TECNOWIN INFO

TUTORIAL File for TECNOWIN.

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TECNOWIN INFORMATION

TECNOWIN v.3.10 - Help Tutorial . Introduction to TECNOWIN.

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About this Tutorial

This **Tutorial** pretends to be an application introduction, specially thinking in users that have not got any experience in the **CAD** World, but it will be useful to users coming from another **CAD** platforms, specially   AUTOCAD(*). In this **Tutorial** we develop an elemental example. We do not pretend to show all **TECNOWIN** possibilities, only the more elemental commands to start.

   In any case, we insistently recommend you to waste some minutes of your time reading the **Tutorial.** It will not take you much time and it is sure that it will be useful in spite of its apparent simplicity.

The Working Environment

When the application starts, a document will be opened by default (its name: **TWIN1).** If we wish to open an existent drawing we must go to the **File** Menu and pick the **Open** command (or pick the appropriate button in the Up ToolBox/ToolBar). If we wish a new document we must go to the **File** Menu and pick the **New** command (or pick the appropriate button in the Up ToolBox) .   In our case we are going to work with the default drawing (or document, we will use both words equally well) TWIN1. This doc name appears in the working window which we can MAXIMIZE to work comfortably and use the largest working area.
 A **Menu** appears with all the application options:

Before we go on with the Tutorial, we will incidentally say that if we close the TWIN1 document and there is not another open document, another Menu appears with only two actives submenus: **File** and **Help**

 As we are moving with the mouse on the window we see that coordinates (**ever in meters,** because the program works **in meters and sexagesimal degrees**) appear in one of the lower screen panels. If we move to the up right corner we can see the largest drawing format we can afford. Then, one first question come to our mind: What would happen if our drawing size is larger than this? So we must enlarge our working area. We will do this with the Zoom Scale command.
    Other important point: TECNOWIN works in REAL SIZE. So we MUST NOT WORRY about Scale drawing. We draw in real size (meters) and ONLY when the printing moment arrives we apply a paper size and a scale to our drawing. Well see further this concept .
    The **lower panel** is subdivided in four panels with the following functions:

    - The lower left panel shows basic information about the option of the menu   we are. In the case we pick any option (or command), this panel will show either the application questions or TECNOWIN comments about that command.

    - The second lower left panel shows the **ORTHO** parameter state (Orthogonal working mode). Activate (ORTHO ON) is the default mode. Deactivate show ORTHO OFF. For toggle ORTHO ON/ORTHO OFF we must pick the ORTHO button in the Up ToolBox.
        With the ORTHO command activated every line well make will be obliged to draw at 0,90,180,or 270 degrees. It can be comfortable in a lot of cases. With the Ortho command

deactivated we can draw at any plane directions.

- The third lower left panel shows the **point coordinates** if we are in the drawing area or basic information about the buttons in the different TOOLBOXES.

- The fourth lower left panel (first by right hand) shows the **current layer.** Well see the layer concept later on. It is in relation with the following fact: Not all the objects that we draw will have the same properties (COLOR for example). Well put objects into groups. These groups are the LAYERS. We can say in other words: A LAYER has a group of objects. We decide about the layers name and the layers color, but its necessary to have at least ONE layer. This is the LAYER BY DEFAULT and we need it in the beginning to draw. All the objects we draw will go to that layer. The **TECNOWIN** default layer has the following name: TW. That layer name appears in the lower right panel.
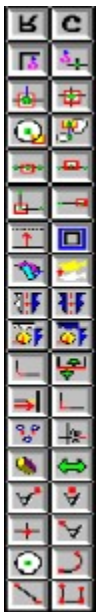
We can also see a group of buttons in the screen up part. The graphics buttons are in row and each button has got an associated command. Well call them UP TOOLBOX. It can be interpreted like the Application TOOLBAR.

We can see another group of buttons in the right hand of the screen. They are in two columns. Well call them **TECNOWIN-I ToolBox** .

