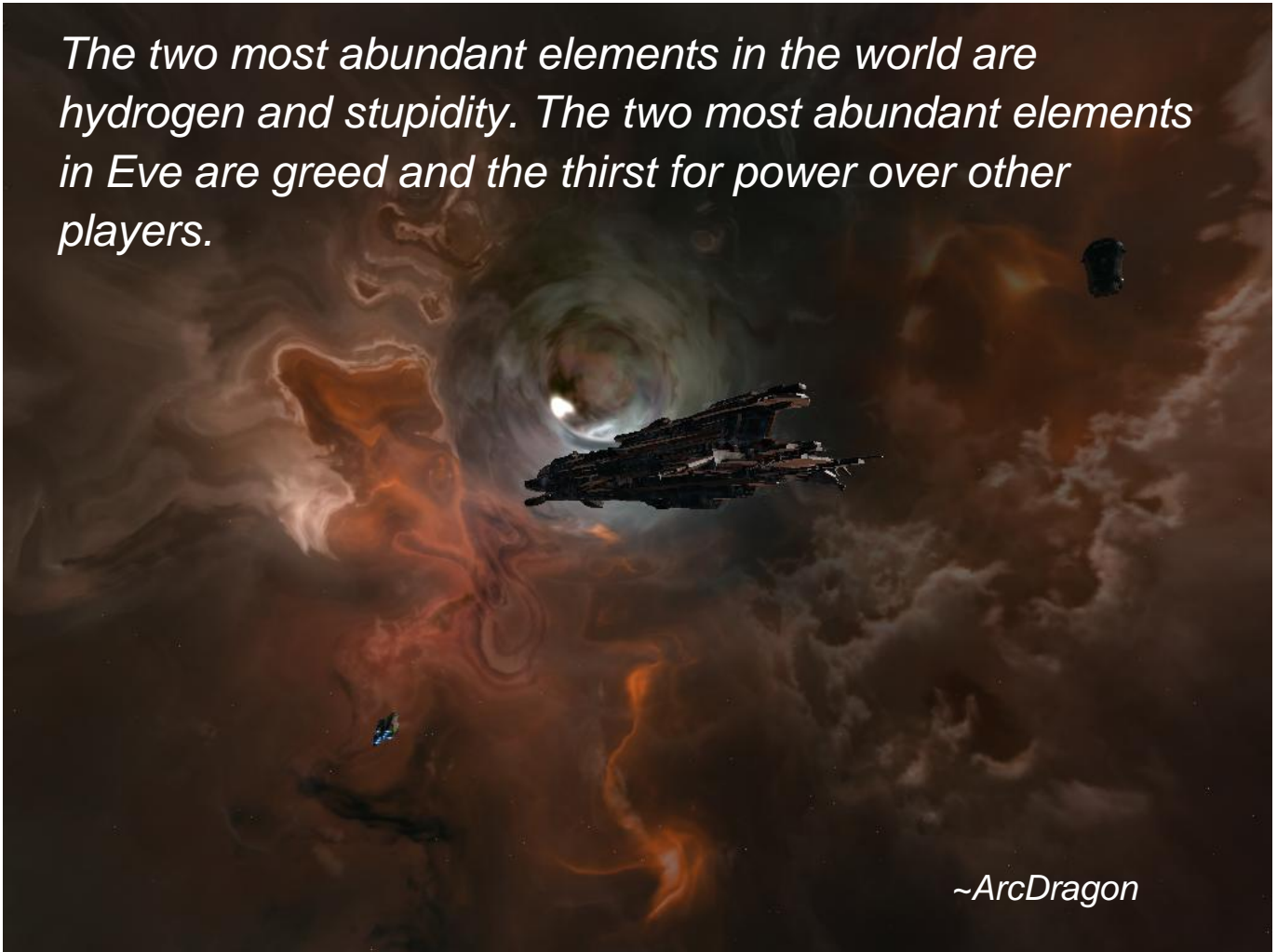


The two most abundant elements in the world are hydrogen and stupidity. The two most abundant elements in Eve are greed and the thirst for power over other players.



Islands Among the Stars:

A Guide To Everything

Wormhole.

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Of Scope and Purpose

The purpose of this guide is to take players who know little or nothing about Wormholes (also referred to as W-spaces and holes) or POS setup and defense to the point of being able to select, move in and stay in their Wspace.

Wormhole tactics will also be covered and will include information on how to take advantage of your island among the stars. It will not cover full explanations on how the game mechanics allow or will not allow certain things to happen as that would make the guide too vague or bloated to be useful.

It is not the intent of this guide to explain all the details about the numerous menus and submenus of POSs themselves but rather the strengths and weaknesses of various POS modules and why they work or do not work for wormholes.

This guide will work for any wormhole class, but it is generally written for a Class 4 Wspace or higher. There is always more than one way to skin a cat with Eve, but if you follow this guide to the letter your chances of success are about as good as it can be with any class of wormhole.

There are also multiple ways to colonize a wormhole. This guide will cover both transient and long term stays as well as raiding setups.

The majority of this guide is from my own experience from running a wormhole-based corporation in a Class 5 (Fusion Industries and The Hole Patrol). There is also a good portion that was derived from numerous other players and they have my full thanks and appreciation. Specific credits for various bits of information are still contained in the original threads linked below.

As with all Eve guides and advice, feel free to ignore what you want at your own peril.

Original thread links:

[Wormhole Tactics and POS Defense: A guide to die for.](#)

[Moving into and keeping a Wormhole: A how to guide.](#)

[Wormhole and Exploration Site Fact Sheet.](#)

[Capital Ship Fact Sheet \(Carriers\)](#)

[Capital Ship Fact Sheet \(Dreadnoughts\)](#)

What Wormhole Life is Like

Got that dream of pulling in billions and coming out a superstar rich dude from some back water system? Good luck. I do know of some that pull in a billion a week, but they have to go through considerable play times and care to do it. I wrote this guide and I can tell you I've lost billions doing it. I've had good times and bad ones but I have also lost money in the process. Doing wormholes is just like everything else in Eve, it can make you and it can surely break you too.

If you are the typical Eve player that plays about 2-3 hours a day then perhaps wormholes are not for you. There can be considerable downtimes involved. A mistake can isolate and strand you deep in null sec. You can get podded quite unexpectedly as well. You can go days without anything to do. If you have no patience then do not do wormholes. You must be prepared to have all you need in the hole to take advantage of whatever comes along, else you just sit by and watch something to do despawn. If you do try wormholes, give it at least a month to see if you like it or not. If you go less than this then you are, perhaps, not getting the full effect. And always remember, the proper response to bad times is, "Thank you CCP, may I have another?".

The Goal of Your Hole

What you are looking for is profitability when the wormhole has "bottomed out". Bottomed out means that you have been in there long enough that you have overtaken the natural spawn rate of exploration/combat sites and there is very little left to do. You will have to be prepared to take on anything that spawns or run the risk of corpmates leaving out of boredom.

That kind of capability usually requires a hearty mining setup as well as enough ships and people to tackle the most difficult magnetic or radar site you come across. In addition, your corpmates should automatically know to scan the system down if it has not yet been done and be able to share those bookmarks with everyone. Your corporation should know what to do about hostile wormholes with or without you.

You should develop a way of knowing who is and who is not in your wormhole. Everyone should be hitting the directional scanner more than when they came in from high sec. Regular fuel runs and a general plan on what to do when a hostile ship or fleet enters your wormhole should be known by every single member as well.

Wormhole Selection

Now, in order to select a wormhole to live in you must first know all there is to know about them. So, what is a wormhole, Wspace and Kspace? When someone says "I found a wormhole!" they mean they found the "door" to Wspace. Wspace is short for Wormhole space. The wormhole is that neat looking "bubble" that you drive your ship through in order to get to the Wspace behind it. Wspaces are designated with what is called a Locus Signature and looks like JXXXXXX. You will see the signature in the upper left of your screen when you are in a Wspace. Kspace is simply all other spaces in Eve which are Low-sec, High-sec and Null-sec systems.

Another thing you should know is that there are two ends to every wormhole. One side is the static side, the other side is the K162 side. If you look at a wormhole you will see it being referred to as something like M267, or U210. This is code for what type of system that wormhole hooks into and how much mass it will allow through it. Those are always unique to each wormhole and is what is called the "static". K162 is the butt end of the wormhole. And all wormholes, like people, have butt(holes). Sorry, butt I could not resist that. The most information you can get if you come across a K162 is to right click it, show info and read what class of system it will lead you to.

