



# Sector Planner User Guide

Sector Planner v1.5

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## ABOUT SECTOR PLANNER

Sector Planner is a utility to help you plan your factory locations in Egosoft's X2: The Threat.

Sector planner allows you to examine current resource supply and demand in a particular sector, making it much easier to spot potential areas of profit within the X2 universe.

Sector planner can even give you a break down of supply and demand for a sector within a specified number of jumps or across the whole X Universe, making it much easier to find great locations for your factories (and loops). It also provides information, such as a profit calculator and can store your stations prices to give you an idea of your hourly profitability.

It can now even import data from Logaan's company value script thereby saving you the time of entering all your station details manually.

Sector Planner **DOES NOT** remove the *THINK* portion of factory placement! The model it uses is based upon all factories operating at 100% efficiency, which the AI very rarely does. However the combination of Sector Planner and some thought can prove to be a potent weapon in your campaign for Universe wide domination.

## HISTORY

I decided to write Sector Planner as a small tool for my own use however it soon developed into much more than the simple tool I had envisioned as a consequence I decided to make it available for others to use.

The first closed beta release of Sector Planner was in March 2004, with the first public release about a month later. Since then Sector Planner



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has been through 5 versions with a number of bug fixes and tweaks in between.

## INSTALLATION

Sector Planner is available either as a zip file containing a MSI file or just the MSI file itself. If you have the zip file version, please extract the MSI from the zip file. To install simply click on the MSI and follow the on screen instructions.

**NOTE:** You will need the dot NET framework version 1.1 from Microsoft that can be downloaded [here](#).

## THE SECTOR PLANNER USER INTERFACE

The following functions are available within sector planner.

### FILE

- **New**-Starts a new sector map losing any content you added that session
- **Open**-Opens a previously saved sector map
- **Save**-Saves a sector map under the current file name
- **Save As**-Saves a sector map under a new file name
- **Import Stats**-Imports factories from a statistics log output by Logaan's company value script.

### EDIT

- **Find Product**-Finds the locations of any product in the sector map.

### VIEW

- **Toolbar**-Hides or Shows the toolbar allowing more of the map to be seen
- **Zoom In/Ctrl+F1**-Zooms in the map
- **Zoom Out/Ctrl+F2**-Zooms out the map
- **Zoom 100%**-Default Zoom
- **Station Roster**-Lists all stations that belong to you. Double clicking on a station within the list will bring up the station calculator. Making adjustments on the calculator on this mode will also calculate the sector profit and total hourly profit of your empire.
- **Station Calculator**-Allows you to choose any factory in the game and see what the buy/sell prices will do to the profits per-hour
- **Greatest Needs**-Brings up the greatest needs for goods in the universe. Can include number of jumps, docks and suns.
- **Demand by Product** – Works in the same way as the greatest needs, but for a single product.
- **Shipyard Locations** – Shows the location of shipyards, equipment docks and pirate bases on the map.



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## ***TOOLS***

- **Add Player Station**-Brings up the add station dialogue box for the current sector. In this box you can
  - Change the station's name
  - Change the output good (product)
  - Change the number of normalized factory units (QTY)
  - Change the Yields on mines (VERY important if you want to add your mine correctly)
  - Change the input goods (resources)
  - Change if the input goods are primary or not.
  - Note: Shipyards will list the stations they sell as Resources
- **Khaak Invaded**-Check this to change the map to post invasion. This is not reversible.
- **Include NPC Stations** – If this is switched off, all resource calculations will disregard NPC production and consumption. This can be very useful when setting up loops spanning multiple sectors.

**NOTE:** The following are intended for custom universes or where scripting has changed the stations significantly.

- **Add NPC Station**-Adds a computer controlled station. The add box is similar to Add Player station above
- **Add Ware**-Adds a ware to the universe. Sets Min/Max Price
- **Add Station Type**-Adds a new type of station to the universe
- **Add Sector**-Adds Sectors and chooses their locations on the grid
- **Reconfigure Gates**-Allows you to alter the destination of gates
- **Redraw Universe**-Redraws the universe after you've changed sectors and gates.

