# TIEDIT Help Index

**How To ...**

Get help with the TIEDIT TIE Fighter Mission Editor/Builder by K & W Computer Works.

**Commands**

**TIEDIT Overview**

TIEDIT is a powerful Mission Editor/Builder for LucasArts TIE Fighter.   It was written in the MS Windows environment because of Windows' clean system for implementing listbox and data entry tools in a menued/editor application.   TIEDIT is very easy to use and it edits many mission parameters.   (For a good understanding of the mission data that TIEDIT can alter, pick up a copy of the Official TIE Strategy Guide.)   You may notice several improvements in this version of TIEDIT compared to Version 1.0:

> °   All TIEDIT Help is now available as standard Windows hypertext.
> °   A Navigation Editor has been added to the Main Editor.   The Navigation Editor will let you *directly edit* the XYZ coordinates (in kilometers) of all mission waypoints, start locations, the jump point, etc.   You can also turn each location on or off.
> °   A Map Editor lets you *view and edit* all X-Y locations using a GUI interface.   You can directly enter XYZ coordinate values using the Navigation Editor or "drag and drop" a location's X-Y values using the Map Editor.   The Map Editor will also let you edit Z-Axis values using a "point and click"/keyboard entry method..
> °   This version of TIEDIT has been upgraded for the *Defender Of The Empire* missions and data.

**TIEDIT is distributed in the Shareware version.   By registering TIEDIT, you will receive a "key" file which will convert the Shareware version into the Registered version.   Please note that the Shareware version is limited in what it will let you do.   You can look at all editor features but you can change very little.   Most of your changes will be undone as soon as you complete an edit.**

I am sorry for the inconvenience of forcing you to register TIEDIT, but unfortunately, many individuals never pay registration fees (and most fees are very small compared to their commercial equivalents).

**Running TIEDIT**

1.   Using either the File/Open menu command or by selecting the File Open Icon, select a mission file to edit.

2.   Select the Main Editor command to call up the Primary Page.   The info on the Primary Page will probably be used/edited most often (that's why I put it there...).

3.   All editing is simple and follows the standard Windows way of doing things -- click a button to activate it; select a ListBox item or select its up/down arrows to scroll the box to the item you want; or select an edit box and type a new value into it.   *All editor items are tab-controlled so you can press the Tab key to advance to another edit control.*   All edit entries are range-checked before letting you continue and you will be prompted if you make an erroneous entry.   If running the Shareware TIEDIT, all "registered - only" features will revert back to their unedited values once the edit control loses focus (you press the Tab key or click the mouse cursor on another edit control).

4.   All menu command features are relatively straightforward -- experiment and see what happens.   You can change the color of the edit screens, turn the Status Bar and Tool Bar on/off, etc.

5.   The TIEDIT system is very tree-structured, so move around the edit pages by selecting the various push buttons at the bottom of the edit pages.   *Note that you can select the push buttons by using their corresponding Alt-key sequence (Alt key plus the highlighted letter or number on the button).*   Go to the Primary Page to select the Flight Group to edit.

6.. Once you have finished an edit session, be sure to SAVE your file (provided you backed it up before editing...).   Select the File/Save menu command or press the File Save Icon (it looks like a floppy disk).   Its a good idea to save your in-edit mission file quite frequently.   As we all know, Windows has its share of General Protection Faults and other errors, so save frequently to avoid losing an edited mission.

7.   Exit TIEDIT by selecting the Exit menu command.

**General Mission Editing Notes**

Remember that the TIE mission files provide only the basic *structure* of the missions. Everything you do is subject to approval by the game engine. For example, if you create a 5 minute start delay for a Flight Group, the game engine may decide to shorten that delay if it thinks the action is getting slow.

Program *logical* activities into the Flight Groups. The game engine can alter the activities in a mission if it thinks that you've programmed *illogical* things for Flight Groups to do. For example, if you program a Flight Group to enter the game via hyperdrive engines, but the vehicles in the Flight Group don't have hyperdrive capability, the game engine will not warp the vehicles into the game.