The first thing you must do is pay careful attention to any side effects a wormhole has on you. If you decide to set up in a wormhole with "bonuses" then be absolutely sure you have a strategy to make it work *for* you and not let it be something you just *deal* with. Make sure that all incoming members fully understand the wormhole before they choose what to bring in.

It would also help to understand how wormholes are connected. There are about 2,499 Wspaces currently in Eve. The entrances and exits all shift based on wormhole timers and/or allowable mass usage. It used to be that CCP setup wormholes that had around a six system path, meaning you could find that same wormhole anywhere within just six systems, that has however, been changed. Wormholes that can lead directly to other Kspaces from your hole or from one Kspace directly to another Kspace can also appear. These usually connect you another race's space, like from Caldari to Amarr space.

It is entirely possible to find an entrance to a Deadly wormhole (C6) from Kspace, including .9 systems (confirmed myself). I found our first Class 5 via a direct low sec opening near Iges and slipped my carrier on in (may she rest in peace). What makes these higher end direct connections to Kspace rarer may not be just a simple case of CCP turning down their chances to spawn but maybe more related to the fact that the higher end wormholes are more often than not, buried within other wormholes. Just remember, there is no limit as to the combinations for which wormholes can connect to Kspaces. Anywhere, anytime and in any way is possible, save for mass limitations.

If you wish to see all of the possible combinations of wormhole connections, here you go: <http://www.ellatha.com/eve/wormholelist.asp>

The class of wormhole you choose will dictate how many members you should bring, what size of POS and what types of ships. Generally speaking, bring everything no matter what.

Here is a link to the [Evelopedia](#) page on wormhole effects. I have also cross referenced (hold Ctrl while you left-click) the raw data in case you cannot link to it yourself.

Study it carefully as you might find yourself fighting in one against your will!

Courtesy of Eve-Online 1 The Black Hole.

Courtesy of Eve-Online 4 The Pulsar.

Courtesy of Eve-Online 2 The Cataclysmic Variable.

Courtesy of Eve-Online 5 The Red Giant.

Courtesy of Eve-Online 3 The Magnetar.

Courtesy of Eve-Online 6 The Wolf Rayet.

You should make this guide a mandatory read for any who come in. Can you imagine what kind of trouble you can get into if the only guy in left with a scanning ship does not know what a static wormhole is, how to find it or how to understand how much mass it can allow? Knowledge is power and I offer it to you.

Show Me the Money

So, you now know why you are going to try this, what about the rewards? This is a very difficult subject. On one end of the spectrum if you screw over your corpmates on the rewards on purpose you'll be playing Eve by yourself with constant wardecs. On the flip side, if you give up all of the profits then there will be nothing left for you personally or your corporation itself. I cannot give you a definitive answer, no one can. *How you decide to split up the loot and deal with those that are unhappy about how you did it is completely up to you.* I will briefly outline some strategies that have worked for us in the past along with some that I came across while trying to tackle this very question. Some pros and cons will also be stated. Remember, you can't please everyone all of the time.

The Even Split Method

Nice, clean and very easy. Take the total corpmates in your hole who even remotely pitches in and divide the ISK that many ways. The down side is that some members play a disproportionate amount to others, still further; some simply do not have the skills to pitch in like others can. At the worst, players may deliberately ride on the coattails of

other active members to make an easy buck. This is best suited for a small gang of highly skilled players with consistent play times.

Running In a Pack Method

The ideal behind this is that you naturally already have clicks of people who have skill sets that complement each other and who happen to be on at the same time more often than not. From a wormhole standpoint, some teams would do mining while others would be raiding connecting holes. The loot would be divided amongst those that pitched in for the particular event. To make this work the corporation itself would need a cut to take care of the fuel costs as well as pay for defense expenses. The ideal setup would be a medium sized group where most players get along with each other. You would also need to trust that these players would contribute to the corporation fund.

The Foreman Method

You pick enough players so that at any time one of the picked ones is on. This person is responsible for overseeing mining operations or raids on sites. The Foreman would then take note of who is doing what and for how long and formulate a cut based on that information. This requires a lot of attention and time on the part of the Foreman and generally makes playing Eve more of a chore than a pleasure. The up side is that your corporation members are encouraged to be active in order to make ISK. The down side is that if you do not have a Foreman logged in then no one wants to do a thing. This method works best when you have a medium to large group of players that may not have a close bond with each other.

Bunch of Boobs Method

Works for any corporation of any size. No rules just go and do something. Leadership is loose and/or nonexistent. Most corporations in Eve have only small amounts of this disorganized method while some absolutely thrive on it. This method works very well for very small corporations. It allows players to come and go as they please and to do whatever they want. The downside is that getting a group together could be painful. Resisting wardecs also becomes a problem. Players tend to do the same thing over

and over again because they lack enough numbers or coordination to do anything else. Money is made mostly from the tax rate or from donations.

The Whole Enchilada Method

Perhaps the very opposite of the Bunch of Boobs method. This method works best when it is implemented early. You need a core group of players who know the game, know how to handle people and play regularly and reliably. This method of running a corporation can start small and grow rather quickly with no problems. Each core member is delegated a specific job/responsibility right from the beginning. New incoming members are groomed as replacements. These types of corporations can bloom into those that have their own websites, can take and hold null sec spaces and offer their members an obtainable goal. Monies earned from wormholes go into a master fund and the core members (directors by now) each receive a cut after fuel and expenses have been paid. What is left over is the given to the members as they see fit.

Know When To Hold 'Em, Know When to Fold 'Em

Sad but true, wormholes eventually trickle out nothing for days on end (Bottomed Out). CCP has specifically stated that wormholes were not meant for long term habitation, this is what they probably meant by it. It is not known exactly how long this takes to occur but is generally considered to be on the order of a few weeks for a virgin system. Our Class 5 was occupied for about four months only to run bone dry shortly before the Apocrypha 1.3 patch was implemented. Others claim this happens within a matter of days.

You will know you are bone dry when spawns are taking longer than 3 days to appear and are usually either small Ladar sites or outbound wormholes only. This is when things get rough and when paying for fuel becomes difficult to justify. Depending on the characteristics of your wormhole you might have the option of raiding nearby Wspaces or you might just have to pack up and go.

The general consensus after the release of Apocrypha 1.5 was that when a site despawns in wormhole X it respawns in wormhole Y. Further, wormholes X and Y are thought to be within the same “wormhole constellation”. According to a posting by devs all wormholes work on the same mechanisms as the regular exploration sites do in

known space. That is, all wormholes are linked via constellations and when someone clears out a site in their hole, it could pop up in your hole.

A wormhole constellation is comprised of the *same class* of wormhole but that constellation could connect with a different constellation of a dissimilar class. All in all, when your hole runs dry you'd better start raiding your static wormhole because your home hole will not be the same.

Corpmate Selection

Presence - Call it a disturbance in the Force but you cannot defend your wormhole if you are not there. It does not matter how well your POS is setup, a smart attacking force can take it down. To successfully defend any territory in Eve you must have multiple players in your corporation/alliance that are willing to commit to staying.

When selecting who gets into your high profit wormhole and who does not, you must balance against two things. You must balance the need for both defense and Presence against your need to make ISK. For a general rule of thumb try five minimum players. These players must know scanning, mining, PvP and a *lot* of game mechanics.

For every one skilled player you can have one unskilled player. You must be careful about how many new players you let in as they can cost you your wormhole if they are the last man standing.

You must trust all of them. Corp members are not protected from other corporation members in the game of Eve. If you have doubts, don't invite them. In addition, everyone should know *why* they are in the wormhole in the first place. Is it profit or a pirate platform or something else entirely? Be ONE on that.

So, as this applies to wormhole defense and colonization here are some things to look for when selecting wormhole corpmates:

- 1) What time zone they play in. You want a good mix of US and EU time zone players. When one side of the Earth is going to bed, the other half is getting up. The goal is to have someone in your wormhole 24 hours a day, seven days a week in order to spot hostiles or undesirable wormholes.
- 2) How often do they play? It does no one any good to have corpmates that you must rely upon if they are flaky about when they can log in and how long they can stay. I'll take the 4 hours a day guy over the 30 minutes every other day guy any day. The ideal candidate is a level headed person with no job, no life and stays logged in forever (know anyone like that?).
- 3) Those with PvP experience. Not all of your corpmates need to be natural born killers, but some of them do. PvP in Eve is not something to learn while your POS is being taken down in front of your eyes. Try to mix PvP and PvE players. The PvE players will provide muscle power for the PvP players to flex under stressful conditions and will also be the ones running the money making processes.
- 4) Consider the all important issue of unit cohesion. Nothing ruins a game like having a player who acts like a complete jackass. If you want a good defense then make certain that you will fight the enemy and not fight amongst yourselves.