## ***PLUGINS***

- **View** – Displays the list of currently installed plugins.

## ***TOOLBAR BUTTONS.***

- **New**-Starts a new sector map losing any content you added that session
- **Open**-Opens a previously saved sector map
- **Save**-Saves a sector map under the current file name
- **Add Player Station**-Brings up the add station dialogue box for the current sector. See "Tools" Above for more details on the add station dialogue box.

## ***SECTOR MAP***

This is the main area of Sector Planner and is where most of the work is carried out. Click on a sector to select it, your currently selected sector is outlined. Double clicking on the sector brings up the Add station dialogue box (see "Tools" for details) Scroll bars to manoeuvre around the map.

**SECTOR INFORMATION**

General sector information is presented in the top right hand corner of the main window. Its shows:

- Selected Sector Name
- Grid coordinates of sector X, Y
- Gate locations N, S, E, W
- Sun output
- Dominating Race of sector
- Number of stations in sector

**RESOURCE INFORMATION**

This is possibly the most important bit of Sector Planner as it displays resource usage, thereby allowing you to locate profitable locations for your factories.

Of the two tabs, the station list is the most obvious, doing “exactly what it says on the tin” – showing you the stations in the currently selected sector. Note that it colours your stations so that are easily recognisable. You can also double click on a station to bring up the add station dialogue box.

The resource usage tab, as its name implies, shows the resource demand and supply for your selected sector; however there are three controls that determine exactly how the demand is calculated.

- **Jumps** Number of jumps to “travel” when analysing demand
- **Docks** if the docks are used in calculations (as they do use goods albeit slowly)
- **Suns** if the Sun % is used in calculations (only for player SPPs).

Once you have set the controls to you liking the Resource Usage section will show the usage and oversupply of Factory units.

1. Negative numbers are deficits and positive numbers are oversupplies.
2. Colour coded entries are resources that have no local Supply (good for monopolies at high selling prices)
3. You can sort Resource Usage by Resource Name or Quantity by clicking those names on the top of the list.
4. Oversupply does not always mean you can't make a profit selling that ware. However oversupply will make your profits lower than filling a need.
5. Right Clicking on any resource and selecting Add Filter will show only that resource allowing you to jump from sector to sector focusing on just a single resource. Right click again to Remove Filter.
6. When jumps is greater than 0 right clicking on a resource will allow you to select “show by sector” which shows a sector breakdown of the usage in each sector in the jump radius.



WALKTHROUGH

## WALKTHROUGH

1. Start Sector Planner either by clicking on Start/Programs/Sector Planner
2. Click Argon Prime in the sector Map
3. On the grid to the right you'll notice basic info about the sector (sector name, grid location, etc) Resource Usage will be the most important list.
  - a. Resource usage shows a 'need' as a negative number a surplus as a positive number
  - b. Colour coded entries indicate Crystals, Wheat, Etc are not produced by that sector yet are needed by factories in it.
  - c. You can sort the list by Resource or Qty
4. Station List Shows what stations are present in the current sector.
5. Check Mark 'docks' you'll notice several more needs are now added to the table showing you what the local dock purchases. Since docks use at 1/3 several of these new resources are shown as creating a need of .33. Secondary resources are used at that rate as well.
6. Increase Jumps to 1.
  - a. Now Argon Prime, The Wall, Herron's Nebula, Ringo Moon, and Home of the Light are all included in the calculations. (Note: the station list is unaffected by this)
  - b. Wheat and Ore are no longer colour coded for now there is a supply within the jump radius.
  - c. Right Click on Crystals. Click on Filter.
    - i. This causes the Resource list to lock on Crystals and forgo showing any other product. This will help to keep track of one resource when you're scrolling through several sectors.
  - d. Right click on Crystals again and remove filter.
7. Click "add station" on the button on top.
  - a. Click briefly on "Federal Argon Shipyard" Notice the stations it sells are shown as resources. Handy for quickly finding where to buy certain rare stations.
  - b. Click on a few more factories and notice the resources they use are listed and primary resources are checked.
  - c. Click on the race list and scroll through the races. Notice how the various races sell different stations. I.E. Boron Have Bio Gas nobody else does.
  - d. Now select Argon again and choose "Wheat Farm" from the station list
  - e. Select your buy and sell prices for your wheat farm.
  - f. Click on Add. Now the Resource Usage is recalculated to the wheat need goes down by one and the energy surplus grows smaller.
    - i. Notice "Your Wheat Farm" is added to the bottom of the Add station list
  - g. Now Add an Argon Ore Mine
    - i. Notice the Ore 'need' goes from -2 to -1.