Finally, the artificial intelligence used in TIE is quite extensive and you can easily mess up a mission. Keep mission backups, be patient with your edits, and just experiment until you find a way to make a Flight Group do what you want it to.

**Flight Group Start Conditions**

There are two groups of conditions which define when and how a Flight Group appears.   A starting condition can depend on another Flight Group, a type of craft (X-W, Y-W, etc.), or a craft having a specified allegiance (Rebel, Imperial...).   The starting conditions are numerous (a vehicle must have arrived, been destroyed, etc.) plus you can add a time delay into the Primary start conditions.

The Secondary start conditions function just as the Primary but *you* must define how the two groups work together.   The AND/OR radio buttons in the Secondary area define whether the two groups must both be accomplished (AND) or just one of the groups (OR) must be accomplished to trigger the appearance of the Flight Group.

The Dependency Type called "Range of Flight Groups" is interesting in that the start condition depends on a range of Flight Groups with *you* defining which Flight Group starts the range and the game engine then adds several more Flight Groups from the mission order to the list of start dependencies.   This option appeared very little in the original game missions.

**Win And Bonus Conditions**

There are Primary and Secondary Win Conditions as well as Bonus Conditions.   All 3 types consist of a condition that must be met (Flight Group destroyed, attacked, etc.).   There is also a Condition Detail which specifies more exactly how the condition must be met.   For example, if the condition specifies that a Flight Group be destroyed, the Detail might specify that only the Special Craft in the group be destroyed.   (You can specify the Special Craft on the Primary Page.)

The Bonus Conditions work the same as the Win1 and Win2 Conditions.   The Bonus area includes Bonus Points that can be awarded if you meet the Bonus conditions.   Note that the Bonus Points can appear as a *penalty* (they can have a negative value).   For example, you can be penalized if your mother ship gets destroyed.

**Flight Group Orders**

The Flight Group Orders are one of the most interesting yet complex areas of the game engine.   There are 3 groups of orders (Primary, Secondary, and Tertiary).   Each group has a specific Order, Starting Velocity command, 3 Detail settings, and up to 4 Target groups.   Please review the following list of Order info:

1.   The Orders in TIEDIT may not match all Orders in the TIE Official Strategy Guide.   There are several misprints in the Guide (and my analysis may not be perfect either).

2.   Starting Speeds are only in increments of 10% power.

3.   The 3 Detail values were called "Details" because they have different functions based on the current Order.   For example, Detail 1 is the craft position in an Escort Order, but Detail 1 is a loop count when the Order is to Fly a Loop.

4.   When a Detail has a TIME value, the TIME will be listed in the Detail's description to the left of each Detail edit box.   For TIME, 1 increment = 5 seconds of game time.   All 3 Detail values can range from 1 to 255, so experiment and see what happens!

5.   The 4 Target Groups for an Order can function as 4 independent groups or Groups 1 and 2 can form a group and Groups 3 and 4 can be another group.

6.   Combine 2 target Groups when using Global commands.   When using Global commands, don't forget that Groups 1-2 and 3-4 are grouped.   For example, if you set Target 1 to the Imperial Allegiance Target Type (i.e. all Imperial craft will be targets) and you want to exclude the Player (who's flying a T/F) from attack, set Target 2 (not 3 or 4) to the Global Target Type, GNP setting.   This example would work for Target Groups 3 and 4 as well.   Think of Global commands as modifiers of a Target Group.