There are another ToolBoxes in the Application. They are not visible in the start of the program but you can activate them in different ways. They have got the following names: **TECNOWIN-II** and **TECNOWIN-3D**. They are in the Windows Menu. Youll find another ToolBox if you acquired either the Architectural or Cartography Extensions for **TECNOWIN**. The ToolBoxes are very useful when working because their buttons are very close to us. Their buttons have the principal **TECNOWIN** commands.

We must know where we are at this moment. Are we ready to make our first drawing? Well see it in the following chapter.

My First Drawing

We want to draw an elemental drawing with the following dimensions:

The first thing we can think is ... Where can we draw the first vertex?... and Which will be the first vertex to draw? The answer is IT DOESNT MATTER. The reason: We only will need define one point by its absolute coordinates in very little cases (for example in Topography).

In most of the times we must make a drawing with a real size and print it with a paper size and Scale. The drawing position, paper size and Scale DONT MATTER for the program. Well give them later without problems. We are saying that the position for our vertex are not relevant.

We start with the V1 vertex (we could start with the V2, V3 or V4 vertex in the same way).

We go to the Draw Menu and pick the **Line** command (or the button in the ToolBox:) to draw a line between V1 and V2. We put the mouse in a point of the drawing area (its position dont matter) and pick. Well get V1 in this way. At this moment when we move the mouse an elastic line beginning in V1 appears. Also the question To point: appears in the lower left panel : **TECNOWIN**   asks us for the V2 position, the position of the endpoint of the line. When we move to the right hand appears the current point position in the Coordinate Panel. It shows the current position in **Polar Coordinates**, it means, **relative coordinates (distance and angle) respect the previous point** (V1). For example   D:4.45 A:0, it means: 4.45 meters to the right hand (0 degrees) from V1 point. If we move to the left hand we can see something like this D:3.56 A:180, it means 3.56 meters to the left hand from V1 (180 degrees). If we move up the angle in the panel will be 90 and if we move down 180.   We are assuming that we are in **ORTHO ON** mode.

In our drawing we must draw a 8.90 meters length line to the right hand. Well move in that direction, well see when the number 8.90 is put in panel and pick. Or not? Well, the most expert users perhaps could do in that way, but we can do a shot error !... After we pick we can find a real surprise !... The length line can be 8.92, not 8.90. Is there another method to pick my point? We dont want depend on our skills. That is not serious... YES, of course. The second (and more practical) method is the following:

We go to the Approximation Menu and pick the **Reference Dist** command. We can pick on

the button of the Up ToolBox too: .
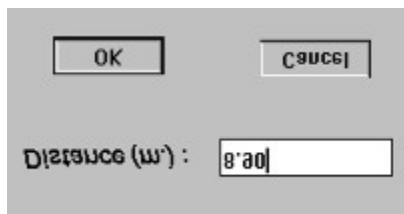
A Dialogue Frame appears asking for the Distance (Length) value. This value is the real length of our line, so we type 8.90 and pick the OK button. It seems there is not any effect, because the elastic line follows moving in (right, left, up or down with our mouse), but **TECNOWIN** knows in this moment that we want a 8.90 length line. It only needs to know the right direction for drawing our line (right, left, up, down). We must move in the right direction (in our case to the right hand) and pick *ANY POINT* in that direction. Well see   that **TECNOWIN** draws a 8.90 length line to the right hand, as we wanted. The picked point position DONT MATTER because its only a *reference* for the right direction.

We already have drawn the **V1-V2** segment**.** Now well draw in the same way the **V2-V3** segment, keeping on mind that it goes downwards and its length (Distance) is 7.60.

But when we arrive to **V3-V4** we are in trouble. We moved in ORTHO ON mode for drawing last lines, but the **V4 point is not either straight left or up**. Its position is in between. How can we define the point? Of course it is impossible with our knowing level.   Even if we suppose that we pick the ORTHO button and we put in ORTHO OFF mode, we   can move in all the directions, but   V3-V4 has got one and only one defined direction.