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- h. Now scroll down to 'Your Ore Mine' and change the Yield to 50.
  - i. Notice now the Ore need is 0 you can change the yield to whatever reflects the in game mine.
- i. Click on the Grey bar to the left of any station
  - i. This highlights the entire bar
- j. Hit the delete key. This will remove the station from the sector.
- k. Close out of the add station box.
  - l. You can bring up the Add station box several ways. By double clicking on the sector, double clicking on the station list, clicking on the Add station button, or tools/Add player station
8. Now Click on Edit/Find Product OR Ctrl+F
  - a. Choose a Product. You'll see a list of all sectors that stock that product. Clicking on the list will jump you to that sector.
  - b. Close the box.
9. Click on 'View' Experiment with Zooming in and out. When done you can always click Zoom 100% to return to default view.
  - a. Click on View and Station Roster.
    - i. This brings up all stations in your empire.
  - b. Now double click on your wheat farm this will bring up the profit calculator.
    - i. You can adjust the sell prices of your product and the buy price of your resources to calculate your profit. Once done click ok and the profit of your empire will be added up as 'hourly profit' and the individual sector profit.
  - c. Close any open windows.
10. Open Station calculator. View/Station Calculator
  - a. Same as before only instead of just your factories you can choose any station in the universe to see potential profits per hour.
  - b. Experiment with the sliders until you are comfortable with them.
  - c. Close the calculator.
11. Click on View/Greatest Needs
  - a. This will find the greatest needs in the universe based on Jumps and if Docks are included or not.
  - b. You can then sort the list by Sector, Resource or QTY (its default)
  - c. Close the Greatest Needs Table.
12. Click on Tools/Khaak Invaded.
  - a. This will 'invade' Presidents End with Khaak.
    - i. Note: this cannot be undone.
13. Don't click on add NPC station just know it works similar to Add player station only with NPC secondary resources included.
14. Don't Worry about Add Ware/Add Station Type/Add Sector/Configure Gates unless you are creating a custom universe. And if you're doing that why are you reading this walkthrough?

15. Redraw Universe use it if you used the Add Sector/Configure gates commands I just told you not to. :-P
16. Click on File/Save As. Type "Walkthrough" as the File name.
17. Close Sector Planner
18. Open Sector Planner
19. Click on the Open button
20. Click on "Walkthrough" to open it.
21. Notice all the changes you made previously are still there.
22. Now click on "new"
23. Click on Open again this time Right Click on "walkthrough" and delete it. (Or just close the planner go into the directory and delete walkthrough that way)
24. Close out of everything.
25. You're done. Congrats.



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## FAQ

Q. What do the numbers in the resource usage mean?

A. They represent the number of "normalised factory units" of this product that are produced. A negative number means that there is a shortfall (demand) for the product; a positive number means that there is a surplus.

Q. What's a normalised factory unit?

A. The game is set up so that one factory produces enough products to supply one other factory. So its output would be considered a single factory unit no matter how much individual product is put out. (There are exceptions to this one to one output ratio examples are explained below – the major one being solar power plants).

Q. Some of the numbers aren't whole numbers?

A. There are a number of reasons for this. Secondary resources are consumed at 1/3 of the rate as primary resources so they will create a demand of .33. Also mine yield that is not a multiple of 25 will create various output rates and the current wisdom is that NPC solar power plants create 4.33 unit of energy.