7.   Remember that an edit doesn't "take" until the edit or listbox that you were editing loses focus, i.e., you click the mouse on another parameter to edit.   You can also use the Tab key to move the edit focus. Once you have moved the edit focus to another mission parameter, all displays on the screen will be updated.
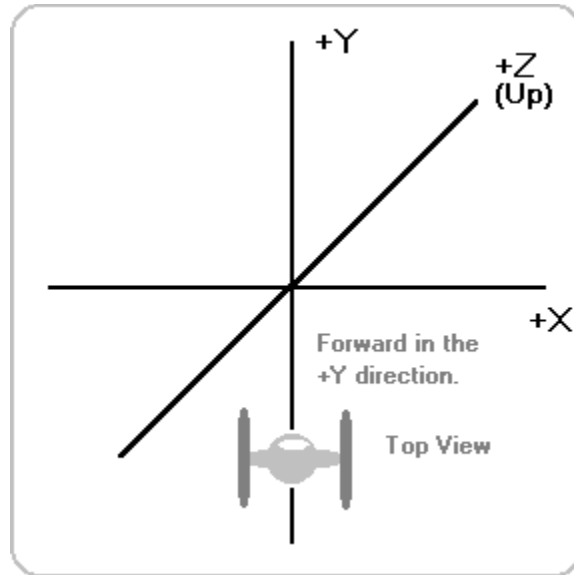
**Printing A Flight Group**

TIEDIT lets you print a summary of an edited/unedited Flight Group.   This is a handy feature, especially when you've made numerous changes to a Flight Group and you need a quick summary to look at while testing out your changes in the game.   There's just a couple of things to remember when printing Flight Groups.

1.   You must have a valid mission file loaded before you are allowed to Print (using the "Print Flight Group" button on the Primary Page).

2.   The File/Print Preview menu option on the Main Window is active.   I used it primarily as a debugging tool while developing TIEDIT but decided that it might be handy for end-users as well.   To use Print Preview load a mission file, select Main Editor and go to the desired Flight Group, return to the Main Window, and select File/Print Preview.   From the Preview you can opt to Print the Flight Group or you can exit Print Preview and go back into the editor.

3.   The Print feature was designed to work with an 8 1/2" x 11" print page in Portrait orientation. Landscape orientation will probably not print all the data on a Flight group.

**Navigation In The TIE World - Navigation Editor**

This figure shows you the TIE Fighter 3D Coordinate system in Vehicle-Centered Coordinates.   All axes are relative to your vehicle.   When flying forward you are moving in the +Y direction.   Turning right moves you in the +X direction.   Upward movement is +Z.   If you are decreasing a waypoint's Z-axis value, the waypoint will move in a downward direction relative to you.   Decrease a waypoint's X-axis value, and it will move to your left.



The TIE Fighter world consists of a full 3D coordinate based system that you are free to navigate.   Since everything in "space" is referenced relative to another object or vehicle, it is easiest to look at the world in relation to your spacecraft.   Referring to the 3D coordinate system shown above, reference the TIE world in terms of your spacecraft's 3D axes.   The Y-axis extends in front of and behind you, the X-axis is to your left/right, and the Z-axis goes above and below you.   The center of the TIE world is at XYZ location 0,0,0.   You will find lots of mother ships at this location.   When changing TIE nav data, frequently refer to the game's map display to help keep locations in perspective.


**Navigation Editor**

From the Primary Page of the editor, selecting the Navigation button will take you to the Navigation Editor. This editor page lets you directly enter the XYZ coordinate values (in Kilometers) of all Waypoints, Starting Locations, the Jump Point, etc.   You will also notice that each location can be turned off or on via an "Active" box.   Select the "Active" box (you'll see an X appear in it) to turn on a location.   Remember that you can't haphazardly turn on locations - you must enter XYZ values for the location too!


**Waypoints**

There are up to 8 Waypoints that can be programmed and turned off/on.   A Waypoint is not active until you select its "Active" box.   You cannot turn off a Waypoint by setting its value to 0,0,0 -- that's a valid location in space!   Waypoints must be sequentially used, so program them in a one-up order, i.e., 1,2,3,4...   Do *not* skip the ordering by programming an order such as 1,3,5.   The game engine will probably ignore all Waypoints at the first inactive one it finds.

**Starting Locations**

There are up to 4 Starting Locations that the game engine can use.   You can program them but the game engine decides when to use them.   Be sure to keep in mind that the game engine can use a Start Location as a rendezvous point or jump point if it so desires.   As with the Waypoints, you must activate a Starting Location by selecting its "Active" box.   Always use Start Location 1 and add Start Locations sequentially, i.e., 1,2,3...