We can draw **V3-V4** in two different ways:

- The first way look like **the process we followed** to draw V1-V2 y V2-V3. We must know the V3-V4 angle. In our case its clear: 45 degrees. Were going to the Approximation Menu and

pick **Reference Angle** (or the button in the Up ToolBox   ).

A Dialogue Frame appears with two options: a) Pick Line. b) Angle. This is a list with any angles (45 is one of them), but if the angle was another we can key it with freedom.   We pick our angle and pick OK and we can see that we are moving along four orthogonal directions: 45,135,225 y 315 degrees),   different than conventional (0,90,180,270). We go now to the Reference Distance command and type 5.66. We move in our right direction and pick any point. We already have got V4.

- The second method can become familiar to users that have worked with **AUTOCAD**(*).   It consists in typing directly **@5.66<135** and press ENTER (But the RIGHT BUTTON of the mouse because the ENTER from the keyboard will not work). It means that our point will be put to 5.66 meters from previous V3 according to a 135 degrees angle respect to X edge (the polar coordinates in distance and angle). The **@** symbol means that the specified coordinates are POLAR, NOT ABSOLUTES.

Other similar way consists in typing directly **@4,4** and press the right button of the mouse. It means that our point will be put to 4 meters along X edge and 4 meters along Y edge. The **@** symbol means that the specified coordinates are POLAR, NOT ABSOLUTES. If we had not put the **@**   symbol in front of 4,4 **TECNOWIN** would have assumed that the point coordinates were X=4,Y=4 (in Absolute Coordinates, I mean, referred to Coordinate Origin 0,0).

V5 has not any problem, but we move our cursor at 45 degrees (we changed before the reference angle to define V4). To come back to 0-90-180-270 degrees we go to Reference Angle again and pick 0 as Reference Angle in the Dialogue. There is other way for this propose: We can pick the another option in this Dialogue Frame: Pick Line. Picking this button **TECNOWIN** asks for picking a line to define the new Reference Angle. The cursor shows the shape for SELECT objects. We pick on the V1-V2 line or the V2-V3 line (but not over V3-V4) and well see that we can move at 0,90,180,270 (right, up, left, down) degrees again.

V5 determination is obvious now. Then were not going to repeat here the same process that we did for V1-V2.We must draw V4-V5 without problems.

However, we must end our drawing in V1. We can think in calculate the angle and distances between V5 and V1 with our actual knowledge level, but it becomes a new problem. The problem is solved if we learn a new thing: How to use a **point approximation command** for defining a new point in the drawing.   I mean:

TECNOWIN asks for To point: and waits that we pick or define the new point by keyboard. But the point that we wish is the **ENDPOINT** of a line object that we have previously drawn (V1) . Therefore we go to the button at the **TECNOWIN**-I ToolBox (at the right hand and

downwards). The cursor will adopt the **Approximation Cursor** shape ⊞ that looks like a sight. We put it close to the V1 point and when V1 is into the sight then we pick.   The line **V5-V1** has been drawn and our V1-V2-V3-V4-V5 polygonal too. Its our first drawing. It seems simple but we have learned a lot of things (I hope).
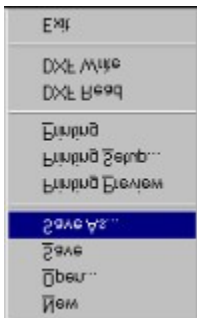
For **writing our work** in a file we go to the File Menu and pick the **Save As** command. A Dialogue Frame for writing drawing files appears. The default name is TWIN1.TNT, but it can be modified. We can call it FIRST.TNT because is our **TECNOWIN** first drawing.

You must have present a thing: *the first time that you save a document* (this is our case), you *cannot write* the doc with the *Save command of the Up ToolBox* .You must use the commands **Save / Save As** in the File Menu.