- 5) What ships they can fly. This is rather important. You want all corpmates to be able to fly something that can contribute to fending off hostile players. Eve is intentionally setup to have a mind boggling array of ships and modules to choose from. The rule of thumb here is variety. The more ships you can choose from the more likely it is that you will be able to exploit a hostile fleet's weakness.
- 6) There is strength in numbers! Skill and Titans aside, it's hard to kill 30 ships with just one ship. This is really the heart of Presence within your wormhole. I hesitate to give you a minimum for defending your hole, but I'd not be caught dead in a hole without at least 5 pilots at the ready. Try to base this minimum amount by considering the maximum size of an incoming hostile fleet in terms of mass. Do you want to be 1:2 or 2:1 in terms of ships?
- 7) Consider who your Directors are and the leadership roles. This goes to corporation structure and organization more so than to wormholes, but it is very, VERY important. Believe it or not there are actually professional studies on how guilds/corporations are formed, run and implemented within all MMOs. Where it counts as far as this guide is that you should have at least one guy with the ability to do it all. At least one (preferably 3 or more) need to be able to do everything there is with a POS. This person also needs access to funds and be able to trade independently of his Kspace counterparts. Remember, you are an *island* so you must be as self sufficient as possible.

Planetary Interaction

Since the introduction of what CCP could only coin as Planetary Interaction (or PI for short) life in wormholes has gotten a lot better for some and has remained mediocre for others. When you choose your hole the number of planets used to matter very little, nowadays it counts for a whole lot. The following is not comprehensive as there are a lot of little things to know about PI but as far as POS fuel goes there is more than enough here to get you started.

If you are lucky you can get a system with every planet type needed to put together up to a third of the total ISK value that your POS needs to run per month in fuel. It is also a fact that as far as resource richness goes, Wspaces are second only to double O space.

Basically, with PI the way it is now, the only things you cannot manufacture with planets are all of the materials you get from mining ice. Remember, there are NO ice fields in any Wspaces on purpose.

Further, you can setup a very nice POS manufacturing ring if you have all of the right types of planets. I have to warn you though, full scale production of POS fuel is easy compared to making POS or POS equipment. The complexities of what is needed is

not too bad but setting up your planets and moving materials around to complete the cycles is nothing short of a pain in the warp drive.

So, without further ado the only three planet types you need to get all the POS fuel you can currently make is one lava, one gas and one barren. Yes, there are other combinations to pull off most or all POS fuel production but listing them all would spoil the fun, right?

This is a link to a healthy Eve thread that has a very nice spreadsheet for PI and can help you deduce the specific combination of planets you require (take a deep breath):

<http://www.eveonline.com/ingameboard.asp?a=topic&threadID=1442658>

Or, you can go directly to it via this link:

https://docs.google.com/spreadsheet/ccc?key=0Ar_YTOcXpvb9dGFldHJlb0VmYXBORWRrcXFkeHNjcWc&hl=en_GB#gid=10

The Price of Wormhole Ventures

Before you dive in, know that a proper setup in a wormhole is not cheap. It is not cheap because you become an island within the ocean. In an emergency you need everything you could possibly need, else you risk losing all you have.

Below is a list of most of the startup items:

POS	Corporation Hangar	Ship Maintenance Bay
Defensive POS Modules	Fuel for POS	Battleships
Support Cruisers	Ship Modules	Scanning Ships (T1 and T2)
Mining Ships	Gas Harvesting Ships	Additional Skill Books
Optional Equipment	Stupid Mistakes™	Phone Numbers!

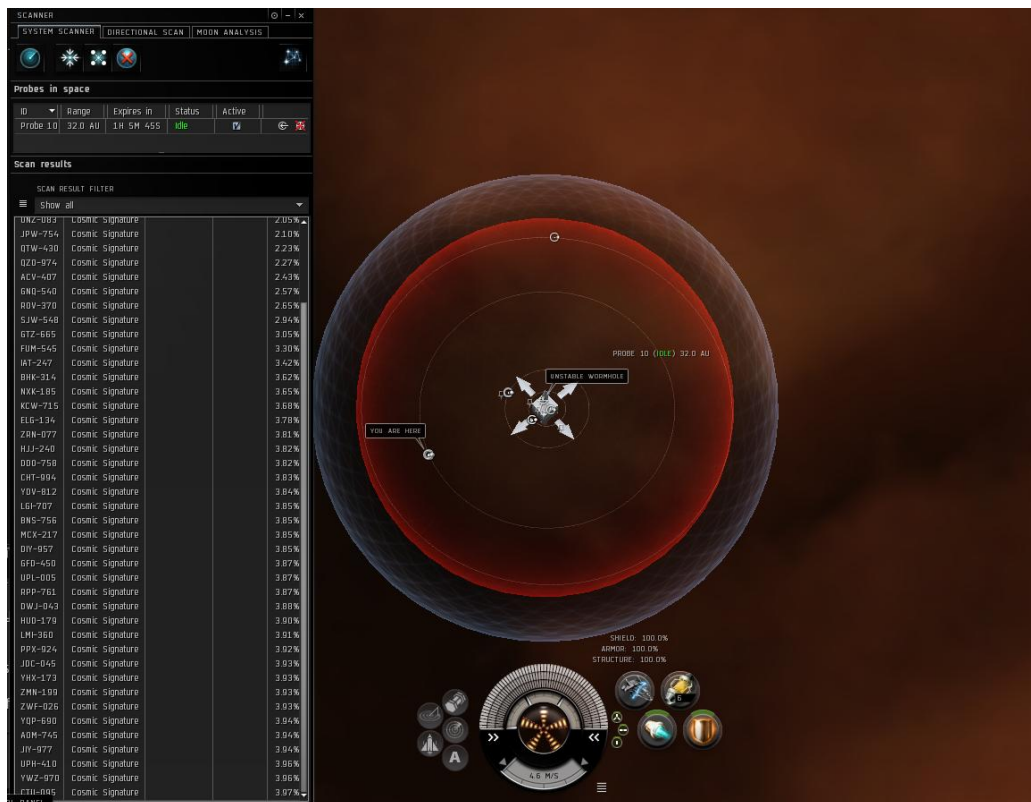
As the prices of most of the listed items fluctuate I cannot give you a more exact figure but if you have none of these then count on spending around 2 billion ISK, maybe more, depending on a great number of things.

Holy Crap, It Closed Right Behind Me!

Never go into a wormhole whose description states that it is “on the verge” or says “...reaching the end of its lifetime” unless you have the ability to probe yourself out or otherwise make due with being in that wormhole for days on end if you cannot probe.

You **cannot** jump clone or use a Clone Vat Bay to get back into or even out of a wormhole. You can, however, blow yourself up to get out. If you do not have the time or patience to be found randomly then blowing up your own pod is indeed the only way out. Keep in mind that your ship will stay there for weeks. It is rare, but you could enter a system with a perfectly good ship floating in the middle of nowhere because someone came in without the ability to probe themselves back out again (SCORE!).

Moral of the story here is *a/ways* have a ship that can probe! This could mean a dedicated scanning alt cloaked somewhere, or sacrificing your battleships fittings a bit to have a probe launcher or some other scheme. Keep in mind that the higher the Class of wormhole the harder the sigs tend to be in order to pinpoint them. It could be the case that a ship without additional means to boost scan strength will never be able to probe its way out even with probes!



YUMMY!

The Three Amigos

The following are the three main ways to use a corporation to take advantage of wormholes. They each have their strength and weaknesses and each require a different amount of starting capital.

The Raiding Party

Not just a World of Warcraft thing after all! Most corporations start out here. This is when you send out ships to find any wormhole you can and mount a posse to go and get what you can. In general, most look for Class 1, 2 or 3 wormholes to do this raiding in because they give a very good risk to reward ratio. The problem with these types of wormholes and this type of raiding simply comes down to a matter of having the highest probability of getting ganked. Class 1 to 3 holes are everyone's favorite and as you are just raiding you have no main means of defense and no safe haven to run to should you get probed out.