**Jump Point**

The Jump Point is the location where a vehicle hyperspaces away (jumps out of the game).   To use the Jump Point, activate it and make sure you have selected the "Hyperdrive" Departure method from the Primary Page of the Main Editor.   Also, make sure that the vehicle you are commanding has hyperdrive capability.

**Locations 1 and 2**

These are currently unknown locations that appear somewhat "generic".   They seem to have various identities based on the current Orders.   Experiment with them and see what happens!

**Fun Things To Do With TIEDIT**

Obviously, the number of changes and mission enhancements you can make to TIE missions are almost endless, but here's a few things I enjoy doing with TIEDIT:

1.   Increase the number of vehicles per wave plus the number of waves.

2.   Make the pilots real dumb -- make them have Novice artificial intelligence.

3.   Give yourself NEAT weapons by changing your Starting Configuration to give you more Missiles and Torpedoes (2x Missiles, Torpedoes).   Also, try giving yourself some Beam weapons.   The Decoy Beam, for example, is used only once in the entire game and Darth Vader had it. Give yourself one and try it out.

4.   Change the alliance of various Flight Groups and watch them kill each other.

5.   Alter a mission so that as soon as you wipe out a Flight Group another one appears.   Change the Starting Conditions of 10 Flight Groups so that one appears as soon as the previous one has been destroyed.

6.   Give yourself a good ship, i.e., the TIE Defender, which you normally only get when you have almost finished the game.

7.   Change the Talk flag on bad guys so you can tell them to "Go Home."

8.   Change the Difficulty Level so that not so many bad guys show up.

9.. Have several ships fly to programmed locations, rendezvous, and then fly docked around several waypoints.

**Map Editor**

The Map Editor and the Navigation Editor work in tandem.   The obvious advantage of the Map Editor is that it lets you *see* a 2D map of a Flight Group's locations in space.   (Since 99% of the spatial locations used in the game are located on a 2D plane, it made sense to have Map Editor display a 2D plane as well.   You *can* however edit the third axis of a location using Map Editor.)   The Map Editor operates independently from the Main Editor.   Select Map Editor on the main window screen to activate it.

The Map Editor menu commands work in a logical manner so little explanation is needed.   Once you've selected Map Editor to activate it, select the "Plot Flight Group" drop-down command.   Select a Flight Group to plot.   All "Active" locations in the group will be plotted.   Select "Erase Flight Group" to erase the plot of an entire Flight Group.   Note that this command **does not** actually erase any Flight Group data! Select the "Clear Map Display" to clear the display of all data so you can start fresh.   If the display ever seems to be "off" after you've resized the window, turned the Status Bar or Tool Bar on/off, etc. select the "Refresh Map" command to redraw the display.   (Actually, the display is completely recalculated and redrawn with every edit, window update, etc.)   The "Show Labels" command can be turned on or off (checked/unchecked) to toggle the appearance of the plot labels.   If you've got lots of locations plotted, turning off the labels will help "unclutter" the display. The plot labels are abbreviated names of the location, i.e., Flight Group 3 is written as FG3, Location 2 is L2, Start Location 2 is S2, Jump Point is J, Waypoint 6 is WP6, etc.


**Plot Colors**

I mention this feature because all colors used for plotting your locations are randomly selected.   It would be unnecessarily tedious to program specific colors for plotting, so random ones are generated.   The obvious consequence of this action is that occasionally you may get a really weird or no color (I tried to prevent black-like colors since the window background is black).   If you plot a Flight Group and get a bad color, just erase it and then replot it.


**The Mapping Grid**

You will notice that the entire Map Editor display is overlaid with a 2D grid having +X and +Y labels on the center grid axes.   The grid isn't just created to look good, rather, it gives you a visual representation of mapping distance in Kilometers.   Each small square formed by the intersections of the X and Y-axis grid lines is a finite distance.   When you start the Map editor, the grid defaults to 1 Kilometer/side of the small grid squares and the center of the grid defaults to X = 0Km, Y = 0Km in Tie Fighter space.   The "Grid Size" menu command lets you change the size (in Km) of each small grid square.   Use this command to shrink or expand the distance between the plotted locations.   The current grid size (in Kilometers) is given in the right-most pane of the Status Bar at the bottom of the window.