In the next chapter we are going to draw a vertical line to a defined distance of V1. Well make a new layer, change the layer of the line and move the polygonal V1-V5 to one of the extremes of the line. Then well   hide the vertical line. Here we go !

Reference Point. Layers and Colors. Basic Edit Commands

We are going to draw a vertical line. Its 3 meters at the left hand from V1. Then we will **move** the V1-V5 polygonal to the **middle point** of it.

The Q1 vertex of our new line is put in a point that dists 3 units to the left hand along the X edge and 0 units along the Y edge. For defining Q1 were going to pick the Reference Point command. This command is either in the Aprox Menu or in the Up ToolBox . The **REFERENCE POINT** is a Transparent Command, I mean, we can call it from another command. So we can: a) Call the REFERENCE POINT command and then the LINE command or b) Call the LINE command and then call the REFERENCE POINT command. As b) is the more complex mode here we go:

We pick the **LINE** command. It asks for a point: From point: for we define the start point of the line. Before picking a point we go to the **REFERENCE POINT** command. It asks for a reference point. V1 is the reference point in our case. So we pick the **ENDPOINT** command. We can go to the **INTERSECT** command too. Both commands are right, but were going to use **INTERSECT** now. We pick V1 into the sight. We already have our reference point. Now we must define Q1: We go to the **REFERENCE DISTANCE** command and type   3 (its the distance between V1 and Q1) and pick OK. We are moving to the left hand from V1. Then we pick any point. Q1 is defined. Now Q2 doesnt need explication.

In a next step we are going to explain the Layer concept again. **What is a layer?**
Imagine a drawing a little more complex than ours, with more objects. And were going to use a example for better understanding of the concept: Imagine that were drawing our home plane. This plane has a lot of different things: walls, doors, windows, furniture and more.   Although we can draw all the elements and we dont need understand the layer concept, we can see that there are very different objects. And we probably wish to draw each object with an identify color. For example: walls in black, doors in red, windows in green and so on. These colors are the default colors that use the Architectural Extension for **TECNOWIN** named **TECNOCAD**. We can take some advantages drawing in this way, nor only stetical profits. When we print/plot the drawing we can *assign a different thick line to a different color*. I   mean: Wed like WALLS look like WALLS, with the same color (by default), DOORS look like DOORS, with their color and so on. The idea in our mind has a name in **CAD** (I   think in all CAD applications): **LAYER**. Then we must have **a layer for each group of elements**, WALLS, DOORS, WINDOWS.   But: What about if we could hide the DOORS layer to see our house without doors or for printing? It would be a good idea ... I   think. This is another possibility if we have the objects in layers.

In short: Grouping objects in layers allow us:

a) **Distinguish a color** for the objects group, with two purposes:

a-1: Esthetic a-2: For printing / plotting.

b) **Hide / See** the objects group with two basic purpose:

b-1:If we dont need to work with a layer for a time we can hide it. Well see our drawing clearer, with fewer objects. It   permits display **only the objects that we really need for working**.

b-2: **A hiding layer will not appear in printing**. It permits us printing any

planes with any layers combination.

One step more:

If you are not an expert in **CAD** the following words may look pretty confuse, but here we go!

Its not necessary that all the objects in the same layer have got the same color. Layer Objects usually have got the same color, but well need **sometimes that some layer objects have got a different color** .(For example we can want they have another thick for printing purpose although they belong to the same layer for all purpose).

When we make a layer, we assign a default color. I mean: All the next objects that we draw belong to that layer and will be drawn with the default color.

But we are free **for changing the color to a drawn object** for another color and the object follows belonging to the same layer. We can change the Line Type (the default Line Type is CONTINUOUS Type) for another (DASHED, CENTER, DASHDOT) in the same way.

Next, we are going to apply the Layer concept to our Tutorial:

We wish that the Q1-Q2 line belongs to another layer. Well call it **OTHERLAYER** (NOTE.- Please be careful with CAPITAL LETTERS. OTHERLAYER and otherlayer are not the same layer for **TECNOWIN**).