The Life of a Nomad

This one is very popular as it is a good compromise between needing starting capital and not having your ass hanging in the breeze when you conduct wormhole operations. A "POS in a box" requires only a low skilled pilot to max out an industrial to fit one small POS, one Corporate Hangar Array and one Ship Maintenance Bay along with 1 to 3 days worth of fuel. That player sets up the small POS while the others defend. When the shields go up the raiding begins!

These operations can last from a single day to whenever you get tired of running around for fuel, you get your POS sieged or your hole runs dry. This is very inexpensive (comparatively) and offers great protection but is extremely vulnerable to even small POS busting gangs. You could set up defenses, but then if you are going to go through that much trouble, you might as well go medium POS and setup enough defenses that even a large POS busting gang would not want to touch. As will all things in Eve, the more you want, the more it will cost you.

The Squatter Style

This is my preferred method. This is where you find a “just right” wormhole and set up permanent POS(s). The rest of the guide will be based off of this style as it requires the most knowledge and has the most risk. It is absolutely vital that you find a premium wormhole as you can be in there for 4 months before it runs dry. If you are lucky you can find one that has a static wormhole connecting to easier holes that you can raid at will. The down sides to this setup is many fold. For starters you can forget doing high sec stuff. It’s a bear to get in and out of your hole all the time. There will be periods of time when nothing is going on for days and you have to have the patience to last. Fuel runs become extremely important and a gate camp will make you spit nails when they rummage through your wreckage and ask you what they are supposed to do with 1000 units of robotics.

The upside is that you have an extremely difficult POS to take down. You will also know your hole. After awhile you can guess where the next static will be and you will know how far out your scanners can detect other ships. If your corporation has sufficient numbers you can defend and raid and do the sites in your own hole without any problems.

Skills You Should Not Go Without

Some of these skills as well as their level can be debated. You must keep in mind that not only is this guide written for a Class 4+ wormhole but it is also written to keep you alive.

1. Have Astrometrics to level 4 and all of the other three scanning support skills to level 3. To be certain, have Astrometric Ranging, Astrometric Pinpointing and Astrometric Acquisition to level 3 each. You are not looking for the ability to just scan, you need to be able to scan *quickly* too. There is more to be said about these skills in the "Scanning Your Ass Off" section.
2. You must set a minimal ship level for your pilots to be able to fly in an exploration site. For a Class 5 it is Battleship or better. What good does it do to bring your favorite Navy Comet against 12 Sleeper Battleships?
3. You must have all support skills needed to fly that ship. All support skills to level 3 at the very least, preferably level 4 and 5. *Have all* of the support skills not just *some* of them.
4. Starbase Defense Management. It is no secret that a POS on automatic cannot compete against a skilled attacking force. You will lose your POS for many reasons and not being able to take control of the guns is a sure way to lose it. It

sucks to train it up I know, but hey, how else are you going to *alpha strike* a Battleship?

5. You will need 3 or 4 regular players with Anchoring to level 3. At level 3 you can anchor any POS equipment. This comes in handy when the only guy with Anchoring at level 3 gets podded, or is not online and you need to anchor that one thing to get started.
6. To make money you will need to be able to mine asteroids and gas. You can skip this, but you will *not* make a lot of money if you do. Get Gas Harvesting up to level 4, preferably 5, and as far as mining skills go you can have whatever level, just be able to contribute to the mining effort.
7. Remote Repair skills. *Do not underestimate* the value of remote repair. Your pilots need to know how to fit and use them. Skill level 4 for armor and shields. Hull to level 3 is optional.
8. If you wish to cash in on the salvage (and YES, it is worth it) then have at least Salvaging to level 4, preferably level 5. Salvaging offers the greatest ISK return for doing combat sites. Don't forget that certain rigs also increase your ability to salvage the harder stuff.
9. OPTIONAL: Propulsion Jamming to level 4. This allows you to use medium size warp bubbles. While not strictly necessary they do offer the ability to camp wormholes with much greater success and can even be used to ambush those coming or going to known sites or POSs.

Ships You Should Bring

The following is an extensive list of ships. This list, when completed provides backups to your backups and allows you to have access to any ship to react to 99% of situations. This list is arguable, but I say again, this is your best chance of surviving out there.

1. You should have a T2 scanning ship with Sisters Scanner and a full complement of Sisters Scanning probes. Deck it out, spend the ISK, you will not regret it. This is huge. No one gets into our wormhole without the ability to scan. With this setup you will be able to cut down on the amount of time and effort it takes to find whatever it is you need, be it a gas site or that all important direct to high sec opening that is allowing a hostile fleet to come knocking.
2. Bring an additional two T1 scanning ships. Consider them the backups to you making a mistake with your T2. Put a cloak, a scanner and some probes in it. Just use regular equipment and you don't have to bother with rigs if you don't want to. You *must* have backup scanning ships on a *per character* basis. You

never know when you will be the last man standing in your wormhole and have to find a way in for the other 100 members that got podded.

3. A Capital ship. If you got one, *bring* it. It is a huge tactical advantage. An incoming force not only lacks a POS for defense but is also limited on the number of ships it can bring in against you. The odds of a hostile fleet bringing in another capital to fight you is very slim, so this gives you a high probability of being the only capital ship for billions of jumps. Capital ships also have a huge tanking ability that enables you to solo sites that you could not otherwise!
4. Your battleship. You will need two. One can be a backup to the other but the real purpose of two is to have at least one fitted for immediate PvP combat. Should you get your only battleship popped it can take hours to get out of the wormhole, get a new ship, and drive it back. Rest assured that the second you get popped by a Sleeper there will be hostile players scanning down your wormhole.
5. Your mining ships. Hulks are still the best, use a battleship if you have to, just be able to contribute. Hulks can be brought into C1 and C2 wormholes if they are assembled and in a cargo hold. Getting them back out means destroying any rigs they have on them so think twice before you dump money into any rigs for a C1 or C2 Hulk.
6. Bring T1 support cruisers rigged to run perma capped for remote shield repair and another one for remote armor repair. Keep these ships in the Ship Maintenance Bay and never use them for battles, they are meant as POS support only. Battleship remote repair setups are nice, but they lack the range bonuses needed to repair your POS.
7. You will need Haulers. Two kinds, first is the throw away kind, no rigs, cheap, no sweat to lose. The second is a fully decked out transport with rigs and racing stripes. The former is for hauling ore in risky conditions and the later for running out goods and bringing in valuable cargo. You will need both kinds.
8. OPTIONAL: For those who are serious about making money from mining bring in an extra Corporate Hangar Array and Ship Maintenance Bay with a Freighter. Keep the Freighter stored in that Ship Maintenance Bay with the power off so you don't use fuel. When you have a full load (which won't take long) and you have that once every other week high sec opening that fits that fat ass ship through you can take it all out and refine it at 100% instead of 65% or 75%. This requires significant expense, added risk and more patience but pays an extra 25% if you have the skills.
9. OPTIONAL: For those with Salvaging at level 4 you should consider bringing in a dedicated salvaging ship. Drakes and Vexors, for example, make good dedicated salvaging ships. You *cannot* salvage the top of the line Sleeper battleships

without Salvaging to level 5, but you *can* with level 4 and a single Salvage Tackle rig!

10. OPTIONAL: Orcas may take up half your Ship Maintenance Bay but they fit through more wormholes than a Freighter or Rorqual. This ship is extremely useful and you can't knock the bonuses either!

Advice on Ship Setups

I hesitated for a long time to put a section like this in as there are at least two or three ways to outfit any given ship in Eve. I also wanted to avoid attracting player opinions on the matter. In the end, I've decided to not post specific setups but rather go over fleet setups and strategies as well as to post what works for solo and two man setups as information on those methods seem to be very popular.

What Can Do Wormholes Solo

You are not going to do C4, C5 or C6 with just one ship. A well trained capital ship pilot will come to a stalemate even in a C5 site. I know this from personal experience as I attempted it 5 times on 5 different sites and each time doing a site solo in a Carrier it ended up costing as much ISK as I made from working the site. So get it out of your head that there is some magical setup that will allow you to do a C5+ wormhole with just one ship.

