distance of the camera to the target (mm)



Preferences

This option opens a dialogue box to configure 3D-Win.

Description of the Options

Read 2D info

This setting accelerates the import of data from drawings that only contain 2D information.

Polygon normals

Backfacing

Backfacing polygon normals are normally ignored when drawing to the 3D Viewer. This has the effect of noticeably speeding up the time required for drawing. If this option is *deactivated*, backfacing normals *will* be drawn, slowing down the drawing procedure.

Hardware acceleration (SPEA FIRE GL only!)

This option activates the Glint chip on the FIRE GL hardware. Complex rendering and light calculation routines are then diverted to the Glint chip, accelerating overall performance.

Important: this function is currently not implemented for Windows NT!

3DS

AutoCAD 13 DWGs can currently not be correctly interpreted in 3D-Win if imported directly. For this reason 3D-Win executes the AutoCAD 3DSOUT command in the AutoCAD session running in the background, which creates a 3DS file which *can* be correctly imported. The options in this boxed area are concerned with the handling of the 3DS data and correspond to the information contained in the AutoCAD documentation (3DSOUT). If you execute the 3DSOUT command manually in your AutoCAD session you will see a dialogue box which contains the same options.

No

ACIS entities will not be read (the drawing will be handled as if it were an AutoCAD 12 drawing)

Partial

Only ACIS entities will be written through 3DS.

All

Executes 3DSOUT and reads the AutoCAD output data according to the Auto-welding and Auto-smoothing values.

Auto-Welding

Welds vertices. If you do not select this option, vertices remain unchanged when exported.

Threshold (for Auto-Welding)

Specifies a distance in the World coordinates of the AutoCAD drawing. If the distance between two vertices is less than or equal to this value, the vertices are welded into a single vertex. The default value is 0.001. You can enter any positive value up to eight characters in length. The decimal point can be in any location.

Auto-Smoothing

Creates 3D Studio smoothing groups when selected. If not selected new 3D Studio objects have no smoothing assigned.

Degrees (for Auto-Smoothing)

Specifies the threshold angle for smoothing. If the angle between two face normals is greater than this value, the face normals are not smoothed.

Process priority (1 ... [420] ... 9999)

This setting influences that display of the drawing during rotations, zooms and movements. The higher the value, the more can be draw between interrupts. This however means that complex drawings can't be rotated so smoothly.

Default

All changes made are reset to their defaults.

Exit

Ends the SPEA 3D-Win session without passing the view back to AutoCAD or saving changes to the drawing. If you want to transfer the viewing data (only possible without rendering information) to AutoCAD, then you must use the corresponding option in the 'Export' pulldown menu.

Export

Parallel projection

Perspective projection

Parallel Projection

The altered view of the construction (e.g. rotated and zoomed) is transferred to the parallel projection of the running AutoCAD for Windows session.

Note:

The Export function is deactivated if:

- the 3D Win window is empty
- AutoCAD for Windows is not currently activated

Perspective Projection

The altered view of the construction (e.g. rotated and zoomed) is transferred to the perspective view of the AutoCAD for Windows session running in the background.

Note:

The Export function is deactivated if:

- the 3D Win window is empty
- AutoCAD for Windows is not currently activated

Flic

[General information about flic animations](#)

[Open](#)

[Close flic](#)

General Information about flic files

Important:

Flic animation files (identified by the extension .FLC or .FLI) **can only be recorded in 256 color (8 bit) video modes (e.g. 640 x 480 x 8)**. If you are using a SPEA-V7 graphics board, then the normal method to change this setting is via the program V7SETUP program located in the SPEA icon group.

The most effective method to create a flic file is via an automatic flic recording with the WALK function. The options in this pulldown menu are intended for **manual** flic file recordings (i.e. scene sequence recording).

The Flic pulldown menu in 3D-Win enables you to make flic recordings into files with the extension .FLC. To check the recording you will need a flic player such as Autodesk's Animation Player for Windows, or PVLITE (both shareware and easily obtainable).

Open (flic)

This option is used to **manually** record a sequence of individual views into a flic file. If a file isn't already opened, a dialogue box will be shown allowing you to enter the name for a new file.