Weve made the Q1-Q5 polygonal in TW, the **default layer**. Its **default color** is BLACK. If we wish that the Q1-Q2 object belongs to the OTHERLAYER Layer weve got two chances:
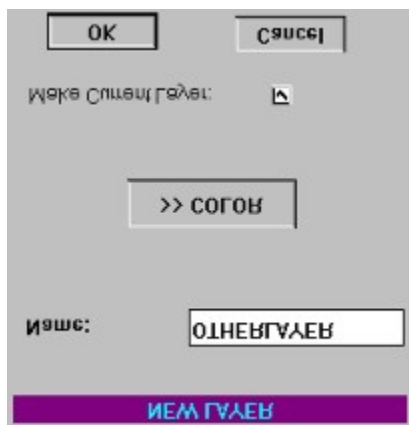
a) We can make the OTHERLAYER Layer before draw the Q1-Q2 line, and we must let the **Make Current Layer** mark on. In this way the new OTHERLAYER layer becomes the **current layer**. I mean, all new objects (like our Q1-Q2 line) will belong to that layer. We can see the layer name in the lower right panel: OTHERLAYER.

b) The Q1-Q2 line is already drawn. Then Q1-Q2 belongs to the default layer (TW), but we wish that it belongs to the OTHERLAYER Layer. In this case we must make the new OTHERLAYER Layer in first time and then use the **CHANGE OBJECT LAYER** command to change the Q1-Q2.

In both ways -a) or b)- we must explain how the new OTHERLAYER Layer is made and how we assign a color for it. If we are following the b) way we must explain the way to CHANGE the LAYER of a drawn object too.

* For making a new layer we must pick the **NEW LAYER** command (Status Menu, Layers SubMenu) or pick the button in the Up ToolBox. A Dialogue Frame appears and we enter:

- The **Layer Name** (be careful. Perhaps there is another layer with the same name). The

layer name is OTHERLAYER in our case.

        - Pick the **COLOR** button for assigning the DEFAULT COLOR for the objects that will belong to this layer. Our layer color is the RED color.
        - Let put the mark in Making Current Layer if we want that the new Layer was the Working Layer, I mean : All the new objects will belong to that layer until we change the Working Layer with the CURRENT LAYER command.

        * For changing the object Layer we must pick the **CHANGE LAYER** command (Edit Menu, Change SubMenu or button in the **TECNOWIN-I** ToolBox:). The command asks for the objects that we want to change. There is only one object in our case. We put on Q1-Q2 and pick. A Dialogue Frame with the existing layers appears. We click on the new layer for our object. We select the OTHERLAYER Layer.

        We already have the Q1-Q2 line belonging to the new OTHERLAYER Layer, meanwhile V1-V5 belongs to the TW Layer. On the other hand we selected the OTHERLAYER Layer as the **current working layer**. Next lines will belong to OTHERLAYER Layer and will be drawn in RED color.

        The next step consists in **moving** the V1-V5 polygonal from the V1 point to the middle point of Q1-Q2. We pick the **MOVE** command (Edit Menu, or button in the **TECNOWIN-I** ToolBox).
        First the application asks for **SELECT** objects for moving. The cursor appears in the

Select Mode .   We put the sight on the lines objects V1-V2, V2-V3, V3-V4 and V4-V5 and pick one after the other. Well see that theyll appear in DASHDOT mode showing they are SELECTED (NOTE.- If we pick over the same object again, itll be NO SELECTED for the operation   (MOVE in this case) and it becomes in CONTINUOUS mode again.
    When weve selected all our objects pick the right button of the mouse to let **TECNOWIN** notice that the SELECT process is finished. (NOTE.- For seeing how we can select objects by the **WINDOW / CAPTURE** methods please read the Manual or the Questions / Answers

chapter).