C1 you can solo in just about any ship bigger than a frigate. Go named modules, rig your cruiser or better ship and go get 'em. You will die to gankers. Have fun. A battlecruiser seems to be the weapon of choice and you will never have a problem running C1's in a battlecruiser. Battleships tend to not fit in a C1. Theoretically you can BUILD battleships in there if you setup a POS, but they won't get out of it and gankers will take one down easy as pie.

C2 you can solo with a nicely fitted cruiser, just be prepared to warp out when needed. C2 sites do not warp scam, that starts mildly in C3 and gets worse in C4 while C5 all ships scam, even the ones that are not supposed to! So bring a nicely fit cruiser or better. Again, a battlecruiser is the weapon of choice. Battleships can get in, but sometimes you have to power off your 1600mm plates or other modules that cause an increase in mass to fit them in. You should have no problems soloing a C2 site in decently fitted battlecruiser.

C3 is where you start to have to get into the bigger ships or better fitted smaller ones. A T3 Strategic Cruiser that is very well fitted can solo most or all C3 sites. But if you think about it, that is a billion ISK ship, and you are all by your lonesome. Sounds like gank-food to me. Other ships with very heavy tanks can solo as well, I'd not try it without at

least a 700 dps tank, probably better. Most tank with speed and try to pop Sleepers as quickly as possible in order to get the incoming damage down as quickly as possible. C3 sites do warp scram but it is not bad, think of it as a level 4 mission when it comes to scrambling you. It is far better to two man C3 sites. This takes care of low dps due to high tanking setup problems as well as having to fit either a remote rep or scanning module in the high slot. If you can solo a C3 site without some body parts puckering up, you're the man.

C4, need I say more? Ok, this is where you cannot solo anymore. They web, scram and neut you too much. Even if you had a ship that could stand all of that you will not have a ship that can also out damage a Sleeper remote repair setup. They are insane on the remote rep. The fleet setup is everyone has a remote repair module, moderate to heavy tanks and as much dps as you can muster. Concentrate firepower to take down the warp scrambler ships first as they tend to go down quickly. If you hit a trigger and you get a wave spawned you'd better hope you have a big enough team. Ball parking the amount of ships I'd estimate 3-5 T1 battleships that are rigged and have T2 modules. All pilots need to have good to excellent support skills and have the ability to communicate instantly while in battle. It goes without saying that all of them need to know how to pilot their ships and know the ships limits. **DON'T FORGET INSURANCE.** Insurance is the ticket to not going broke because something went wrong in a C4.

C5 is something I know a lot about. A Raven with an excellently skilled pilot had 21,000 shield hit points with all resists in the high 80's to mid 90's. He relied on carrier support to recharge the shields. When he was alpha'ed by the initial sleeper spawns his shield hit point bar looked like a ping-pong ball being bounced back and forth from empty to full. He would have popped in about 20 seconds without the carrier support. All enemies scram you, and you also get neutered and webbed like crazy. In a C5 hole that gave an additional 85% to shield transporter modules with a carrier for support they can pop a properly fitted T1 battleship. For a C5 without carrier support do not go in without at least 8 battleships with remote repair setups. Communication is paramount. Take down the high dps ships first such as the sleeper battleships and work your way down. With carrier support minimum is 3 battleships and the carrier with triage mode. You can tank the entire sleeper spawn with a perma capped triage carrier, but you will never destroy a sleeper ship as they chew up drones. Don't forget that you can park two battleships inside a carrier if you are about to lose them, this is a wonderful tactic. Just don't forget that sleepers **WILL TARGET PODS EVENTUALLY.**

C6 is something I do not know a lot about. I can estimate at least a dozen battleships was the intent. Carrier support would be fine if you had that many T1 battleships swinging away for you. I can tell you that nothing in Eve gets as mean and hairy as a top of the line C6 fight. Bring your A-Game and cross your fingers.

What Is Out There

The following is a basic description of what to expect when you finally scan down that exploration site in your hole. Keep in mind that these sites have a Kspace counterpart but the ones you find in Wspace are much more difficult. A typical site found in a Class 6 wormhole can easily pop capital ships. One last thing, structures in Wspaces do not drop loot no matter what kind of site it is.

I HIGHLY suggest that if you want to find more information about a specific site, be it a regular Kspace or a Wspace site that you use this link:

<http://eve-survival.org/wikka.php?wakka=WormholeSpace>

You should contribute to this site all you can!!

Magnetic Sites

Uses the Analyzer Module.

Some known magnetic site data:

- Forgotten Perimeter Coronation Platform (3 cans)
 - Forgotten Perimeter Habitation Coils (5 cans)
 - Forgotten Perimeter Power Array (4 cans, 1 frigate)
 - Forgotten Core Information Pen site. One Abandoned Talocan ship, Class 5 Wspace. (15 cans) - BRUTAL. Four battleships initially. Can opening spawned 6 battleships, 5 cruisers and 5 frigates.
 - Forgotten Perimeter Power Array - 4 Forgotten Sleeper Artifacts, Class 1 Awakened Patroller x2. I didn't bother to spend missiles on these to trigger the 2nd spawn
 - Forgotten Frontier Quarantine Outpost (7 cans, remote repair, webify, can drop some malfunctioning rather than just wrecked sections).
- 1) Using Carriers OR Dreadnoughts WILL spawn 6 additional Battleships if you use them on Magnetic sites in a Class 5 or 6.
 - 2) They are tougher to clear out than other sites.
 - 3) Consider tanking the spawns while opening the cans, there are waves of spawn. The second wave could be the web/scram or the remote repair gang. The remote repair variety allows a frigate to tank 9 Fighters!

- 4) Magnometric and Radar sites, as well as anomalies, all seem to have four waves. The trigger for the next wave is usually the last of a type of frigate or cruiser. Be careful you don't kill it early.
- 5) The attempt to open a can has a possibility to cause additional spawns. Rare and downright deadly at times.
- 6) When a ship starts to open cans while tanking the spawn, the spawn concentrates on that ship and ignores other targets.

WARNING: When you tamper with a can and you leave the site, the entire site will despawn in under a minute! This has been confirmed multiple times for it happening in Wspace. Some use a cloaked covert ops alt to sit on the grid to keep it active, but cloaking devices in these rooms tend to fail on arrival. So, if you do try that, make sure the Sleepers are busy enough to be able to drive away from the entry point.



Radar Sites

Uses the Code Breaker Module

Some known Radar site data:

Unsecured Perimeter Amplifier (4 cans, occasional frigate)
Unsecured Perimeter Communications Relay (8 cans, occasional frigate)
Unsecured Perimeter Information Center (3 cans)
Unsecured Perimeter Transponder Farm (? cans)
Unsecured Frontier Database (9 cans, 1 cruiser)
Unsecured Frontier Enclave Relay (15 cans)
Unsecured Frontier Receiver (7 cans)

One example from a Class 3 Frontier Radar site post Apocrypha 1.3 patch:

- 29 Propulsion Datacores
- 23 Offensive Datacores
- 36 Engineering Datacores
- 38 Defensive Datacores
- 3 Electronic Datacores

Salvage:

- 3 Neurovisional Input Matrix
- Assorted salvage

First wave: A remote repair gang, 3 cruiser class, 5 frigates,

Second wave: 5 cruiser class, 1x battleship,

Third wave: 2 remote repair battleships with 4frigates

An Unsecured Frontier Receiver had a return of 70 datacores and had the same spawn. An average of about 110 datacores seems to be what these sites spawn now. For a rule of thumb try 35 datacores per site per wormhole Class. So a Class 1 would give around 35, a Class 3 around 105.

- 1) In a Class 5 wormhole we did a Frontier Unsecured Enclave Relay something. It had 15 cans. Three battleships where in the initial spawn. Killing the last battleship spawned two more battleships, four cruisers and five frigates that remote repaired like you would not believe.
- 2) You can loot the cans while under fire from the spawn.

- 3) Magnometric and radar sites, as well as anomalies, all seem to have four waves. The trigger for the next wave is usually the last of a type of frigate or cruiser. Be careful you don't kill it early. Triggers vary!
- 4) Radar sites can have an Abandoned Talocan Battleship/Cruiser present (the source of T3 hull BPCs). The same site can spawn with or without the abandoned hull, this includes temporary despawns.
- 5) When an abandoned battleship is present, the initial spawn defending the site will have one more advanced level Sleeper battleship guarding it. An equivalent extra guardian is likely present for abandoned cruisers.
- 6) You will need both hacking and salvaging to clean out the Abandoned Battleships.