Proceed as follows:

- 1) Load your construction into 3D-Win.
- 2) In the 'Flic' pulldown menu select the option 'Open'
- 3) Enter the name of the flic file to be created.
Note that the lower right corner now shows an 'F' to indicate flic file recording status.
- 4) Set up a view for your animation sequence (Zoom, shading style etc.).
- 5) Click on the lower right corner of 3D-Win to record this scene.
- 6) Set up the next view of your animation.
- 7) Repeat steps 4 to 6 until all the individual views have been recorded.
- 8) In the 'Flic' pulldown menu select the option 'Close flic'. The recording is then terminated.

Important:

The most effective method to make an automatic flic recording using AutoCAD is with the WALK function.

Close (flic)

When you are finished with the animation recording process, close the flic file with this option. All the view manipulations made in 3D-Win are then transferred to the previously selected file file.

Glossary

Aspect ratio

The ratio of an image or screen display's height to its width. Images will become distorted if forced into a different aspect ratio. For example, a height to width ratio of 3:4 or width to height ratio of 4:3 is the aspect ratio.

BitBlock Transfer

Bit-aligned block transfer. Transfer of a rectangular array of pixel information from one location in a bitmap to another.

Bitmap

1. Digital representation of an image in which bits are mapped to pixels
2. Block of memory used to hold raster images in a device-specific format

Clipping

Removing parts of display elements that lie outside a defined boundary (usually a window).

Default Mode: The capabilities, resolutions and display mode the system operates with when you start your computer.

Display Area

Rectangular portion of the physical display screen in which information is visibly displayed; does not include the border area.

Hardware Cursor

The cursor seen on the screen is created by the hardware (making it much faster).

Hardware Clipping

Clipping is done at a hardware level (making it much faster).

Horizontal Frequency: The rate at which a monitor displays each scan line. Usually measured in kilohertz (kHz).

Interlaced Display: A monitor that refreshes every other scan line every other pass of the screen. A non-interlaced monitor refreshes the entire screen (every scan line) every pass of the screen.

Line Draw

If supported at the hardware level then drawing operations are made much faster.

Non-interlaced Display: A non-interlaced monitor refreshes the entire screen (every scan line) every pass of the screen.

Palette: A selection of colors from which to choose.

Pixel: Short for picture element; the smallest field displayed on the monitor; could be compared to the dots which form images in photos printed in newspapers. Also called pel.

Resolution: Number of pixels displayed on the monitor. The higher the resolution, the crisper and sharper the images appear.

Surface normals

The basis for the calculation of various shading styles are the surface normals. The following diagram shows you their location on the polygons of a drawing.



Sync: The stable condition that exists when two repetitive events maintain a constant time relationship; your monitor is in sync with the signals from your board when the display is correct and stable.

Terminate and Stay Resident (TSR): Programs that are run once then remain in memory in order to be activated by a sequence of key strokes or a 'hotkey.' It is possible that a TSR may take up too much memory and cause conflicts with other programs.

Wait State

Clock period inserted into a memory cycle in order to permit accesses of slower memories and slower memory-mapped devices.

Help

[Using help](#)

[About SPEA 3D-Win](#)

[Copyrights](#)

Using help

This option opens the file 3DWIN.HLP (this online help).

About SPEA 3D-Win

This option shows you the version number of your 3D-Win software.

Copyrights

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Powered with Autodesk Technology Copyright © 1995.

Layer

This option is used to activate or deactivate layers and to transfer these changes to 3D-Win if desired.

Note

The changes only apply to 3D-Win and are **not** transferred to AutoCAD!

The dialogue box lists all the drawing layers with their ON/OFF status. To change (toggle) the status of a layer simply click on it (or press an arrow key).

The 'Execute' button changes the layer status immediately. This allows you to test the effect of the changes without saving to 3D-Win.

When finished, click on the 'Close' button to leave the dialogue box saving the changes. If you want to discard the changes click on 'Cancel'.

Limitations

3D-Win can read up to 100 layers.

Teach

What is a 'Teach file?

Open

Close

Suspend

Execute

What is a 'Teach file'?

The Teach function enables you to protocol various actions conducted in the 3D Win window (camera movements) in an editable ASCII file. The ASCII file can be replayed in the 3D Win window using the 'Execute' option in the Teach pulldown menu.

Changes to the ASCII file at a later point in time make it simple for you to change the viewing angle (for example) by altering a single parameter even **after** the recording has been made.

Note:

The recording status of the Teach file is indicated in the lower right corner of 3D-Win:

If the function is **ON**, the corner is **GREEN** and a 'T' is shown in the button.

If the Teach function is **SUSPENDED**, then the lower right corner of the 3D Win window is **RED** and a 'T' is shown in the button.