   After this process, the application asks for the first point for moving From point:.
 We pick the ENDPOINT command and we move the sight until V1 is into the sight, picking in
that moment. The phrase To point: appears in panel. We pick another support command that is
close to the ENDPOINT command: MIDPOINT and we move the cursor/sight until it is over
Q1-Q2, (Never mind if we are near Q1 or near Q2) and well pick.   If the operation is right the
V1-V5 polygonal moves until V1 point coincide with the Q1-Q2 midpoint.

        To end with this Tutorial chapter were going to work with the TW layer and then were
going to hide the OTHERLAYER Layer.
        For TW becoming to the CURRENT WORKING LAYER (current layer) again we pick
the CURRENT LAYER command (Status Menu, Layers Submenu or button in the Up ToolBox).
A layer listing appears. There are two layers in our drawing: TW and OTHERLAYER. The
current working layer appears signed on by default (OTHERLAYER in our case) . We select as
new current working layer TW and pick OK. Then the TW Layer must appear in the right lower
panel as the Current Working Layer.

    Next we pick the **LAYERS ON/OFF** command (Status Menu, Layers Submenu or button in
the Up ToolBox). A Dialogue Frame with two list appears. In one side are the layers **ON**
(Visible). On the other side are the layers **OFF** (Hide) . We select the OTHERLAYER Layer and
pick the button for passing **ON->OFF** the layer.
    We pick OK and well see in the screen that Q1-Q2 **disappears.** Is Q1-Q2 erased? Not. Q1-
Q2 **belongs to a hide layer**.
        We have finished this chapter, well print our drawing (in its current state) in the next
chapter.

Printing

Its time for **printing our work**. There are three commands in relation with this subject:

PRINTER SETUP   (File Menu): Permits to choose the printing device. We can change the printing device from the Dialogue Frame of the **PRINTING** command too.

PRINTING   PREVIEW (File Menu, button in Up ToolBox): Permits to make a **preview view** of our job before printing it .

PRINTING (File Menu, button in Up ToolBox): **Permits print out the drawing**.

The **PRINTING PREVIEW and PRINTING** are **similar**. The only difference is that Preview assumes all **default printing device characteristics**, including paper size. Then the Printing Dialogue Frame does not appear. Therefore all things well say about the Printing command can be applicable to the Printing Preview command. The Preview advantage is that we can test the paper size, scale and drawing position in paper before printing out.

When we pick the Printing command the application asks for the **lower left point** (P1) of our drawing. This point will **coincide with the lower left point of the paper.** So **this is the fundamental point to put our drawing into the paper**. When we pick this point **TECNOWIN** asks for another point: the **up right point** (P2) of our drawing (or piece of drawing). This point is only a reference point to define the printing area. The point position in the paper will be determinate in function of the Scale and paper size.
    You can see the P1 and P2 points in the previous drawing.
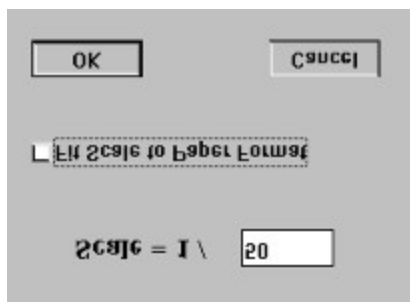
Next appears a Dialogue Frame asking for the drawing **Scale** (1/100 by default). The 1/ come built in the Dialogue.   We must type the denominator (For example: 50 for 1/50, 100 for 1/100, 200 for 1/200). A 1/100 Scale means 1 meter of our drawing will be equal 1 cm. in the printing paper . A 1/50 Scale means 1 meter of our drawing will be equal 2 cm. in printing paper. A 1/200 Scale means 1 meter of our drawing will be equal 0.5 cm. in printing paper.
    There is very *IMPORTANT* fact. There is a text lower the Scale **Fit Scale to Paper Size** and

its marked by default. It means that if we let **the mark on** (default value) **TECNOWIN will fit** the drawing scale for viewing the drawing making the most of the paper, although we put a Scale factor in the dialogue. So if we want to print at Scale we must:

 a) Type the Scale (If different of 1/100).

b) Deactivate the mark in Fit Scale to Paper Size (Format).