Q. What's up with the colour coded entries?

A. Those are needed resources with no supply in the jump radius. This is also true of the greatest needs calculator. Good for finding Monopolies (one of my favourite features)

Q. Do loops create false results?

A. Not if you add the stations correctly. Your feeder factory will be cancelled out by your output factory. Mines and Solar Power Plants are trickier; Sector Planner currently does not account for closed loops that produce an unintended surplus.

Q. Can I add a pirate base?

A. Yes, however as pirate bases spawn with random resources you will have to modify the resources it buys / sells.

Q. Can your planner read from save games and automatically add my factories?

A. Sort of! If you use Logaan's company value script you can import the output log file directly into sector planner. However due to limitations of the scripting engine the yield of mines cannot be calculated.

Q. Can I make a profit even if there is a surplus in the sector?



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A. Probably. Your selling ships are more efficient than the AI ships. The planner just helps you spot glaring needs. Always look in the sectors surrounding your suggested location to make sure there isn't an abundant supply in the next sector.

Q. How can I tell the Push/Pull effect? (i.e. if there are not enough feeder factories to fuel stations it's unlikely the higher up stations will produce and effect supply)

A. The sector planner isn't set up to handle this it would add more calculations onto the program that would just slow it down for little gain. See this example

Soja Husk production is low-> (leads to)

Crystal fab production is low->

Energy cell production is low->

Silicon mine production is low->

Crystal fab products is \*LOWER\*-> Etc.

Instead just use logic and notice if the Soja Husk is in the negatives it will likely affect the entire sector.

Q. How do you set Yields on mines?

A. Add the mine (it defaults to 25 yield) then in the station list scroll down to your mine and edit the number.

Q) How do I delete a factory?

A) Open the add station dialog by double clicking on the relevant sector and then right click on the factory you want to delete, and then select delete.

Q) Why does the greatest need take so long when I set jumps to 5?

A) Sector Planner has to examine every single station in every sector and work out all the valid routes within 5 jumps and then analyse the demands. I have optimised this routine and it now will not get any faster.

Q) How do I calculate the yield for a mine I have already placed?

A) Work out the time it takes your mine to produce one product in seconds. I.e. if it produces 2 products in 3 minutes, each product takes 90 seconds to produce. Let's call this "prod\_time".

- If the mine is a silicon mine:  
yield =  $(96 / \text{prod\_time}) * 25$
- If the mine is an ore mine:  
yield =  $(24 / \text{prod\_time}) * 25$

Q) Why does the station calculator not show the correct figures for mines and SPP's?

A) To keep things simple the station calculator makes some assumptions, firstly mines are all 25 yield and secondly that a SPP has a 2 minutes cycle time. However the station roster DOES calculate the profit correctly.

Q) How do I use the plugins?

A) The plugins that are shipped with Sector Planner are sector based plugins and therefore simply right click on a sector to see the options from the installed plugins.

## KNOWN ISSUES

At the time of writing there are no known issues with Sector Planner.

## ACKNOWLEDGEMENTS

Without the help and support of many people Sector Planner would never have been released and so thanks are extended to:

- **Darkhold** for beta testing and writing the first version of this manual
- **Cynric** for beta testing
- **Rapier** for producing his Utopia spreadsheet back in the X-Tension days which was the inspiration for Sector Planner and for giving me the first heads up about the actual rate at which NPC SPP's produce energy.
- **Sirus** for writing a sector display routine to show the locations of items within sectors that has finally been integrated
- **Logaan** for suggesting his script to allow import of peoples current games
- The countless people on the forums who provided feedback, suggested features, reported bugs and those people who just wrote to say "thanks".

Sector Planner Manual and FAQ were originally written by Darkhold and subsequently modified nearly a year later by LordSuch. You can visit the Sector Planner website at <http://www.lagerchurch.com/lordsuch/> for more current info on the sector planner.

## PLUGIN INTERFACE

Some of you will no doubt have noticed that Sector Planner with this version supports plugins. If you want to install a plugin all you have to do is copy it to < sector planner install dir>\plugins directory. Then the next time you start Sector Planner the plugin should be available.

If you are a developer and would like to write a plugin, please contact me and I will send you the relevant code to get you started. Note you will only be able to write plugins in a .NET based language.



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