If the Teach function is **OFF**, then the lower right corner of the 3D Win window is **RED** and a 'T' is **not** shown in the button.

Syntax of the ASCII file

Six parameters (using the command #VSETVIEW) are simultaneously set in order to set up the complete view:

```
#VSETVIEW_X-angle_XY-angle_X_Y_Z_rotation angle_distance
```

Parameters:

X-angle	Angle of the camera position on the Z axis, relative to the X axis (theta)
XY-angle	Angle of the camera position on the Z axis, relative to the XY axis plane (delta)
X	Target position on the X axis
Y	Target position on the Y axis
Z	Target position on the Z axis
Rotation angle	Angle of the camera position relative to the X axis
Distance	The distance of the camera to the target (mm)



Example of an ASCII file

```
#VSETVIEW_-0.791_1.015_0.000_-90._90._11.440_0.000  
#VSETVIEW_-0.791_1.015_0.000_-90._90._11.604_0.000  
#VSETVIEW_-0.791_1.015_0.000_-90._90._21.222_0.000  
.....  
.....  
#VSETVIEW_-0.791_1.015_0.000_-90._90._77.655_0.000  
#VSETVIEW_-0.791_1.015_0.000_-90._90._97.994_0.000
```

Useful tip

If you want to create a Teach file using a particular style, the record all the scenes in wireframe first. Then, when recording the last scene, change to the final style. The complete Teach file will then be saved using that style for all the scenes.

Open

This option opens a dialogue box to permit you to select the name of an existing file, or to enter the name of a new file to be created. After the file has been opened, the lower right corner of the 3D Win window changes from **red** to **green** and contains a 'T'. This signals that the Teach file is ready for recording.

Close

Saves the opened Teach file and signals this by changing the color of the lower right corner of the 3D Win window back to **red** (does not contain a 'T').

Suspend

This is a useful function that allows you to temporarily suspend the recording of a Teach file. This enables you to change the view before continuing with the recording (click on the option - or the lower right corner of the 3D-Win window - again to reactivate the recording). During suspend mode the lower right corner of the 3D-Win window is displayed in **red** (and contains a 'T').

Execute

This option is used to replay a Teach file that has previously been recorded. The file must be opened first. The function reads a set of VSETVIEW commands from the ASCII file (scenes) and displays them on the screen.

Note:

It is not possible to transfer a Teach animation to a FLIC file.

Walk ...

The Walk option enables you to literally 'take a walk' along a polyline towards, through or around your construction in a three-dimensional environment. It is possible to save the views created during the Walk in a FLIC file for later use.

There are two Walk types:

WalkAround

Moves the camera along a 2D/3D polyline looking at a target point.

WalkThrough

Moves the camera along a 2D/3D polyline looking at the next point on the polyline

It is possible to define a second polyline as a target. The camera then moves along the first polyline, looking at the first point of the second polyline. It then moves to the second point on the first line, looking at the second point on the second line etc. If one polyline is longer than the other, then the missing points will simply be ignored.

When a Walk is executed, the contents of the 3D-Win window dynamically change with the movements of the camera - even if the contents of the 3D-Win window are shaded.

Using the WALK command

1. Open an AutoCAD session and place a (target) point in your construction.
2. Draw a polyline either around or through your construction.
3. Click on the WALK menu.
4. Select 'Camera'. Select the 2D or 3D polyline in your AutoCAD drawing that you want to move the camera along.
5. (WalkAround only) Click on the option 'Target'. Select a target point in your AutoCAD drawing in order to define the camera's orientation.
6. Start your WalkAround or WalkThrough.
7. Change the camera's focal length, the number of camera steps along the polyline and/or the arc resolution (number of line segments for the angle of the camera polyline).
8. Repeat the steps above until you are satisfied with the results.

Camera

Click on this option and then on a polyline in your drawing for the camera (the program will prompt you to do this). If the option is already marked, then a camera polyline has already been defined in the drawing.

Target

In order to define the target for the camera orientation, click on this option and then on the target point OR a second polyline in your drawing.

WalkAround

Starts a WalkAround, using the view parameters set.

WalkThrough

Starts a WalkThrough, using the view parameters set.

Lenslength (set this, **before** executing the WALK!)

Value for the focal length of the camera [default: 50]
[Value range: 1 ... infinity].

Steps (set this, **before** executing the WALK!)

The number of steps used when moving the camera along the polyline. The program automatically checks the maximum number of steps possible.