    Weve chosen 1/50 for printing in A4 size.

    Finally, the **Printing Dialogue Frame** appears. We can change the printing device and/or the paper size here.

Questions and Answers

- <u>General Questions and Answers</u>
- <u>Questions and answers to AUTOCAD[*] users</u>

(*) AUTOCAD is a trademark of AUTODESK, Inc.

General Questions and Answers

* I usually worked with other **CAD** application, and Id like to pass **TECNOWIN**, but ... Can I pass my drawing files to **TECNOWIN** format ?

TECNOWIN files have got   .tnt   format. This is the default format for **TECNOWIN** files. But your drawing files format DONT MATTER if your program accepts DXF export because **TECNOWIN** can read / write DXF files.
 Please read the DXF READ command in the **TECNOWIN** help file.

* Id like work with TECNOWIN, but I   usually work with people that have another **CAD** program. Can we interchange information in any mode ?

Yes, if your **CAD** program permits import / export files in DXF format, because **TECNOWIN** reads and writes files in DXF format.

* Does TECNOWIN have any limitation about files size?

NO. The only limitation is imposed by your computer limitation.

* My drawing does not fit in the default **TECNOWIN** drawing area. How can I extend my working area?

Use the ZOOM SCALE command. If you enter in the Dialogue Frame a scale factor of 1, your drawing area remains unchanged. If you enter a scale factor of   2, your drawing area becomes to a double area in relation (X,Y) with your previous area. If you enter a scale factor less than 1 it will decrease. For example a 0.5 factor brings near your drawing. Your working area (in units) will be smaller than your previous working area.

*   What is the Aerial View advantage ?   Can I have more than one?

The Aerial View permits viewing in a separate window all the drawing so that we can do ZOOMS WINDOW in dynamic mode, I   mean, we pick two points in the Aerial View and well see the corresponding ZOOM in the main window.
You can only have one Aerial View for drawing.

*   How can I close an Aerial View?

Closing its window like another Windows window.

* How many 3D views can I   have ?

 You can have as many as you want. Anyway the maximum cameras number is SIX. So the different 3D views you can have is SIX.

* Can I have some Section Views at the same time?

Yes. You have not limitation.

*   Ive read the Tutorial but I dont   know how to SELECT some objects at the same time instead of picking one after the other. Can you explain it?

Of course. When the application asks for objects to apply a command (usually an Edit command like erase, move, copy, extend, fillet, mirror...) a sight cursor appears. If we put the cursor on the object and pick, it will be selected (dashed). If we pick over a selected object again, the object will be discarded for the group of selected objects (continuous). We already talked about it in the Tutorial. But if we must select 5,10,20, or 1000 objects the more affordable mode is with the WINDOW SELECT o CAPTURE SELECT. We can see in the figure the way for picking P1 and then P2 for WINDOW SELECT and the way for picking Q1 and then Q2 for CAPTURE SELECT. In the first case all the objects fully included into the window are selected. We see there are two line objects not fully included into the Window defined by P1 and P2 and theyre not selected. In the second case all the objects fully or partially included into the Window defined by Q1 and Q2 are included.

How does **TECNOWIN** understand that the P1-P2 Window corresponds with a SELECT method of WINDOW and the Q1-Q2 Window corresponds with a SELECT method of CAPTURE ? Theres nothing better than an example:

You can see how we pick P1 then P2 and how we pick Q1 then Q2. In the first case weve opened a window to the up/right direction (P2 is up/right from P1). **TECNOWIN** assumes that we want to make a WINDOW SELECT . In the second case weve opened a window to the down/left direction and **TECNOWIN** assumes that we want to make a CAPTURE SELECT.