WARNING: When you tamper with a can and you leave the site, the entire site will despawn in under a minute! This has been confirmed multiple times for it happening in Wspace. Some use a cloaked covert ops alt to sit on the grid to keep it active, but cloaking devices in these rooms tend to fail on arrival. So, if you do try that, make sure the Sleepers are busy enough to drive away from the entry point.



Gravimetric Sites

Gravimetric site names from worst to best:

- Infrequent
- Isolated
- Ordinary
- Uncommon
- Unusual
- Average
- Unexceptional
- Exceptional
- Rarified

- 1) Gravimetric sites seem to be the most common exploration site spawning.
- 2) Ore types present are dependent on the type of site, i.e. Average or Rarified. It is not dependent on the class of Wspace it spawns in.
- 3) Using Capital ships on these sites do not spawn additional Sleeper ships.
- 4) The NPCs in a gravity site are the easiest to deal with.
- 5) Additional rocks can spawn in over the lifetime of the field.
- 6) Average lifetime of a field is 3-5 days.
- 7) An Exceptional field has all ore types including Mercoxite. The field is huge, 20 Hulks going at it for 24 hours will not clean it out.
- 8) The lower the level of the site the less of each ore type it has per rock.
- 9) The layout of each type of field is the same every time. The range between asteroids can be normal or very spread out. One field spanned 300km with rocks very spread out.

Ladar Sites

The order from worst to best for Ladar sites: Barren, Token, Minor, Ordinary, Sizeable, Bountiful, Vast, Vital and then Instrumental.

Types of gas and quantities:

- Barren has 3000 C50 and 1500 C60
- Token has 3000 C60 and 1500 C70
- Minor has 3000 C70 and 1500 C72
- Ordinary has 3000 C72 and 1500 C84
- Sizeable has 3000 C84 and 1500 C50
- Bountiful has 5000 C28 and 1000 C32
- Vast has 1000 C28 and 5000 C32
- Vital has 500 C320 and 6000 C540
- Instrumental has 500 C540 and 6000 C320

- 1) Ladar sites can have ships or Sentry Towers as defense. The Sentry Towers are present on arrival.
- 2) They always have two gas clouds.
- 3) Ladar sites despawn within one hour of being completely drained.
- 4) Using a capital ship on these sites do not spawn additional NPC ships.
- 5) Upon initial arrival there will not be NPCs, they take a little while to spawn in.
- 6) A well tanked battleship can solo these sites in a Class 5 Wspace. **WARNING:** The upper end sites like vital and instrumental can spawn two battleships which will annihilate most solo players attempting this site!
- 7) Ladar sites compete with gravity sites as the most prolific spawns.
- 8) The Vital and Instrumental Ladar sites have the potential to spawn two Sleeper Battleships that will web and scam, you are warned.

Combat Sites

The class of the system only determines what kinds of sites are likely to spawn; the jury is still out on whether or not it also affects the difficulty. Some reports that a frontier site in a Class 3 will actually have a few more ships if it spawns in a Class 5.

Perimeter sites are "easy":

1. Checkpoint
2. Hangar
3. Camp
4. Ambush Point

Frontier sites are "medium":

1. Command
2. Barracks
3. Outpost
4. Fortification

Core sites are "hard":

1. Core Stronghold
2. Core Garrison
3. Core Bastion
4. Core Citadel

Combat sites always return 100% on the first try no matter what your skills are. You can also expect four waves with each wave possibly having a different survival strategy than the one before it. Remote repair and straight brute dps have so far been confirmed.

For your convenience I took down a sample of the ship counts for a C5 Core Garrison site. Four spawns with the last of a type being the trigger:

1. 4 frigates 5 sentries
2. 4 Battleships
3. 6 Frigates 7 Cruisers
4. 5 Battleships 4 Cruisers (Remote Rep)

Scanning Your Ass Off, the What and How

We all know how much you love scanning, what you don't know yet is how much your REALLY going to love scanning should you decide the wormhole life is for you! The following is NOT a comprehensive look at all there is to scanning, rather I will cover all you need to know in order to find not only the wormholes but the stuff in them. Once again, I write this section assuming you have some experience with scanning already so, here we go.

First off, yes you can find a C6 wormhole entrance in a 1.0 system. What you cannot do is pin one down with crappy skills and crappy equipment. The higher the wormhole class the harder it is to find it in the first place (as in weak signal strength that just won't increase) and the harder it is to pin it down in order to be able to warp to it. In fact, if you scan long enough you will even find cases where you have 100% signal strength and you STILL cannot warp to them. This usually happens when you have one too many probes but the real game mechanic explanation is beyond me at the time of this writing and you should not concern yourself with it anyways.

So, what skills do you need? There are only 4 scanning skills in the game. When I evaluate a character's ability to scan I use a simple rule of thumb. All four skills at level three is a weak scanner, all skills at level four is an average scanner, all skills at four with some or all at level five is a good scanner. The relevant skills each start with Astrometric and are:

Astrometrics - *Skill at operating long range scanners. Allows one additional probe in space per level.* This is a big fancy Eve way of saying at level 5 you can poop out 8 probes. You will find that 5 are enough for 90% of operations, but when it comes to mass scanning (covered shortly) the more probes you have the merrier. Get this one to at least level 4 which will let you drop 7 probes.

Astrometric Acquisition - *Skill at the advanced operation of long range scanners. 10% reduction in scan probe scan time per level.* When you have positioned your probes and you send the scan now command there will be a time delay before you get your results. This skill reduces that delay. Most of the time level 4 in this is a good balance between scan reduction time versus what little difference it makes to have it at level 5 and spending the 20 or so days to get it there. Go for level 4.

Astrometric Pinpointing - *Greater accuracy in hunting down targets found through scanning. Reduces maximum scan deviation by 10% per level.* What the hell is deviation? It is a fancy way of saying Where's Waldo with the object you are looking for, that's what. When you scan something using only say, one probe, the object you are looking for lies somewhere along the shell of the sphere your probe made. If your deviation is high that means your object can lie somewhere close to that shell, but not on the shell. The lower the percent of deviation you have the more likely your object is to lie on that shell. You like this, trust me, train it to level 4 at least.

Astrometric Rangefinding - Skill for the advanced operation of long range scanners. 10% increase to scan probe strength per level. Most players consider this the "Holy Grail" skill of scanning. This is where the bulk of the scanning success calculations come from. Without this skill you will never be able to find or pinpoint the good stuff. You will get it up to a certain scan strength and it will simply never climb higher no matter what you try. This is such a highly sought after bonus that most dedicated scanner characters will train for months to get access to the ships that also give this bonus, such as the Buzzard. Go for at least level 4 and if you are going to pick one skill to raise to 5 in the scanning department, make it this one.

Other skills you might want would be Racial Frigate to level 5 to get you access to the Tech 2 scanning ships. Cloaking is huge advantage as it allows you to "safely" stare at the scanning screen while trying to line up your probes. Past those there are not many other skill sets that will give you a huge advantage to scanning. Keep in mind that you can scan with any ship, but until you hit the T2 dedicated scanning ships don't expect to blaze through 40 signals in 10 minutes flat, which you can do.

Here is a nice example of a Tech 2 dedicated scanning ship setup: Buzzard with 2 Gravity Capacitor Upgrade I (T2's if you can afford it and don't mind losing them when you finally get blown up) Rigs, a Sisters Expanded Probe Launcher with 10 Sisters Core Scanner Probes, a Covert Ops Cloaking Device II with any other combination of equipment you want.

Always a Procedure, Always Always

Ok, here is the quickest way to find wormholes in a given system. First off, look at the system AFTER you are in a safe place and you are cloaked. If you can't cloak then you will get what you deserve. All signals in any system, wormhole or regular are within 4 AU of a planet. It used to be that you could find special places that only special probes (Deep Space Probes) could find but recent changes to the game will change that. In addition, those places are beyond the scope of this guide. You can find them using the probes that scan out to hundreds of AU, but really, they are not worth the effort anymore and I don't recall ever finding one in a wormhole space. What I do recall is two times out of the year I spent in wormholes we found another wormhole outside of the 4 AU radius. Nothing special about them except they were way out of the 4 AU radius.