Notice the "XC = " and "YC = " indicators on the Status Bar.   These two indicators are the "X Center" and "Y Center" values (in Kilometers) of the center of the grid.   As previously mentioned, the Map Editor defaults to XC = 0 and YC = 0 when it starts.   Selecting the Horizontal or Vertical Scroll Bars (the small controls having arrows at both ends at the bottom and right side of the window) will cause the X Center and Y Center locations to shift, thus causing your plotted locations to move on the screen.   Note that the location values are *not* changing - the display is just moving the plot points around on the screen.   This feature is very important because quite frequently you will have several locations that can't be plotted within the distances represented by the current display page.   Just use the Scroll Bar controls to find any locations that you know are "Active" but you don't see on the page.   Just as in other Windows applications, clicking the Scroll Bar Arrows will only slightly move the display page, while clicking inside the control track will move the page much farther.   You can also "grab" the Scroll Box and pull it to wherever you want.

**Editing In The X-Y Plane**

The Map Editor displays TIE locations in the X-Y plane.   Editing either or both of these axes is *real simple*.   Move the mouse cursor around in the map display.   You'll notice that whenever the cursor is moved over a plotted location, the title of the location appears in the left-most message pane of the Status Bar.   (Please note that you can frequently have more than 1 location with the same coordinates, therefore they will be stacked on top of each other in the display.   To find out what locations are stacked, just move each one slightly away from the others until you get them all uncovered (see below for moving locations) ).

Plot a Flight Group and select the location you wish to move and where you want to put it.   Using the mouse, position the cursor over the location.   *Press and Hold the left mouse button to move a location.* The cursor will change shape to indicate you've begun an X-Y edit.   The left-most Status Bar pane will indicate X-Y edit mode, and the "X =" and "Y = " panes will go active, giving you the X-Y location (in Kilometers) under your mouse cursor.   Just move the mouse cursor to the new location and release the left button.   The Flight Group location will be updated.   Practice this a few times and be sure to watch the Status Bar panes as you edit.


**Editing In The Z Plane**

Even though the Map Editor displays a location's X-Y values, you can edit the Z-axis too.   This is easily done by positioning the mouse cursor over the location you wish to edit and then **press and hold the Ctrl key and then press and release (click) the Left Mouse Button.**   Release the Ctrl key once you've released the mouse button.   The left-most Status Bar pane will indicate you're in Z Edit mode and the "Z =" pane on the right side of the Status Bar will become active.   Use the following keyboard keys to edit the Z-Axis values:

> **- (minus sign)**          **Decrement Z by 0.1 Kilometers.**
> **= (equal sign)**           **Increment Z by 0.1 Kilometers.**
> **[ (left bracket)  Decrement Z by 0.5 Kilometers.**
> **] (right bracket)          Increment Z by 0.5 Kilometers.**
> **Backspace                 End the Z-Axis edit mode.**

As you press the above keyboard keys, you'll see the "Z = " value change.   When done editing, press the Backspace key to end the edit.   Of course, if you're not happy with the Z-axis value obtained using the Map Editor, just enter the Main Editor, go to the Navigation page, and directly enter the Z value you want.

**Final Comments**

Please note that you will only have to register this program once -- no charges for upgrades.   The "key" security file will work with all revisions of TIEDIT so that if you register Version 1.1, then the "key" will work with revisions 1.2, 1.3...

If you want more info on how TIE Fighter game internals work and more on mission structures, read my Chopping Block column in the February and April 1995 Game Developer magazine.   TIEDIT evolved as a result of the analysis I did for the two-part review of TIE Fighter internals.

Thanks again for registering TIEDIT.   I will support this product -- contact me with any problems using it. My home phone and BBS number is 505-869-3522.