Arc resolution (set this, **before** executing the WALK!)

Sets the resolution of the arc steps used when executing the WALK.

Open/Close FLIC file

This function enables you to record the WALK views in a FLIC file.

Notes:

If you have defined a polyline in an AutoCAD session and have loaded a new drawing into the 3D-Win window, it is possible to execute a WALK on the existing polyline (!) for the new drawing. This feature can be useful if you load a variation of a previous drawing (you can save yourself the effort of creating the same polyline again). Note that if you use this feature on a completely different drawing, the results may be quite unexpected!

Using the Mouse

The mouse control used by 3D-Win is based on the standard 2-button mouse. If you are using a mouse or puck with more buttons, please note that these buttons are ignored.

Action:	Mouse:	Puck:
Set distance	Hold left button and move mouse: to left: reduce distance to right: increase distance	Pick button (button 0) Handling as with mouse
Set target (when plane is set using MODE menu)	left button: set distance to target right button: place target	Button 0 as left mouse button Button 1 as right mouse button
Rotate object	Hold right button and move mouse: to left: movement on X axis to right: movement on Y axis	Button 1 Handling as with mouse
Move visible area (X,Y)	TAB + left mouse button, move mouse: to left: object becomes smaller to right: object becomes larger	TAB + Pick button (button 0) Handling as with mouse
Move visible area (Z)	TAB + right mouse button, move mouse: from user: object moves away to user: object moves closer	TAB + Button 1 Handling as with mouse

Problems / Possible Solutions

I can't activate the function 'Export'

Make sure that AutoCAD for Windows is currently running (in the background). Important: it is only possible to export a drawing if it is already loaded into the 3D Win window!

Error Message 'Not enough memory for Z buffer'

Close one or several other applications. Upgrade your system memory to at least 16 MB.

Error Message: 'The following files are missing in your installation ...'

You will see a list of missing/corrupted files. Please repeat the entire installation!

Colored light sources aren't shown properly when rendering

You are probably using a 256 color mode. The lights' color can only be correctly shown if a TrueColor mode (16,7 million simultaneous colors) is being used.

AutoCAD 13 DWG's can't be opened

The current version of 3D-Win does not support the direct import of AutoCAD 13 DWG's. We hope to rectify this with the next version of 3D-Win.

Construction object jumps when rotating

This effect occurs when the fixed camera reference point and viewpoint are identical. For example if you move the mouse away from you, an object previously shown pointing to the left will - at a certain position - jump to point to the right. This occurs because a new fixed reference point is placed opposite the old point. This is unavoidable because 3D-Win has to use the AutoCAD co-ordinate system to remain compatible to this application.

The driver doesn't seem to support the Glint chip (hardware acceleration with display HiColor mode, SPEA FIRE GL only!)

It is necessary to use a 15-bit Windows driver (as opposed to a 16-bit one) for HighColor display modes. A corresponding driver is in preparation for Windows® 95 and Windows NT environments. Until this is available it is possible to divert to the standard S3 HighColor (32K colors) driver. Please note that a 15-bit BigWin driver version will not be available for Windows 3.x.

Tips

Accelerating the file reading procedure

Save your drawing in AutoCAD. Load this *.DWG file rather than the same data from an active AutoCAD session.

Set the option 'Faster' in the 'File' pulldown menu, item 'Preferences'.

Upgrade your system's system memory to 16 MB at least. The performance improvement is notable!

Keeping your 3D-Win in sight ...

Click on the System menu symbol of the 3D-Win window (this is the top left corner of the window itself - it looks like a minus sign). At the bottom of the menu you'll see an option 'Always on top'. Click on this and the window will be placed over any other windows.

Recording Status

The recording status of the Teach or flic file is indicated in the lower right corner of 3D-Win:



If the function is **ON**, the corner is **GREEN** and a 'T' is shown in the button. View manipulations in the 3D-Win will be recorded into the Teach file.



If the Teach function is **SUSPENDED**, then the lower right corner of the 3D Win window is **RED** and a 'T' is shown in the button. The recording is temporarily stopped. Click on this button to toggle the suspend mode.



If the recording function (Teach or Flic) is **OFF**, then the lower right corner of the 3D Win window is **RED** and **empty**.



If the flic recording function is **ON**, the corner is **GREY** and an 'F' is shown in the button. Click on this button to record the current 3D-Win scene into the flic file.

See also:

[Teach](#)

[Flics](#)