Ok, so what you are looking for lies within a 4 AU radius. The return classification you want is "Unknown". You will find other returns but the wormhole is always returned as Unknown. What works for me is to drop a single probe at the inner most planet and expand it to maximum size. Ideally what you want is for one probe to cover the entire solar system. What this does is eliminate duplicate signals. Duplicate signals is when probe 1 says it found something and probe 2 found the same thing and you see it as two returns, perhaps with the same signal strength or even different signal strengths due to how far off the probe is to the object. This is considered by most players to be a

bad game mechanic and has or will be removed from the game. It is possible that the mechanic of double returns has been tweaked already.

All signal strengths are based off of how far from the CENTER of the sphere the object lies. Other qualities also affect this percentage such as how small the object is, how difficult the object is to find and other such magic game developer mumbo-jumbo. Usually, the better the object, the harder it is to find and to pinpoint.

So, in the simplest case, you drop one probe that covers the entire system and you scan. This will never pinpoint objects for you, but it will tell you everything there is to know about scannable objects. What it returns is what I refer to as the Master List of Stuff. If you are smart you will have a pen and paper next to you and start writing down all of the unknown signals you get, it will be 3 letters and 3 numbers. That 6 digit code always refers to that object. It will not change until the object respawns somewhere and the verdict is still out on whether or not that code is ALWAYS specific to that object or if it is randomized each time an object spawns. Who cares either way. What is important is if you are tag teaming a system with another scanner ship then you can tell him/her to take code XYZ-123 and you will take ZYX-321 and you will be hunting two different sites at the same time. By the way, downtime scrambles all of those codes, have fun with that!

So, now you have found a system that you know has an unknown signal in it because you dropped a probe in the middle of the fray and got a Master List of Stuff. In general, the weaker the signal strength the further from the probe center it is. Cross this general rule of thumb with where the planets are and take a guess as to which planet you should start mass scanning for next. If you can't tell, then start with the planet that is furthest from any other planet. What this will do for you is tell you that if you find a signal at a planet that is more than a 4 AU radius from any other planet's 4 AU radius then you know for certain that you have a general area where that signal MUST be. If you don't understand this, then just trust me, the outer planets in a system are easier to scan down first simply because another planet's signals won't interfere with it. Start out, work your way in.

So now you are looking at a planet and wondering how to best go about finding that wormhole unknown signal. Here is the mass scanning approach that will get you close. What is important is the pattern you put your probes in followed by what radius you use them at. The bigger the radius the smaller the accuracy. Unless you have fantastic skills and fantastic equipment do not expect to find the good stuff with probes at 1 AU or greater. In general, the harder to find wormholes will need to be tracked with 3-5 probes at .25 AU to .5 AU radii.

First Pattern and First Pass Procedure

Drop all probes you can and line them up 3 in a row, and with as many columns as you can. At level 5 in Astrometrics you can make a nearly nice pattern of two rows of 3 and

the third row has two. Put them at 4 AU each. Overlap them so that each probe's sphere slightly overlaps the probe next to it. This will give you a nice 8 AU x 8 AU grid to search with (close to it anyways). Center this nice 8 probe pattern on the outermost planet first and scan. You'll either get signals or not. Most likely you will get some as most objects lie within this grid pattern. If not, no worries, while holding down the Shift key drag your entire set of probes UP until the bottom of the center probe's shell barely overlaps the planet and scan again. To be complete, LOWER the set until the top of the center probe's shell barely overlaps the planet and scan one last time.

This is a very thorough scanning pattern and should be done per planet every time. It will find 95% of objects 95% of the time. For one last attempt at finding those objects that are really, really out there, turn off all probes and expand the one you have left on to 8 AU and be sure to put it right on the planet and scan. Your welcome to keep scanning at greater AU, but really, unless you know it is there, your just wasting your time, there are other planets to scan.

Second Pattern, Second Pass Procedure

Ok, so with the mass scanning first pass procedure you found an unknown around that stupid planet and now you want to pinpoint it. Put your probes in a + pattern. That is 5 probes, one in the center, one east, one south, one west and one north of the center probe. Put them at 2 AU each. Be sure that each probe does NOT overlap the actual center probe or overlaps any other probe, close is ok, but do not overlap probes themselves. You are only wanting to overlap the spheres the probes generate, which should be at 2 AU at this time. Grab the set (Shift key) and move that pinpointing bad boy of a pattern around to where you think the signal is. You will now have to pay attention to the green/red/yellow dots or the red circles and their meaning. If you have a red dot, the chances are high that where that red dot is located is NOT exactly where your object actually is. Yellow means your object is closer, green means you've pretty much nailed it. The red circles mean your object could lie anywhere along that circle PLUS the inaccuracies in location due to deviation.

Move this pattern around until you find a dot instead of a circle or sphere. If you get two dots but KNOW there is only one signal, don't fret, this is natural. Just center your 5 probe pattern on one of the dots and scan, if it does not return your signal, simply move it to where the other dot was. You should find something, if you do not, then start over as you have missed it, or it is playing hard to get with your skill set and equipment levels.

Let's say you have now turned a red dot that started as two red dots into a nice yellow dot. Congrats! At this point it gets easier.

Same Pattern, Last Procedure

To find the object now you only need to decrease the AU radius, to say, 1 AU (or smaller if you are confident as to the object's true location) and reposition the 5 probes around the center probe only this time you WANT TO SLIGHTLY OVERLAP ALL SHELLS WITH THE CENTER PROBE. This greatly increases the scan strength of that overlapped area. Before you did not want to do this as it would likely return multiple signals, but now you are looking for just one that you have a much higher degree of confidence as to its location. Move the set to the new dot's location (as it moved since you have increased the accuracy of where it is located). Keep playing this cat and mouse game while continuing to decrease the scan radius of your probes. Eventually this technique will find any and all signals to the point that you can either warp to them or to the point where you know you can never pinpoint the signal due to lack of skills or equipment.

Any Other Bright Scanning Ideas?

There are other techniques, but the one I just described works for the vast majority of signals. If you have high skill set and the best equipment you can do the shotgun approach and just put your probes in the 8 probe pattern and start at say 1 AU or even .5 AU and you will likely get a strong signal return, but it has been my experience that trying to take shortcuts winds up costing you more time than it saves.

Another thing you can do to achieve the processing of many signals in a system (some wormhole systems have been reported to have 80+ signals in them!) is to use the 8 probe pattern with 2 AU or 4 AU radius and move the set around to each planet and try to luck out on the signal return. The signals will give up what they are once you have them at a certain signal strength. Most tell you what they are when you have them around 40% or better. Once you know what they are (as in Unknown, or Magnometric NOT as in XYZ-123 designation) then you write it down and move on to the next signal until you find the type you are looking for. This does not give you the ability to warp to a signal, but it sure as poop lets you fly through a massive amount of sites in a very short period of time.

Just the Facts, Ma'am

The following lists are just point by point juicy facts about wormholes. They represent the latest and most provable facts gathered from four months of research including over 400 replies from various players. It is possible that some of them are slightly wrong or wrong altogether but so far they have withstood a lot of scrutiny.

Facts About All Wormhole Spaces

1. The normal despawn rate for an untouched site is about 3 or 4 days. Untouched means you found it, maybe warped in but did not engage anything or interact with anything.
2. Clearing out a Gravity or Ladar site of NPC Sleepers in a Wspace cleans it out permanently. The NPCs do not respawn. The only known exception to this was after a server crash all of the sites respawned Sleeper ships.
3. Bringing a Carrier or Dreadnought to a combat site in a Class 5 or 6 Wspace will spawn 6 additional battleships. The second capital will spawn in 8 more!
4. Magnetic and Radar sites will respawn complete Sleeper waves after a downtime to include the reset of the capital ship "additional 6 Sleeper battleships" trigger!
5. Magnetic and Radar sites do not spawn as much as Ladar and Gravimetric sites, which breed like horny bunnies in the spring time.
6. Assigning Fighters to someone who then goes to a combat, magnetic or radar site will also cause 6 additional battleships to spawn. This is for C5+ only.
7. Orcas do not spawn the additional 6 battleships at any site or encounter.
8. Confirmed: Bringing in 4 capital class ships spawned 28 additional Sleeper Battleships (C5 or C6 only).