* The solid raster hatch is easy to use, but Ive seen two problems:
  a) It must be inside an enclosure, but it extends sometimes to another zones depending of the current ZOOM.
  b) Its not printed in my printer.

  a) You are right. It can be possible though the hatch has got a defined boundary, specially if we do a large ZOOM (a ZOOM with a large Scale). In that case the hatch can escape to adjoining zones. The reason is that the hatch extends until it finds a physical boundary, and the boundary can be wrong delimited in ZOOMS with large scale. This fact depends of the screen resolution as well. Youll find less problems if youve got a graphics card with higher resolution. However you must not find that problem in printing (if your printer/plotter supports raster display mode. We talk about it next).

  b)   Your printer does not support raster-display technology and it can not print this type of hatches. Therere not much devices that support this technology at this moment.

In short: We recommend youve got the solid raster hatch limitations on your mind and you operate with raster hatches type Region. Youll get the ***same effects*** with them without problems. Youll only need a little more effort.

* The 3D Menu is not accessible when I open a 3D Window. What can I do ?

Yes, you are right. You must pick in any internal point of the window for activating the Menu.

Questions and Answers for AUTOCAD [*] Users

(*) AUTOCAD is a trademark of AUTODESK, Inc.

* Can I pass my drawing from / to **AUTOCAD** from / to **TECNOWIN**?

Yes, because **TECNOWIN** either reads and writes files in DXF format. Please read the commentary about it in the General Questions and Answers chapter.

* I work with **AUTOCAD** for WINDOWS. Is there another way for sharing my information with **TECNOWIN**?

Yes, because both of them support OLE. **TECNOWIN** supports OLE 2.0 in two ways: Server and Container. It means you can either call an **AUTOCAD** file from **TECNOWIN** or call a **TECNOWIN** file from **AUTOCAD**.

* I usually type the Absolute Coordinates / Polar Coordinates with AUTOCAD. Can I do the same thing with **TECNOWIN**?

Yes. **TECNOWIN** supports the following formats for entering points by keyboard:

  X,Y   for Absolute Co-ordinates. Example: 4,2
  @ x,y   for Polar Co-ordinates x,y. Example: **@** 4,2
  @ d<a   for Polar Coordinates distance/angle. Example: **@** 4<90

You must keep in mind that you must pick the RIGHT BUTTON of the mouse for ENTER (The ENTER key of the keyboard will not work).

Anyway we suggest you read the Tutorial (My First Drawing chapter) . Youll can see another ways for entering point coordinates and point positions in **TECNOWIN**.

*   **There** are not FREEZE / THAW layers in **TECNOWIN**.

You are right. **AUTOCAD**(*) uses the freeze / thaw layers for earning in speed   in some ZOOMS, but it can be pretty confuse for new users. **TECNOWIN** has got its own way   for handling this subject. It only handles ON / OFF layers for simplicity.

*   **Is** there any limitation in the number of layers?
NO.

* I dont find the only Dialogue Frame for Layers.

Right. There is not only one. There are Dialogue Frames for: New Layer, Current Layer and ON / OFF Layers.

* When I do a ZOOM-EXTENTS in **AUTOCAD** the drawing extends along the screen and I have not margins for working.   Is there any possibility in **TECNOWIN**?

Yes. Weve incorporated the MARGINS command (Status Menu) that fits lateral margins (in meters) when you make a ZOOM EXTENTS.

* Can I purge Blocks / Layers in any moment in my drawing ?

YES. You can see the Purge Blocks / Purge Layers commands.

*   Can I make my own library and put my icons?

Thats not necessary. When you do a Directory Preview command (we also call this command Library Preview) of the drawings in a directory **TECNOWIN** updates the files information and youll see all and each one blocks.

*   Can I open several drawings at the same time ?

 YES. **TECNOWIN** is MultiDocument. You can arrange the views in Cascade / Tile mode.   You can have any views of the same drawing too.

*   How can   I   close a polyline ?

You must use the Close Polyline command (Edit Menu, Edit Polyline Submenu).

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