Wspace Behavior

1. Some Wspaces have effects on your ship both good and bad. Use this site to get a lot of useful information on a specific Wspace while in the game:
<http://www.staticmapper.com/index.php>

2. Wspaces can be buried up to 3 or more Wspaces deep. This means that you would have to cross 3+ Wspaces to get out of Wspace and into the nearest Kspace!
3. Wormhole Class is a numeric rating contained in the data dump that CCP put out. In short, wormholes leading to "unknown space" could lead to a class 1, 2 or 3 Wspace. One leading to a "dangerous unknown space" leads to a class 4 or 5 and a "deadly unknown space" wormhole always leads to a class 6 Wspace.
4. A Class 1 Wspace does not allow anything bigger than a Battle Cruiser through. This is a ship based limitation and not a ship mass limitation. This is just like some low level mission acceleration gates will not allow a battleship through.
5. Class 2 wormholes have a low mass restriction and will allow some battleships through and not others. If your ship has too much mass to fit through, try off-lining your armor plates (1600mm, 800mm etc.) or other mass adding equipment.
6. Class 1 and 2 encounters are generally considered to be soloable. Class 3 is a maybe soloable situation. Class 4 is generally a fleet op while a Class 5 can be solo'd only if you use a Capital Ship (Carrier OR a Dreadnought) but be prepared to sweat bullets as a class 5 can crack a carrier and eat drones severely. You can expect to lose 40,000m3 of drones. Class 6 sites are NOT soloable.
7. POSs behave as normal except you cannot claim Sovereignty and you cannot moon mine as Wspace moons have minerals.
8. Wormhole effects (Pulsars, Cataclysmic etc) are not applied to POSs or their weapons/defenses. This is difficult to prove and the actual case might be that some bonuses are applied to some modules, but not all of them.
9. All Wspaces are 0.0 security.
10. Players do not show up in local unless they chat there, so scan often with your directional scanner at max range and have it set to 360 degrees.
11. Wspaces have a low exploration site spawn rate. With even a little bit of player interaction you can rapidly deplete a Wspace of all sites. POS presence or absence has no effect on respawn rates. They are just really slow naturally.
12. Spans of no spawning in a wormhole have been up to 36 hours long.
13. There are no Ice fields in any Wspace, on purpose by the developers.

Wormhole Behavior

1. Wspaces have had up to 7 confirmed wormholes active at one time. THEORY: Up to 4 outbound wormholes max with at least 3 inbound (K162) wormholes allowed.
2. Certain wormholes are always present in a Wspace. They immediately respawn no matter what. These wormholes are referred to as "static" wormholes and always have the same designation (M267 or C247 for example).
3. Some Wspaces are reported to have two "static" wormholes.
4. The "color" of the wormhole indicates which color of system you are going into, i.e. a red wormhole means you go into red space and a blue wormhole puts you into a blue colored space.
5. Use the website <http://www.staticmapper.com/index.php> to know what Class any given Wspace is (1 through 6) and to tell how much mass a wormhole can handle.
6. All classes of Wspaces can open up to any class of Wspace, null sec, low sec or high sec directly.
7. The "life cycle has not yet begun" statement means you found it within 1-2 minutes of spawning.
8. "Probably won't last another day" means you have more than 25% of the wormhole's life left.
9. Nearing the "end of its life" means it has less than 25% of its life left.
10. Wormholes last for 16, 24, 36 or 48 hours.
11. "This wormhole is stable and looks like it could last more than a day" means it will last longer than 24 hours or until its allowable mass is spent.
12. "Has not yet had its stability reduced" means it has more than 45% of its remaining allowable mass left.
13. "Has had its stability reduced", "but not to a critical degree yet" means it has less than 45% of its remaining allowable mass left.
14. "This wormhole has had its stability critically disrupted by the mass of numerous ships passing through and is on the verge of collapse." means it has less than 5% to 10% of its allowable mass left.

15. The largest "to high sec" wormhole allows a ship of 1,000,000,000 kg mass to fit through.
16. Capital ships can fit into Class 5 or 6 wormholes only. You can BUILD one in any Wspace as well.
17. It is possible to build a capital ship inside any wormhole with an X-Large Ship Assembly Array.
18. CONCORD is the only entity that can prevent you from jumping through a wormhole.
19. Jumping through the same wormhole twice starts a 4 minute timer during which you cannot jump back through.
20. There is also a 30 second Session Change timer that starts when you jump through a wormhole. You cannot jump back through until that Session Change timer is up.
21. The wormhole graphic physically gets smaller when you make it past the 45% and the 5% to 10% allowable mass values.
22. The maximum allowable mass for a wormhole not only takes into account the mass of your ships themselves, but also the mass added due to fitted modules. 1600mm plates tear a wormhole a new one and will throw off your mass count!
23. Yes, you can fit a Dreadnought through some wormholes.
24. Wormholes collapse when the allowable mass is reduced to zero or less than zero (negative). So, if the wormhole has 1kg of mass left you can jump through it with any ship that "fits" (fit meaning ship type for Class 1 and mass cap for the other Classes) in the wormhole. It will collapse when you are on the other side.
25. The "polarity" timers that are 4 minutes long on wormholes are PER individual wormhole. So, if you jump two times back to back through wormhole XXXX you cannot jump back through it for 4 minutes but, if you jump through wormhole XXXX twice and immediately head for wormhole YYYY because the timer will not exist and you may pass through wormhole YYYY twice before incurring a 4 minute timer for wormhole YYYY.
26. Wormholes that are close to their end of life will have a more active graphic, it will be more energetic looking.

What We Know About Sleepers

We now know a lot and one thing is for certain, CCP did a great job on making these ships very challenging. If you are not getting a challenge out of them then you need to step up a Class of wormhole. The AI has been documented in the dev blog section within the Eve Online website and is a very nice read for those tech buffs.

1. NPC warp scramble ability starts at the sites commonly spawned in Class 3 wormholes and above. At Class 5 every NPC webs and warp scrams, all of them! Some do not scram right away, but they are capable.
2. Occasionally, you will get a more difficult site in a Class 2 that will have limited scram ability, it does happen.
3. Tentative resists: Armor is 70/70/70/70 with hull being 0/0/0/0.
4. NPCs in wormholes do get some wormhole effects applied to them. Not all effects have been verified.
5. The large advanced Sleeper wrecks require Salvaging to level 5. Most other Sleeper wrecks you can do with level 3 or 4. You can do all Sleeper wrecks with your Salvage skill to level 4 and using Salvage Tackle rigs (at least one).
6. Use any racial ECM jammer you want, Sleepers don't care which you use, they said so. Using a Multispectral Jammer is only going to be less effective. Use racials.
7. The amount of dps a common Class 5 magnetic site deals out is in the range of 1250 with you having a 76 resist. That damage is per sleeper battleship per volley. You do the math.
8. Some Sleepers can peg you from 250km away.
9. Confirmed scram ranges of 120km+ with webs to boot.
10. Sleeper ships have a speed of 1000 m/s for battleships and 3000-3500 m/s for cruiser and frigates.
11. Sleeper sensor strength is around 24 for battleships, lower class Sleepers are thought to be equally comparable to other player ship sensor strengths of the same class.
12. Sleepers do omni damage. Missiles do two types and their lasers do the other two types. They both hurt.

13. Some tactics will include making the ship that warps in the primary even if they are already on another target. I see this as a hazing event.
14. They can and will switch targets, this makes using weak logistic ships extremely risky.
15. Their remote repair ability is very much on par with player remote repair ability.
16. They will ignore nonthreatening targets that are on grid, like say those 30 shuttles you popped out in an attempt to get away. Don't worry though; they will eventually get around to them after you are gone.
17. They consider drones a high level of threat the further up the Class of wormhole you go.

This is what I personally know about Sleepers. 35% hull left. Closest call I've had and actually lived!



Moving Into a Wormhole

The following pages detail how to pack up your stuff and get into a wormhole as safely as possible. Some will consider doing all of these steps unnecessary but I assure you that if you leave out any precaution then Mr. Murphy (who lives everywhere something can go wrong) will wake up and smack you around. Since you are likely to be carrying billions worth of ISK across who knows what security of space you would do well to go ahead and err on the side of caution.

We will start by doing an analysis of the equipment and some explaining of what is good and bad and ugly. We will also cover some general practices that everyone should know how to do when you have moved into the wormhole. We will touch on defensive modules but this will be explained later on in much greater detail. Right now I just want you to get the feel of what is important and what is not and why.

Pack Your Bags

Packing a transport or industrial seems like a mundane task that you have done countless times before. I have no doubt that you have. Let's step it up a notch and put in some loss control. After you finish reading this guide and have an idea as to what you wish to bring make a master list of all items. Then, over the next few days, weeks or whatever span of time start to assemble these items in a central location. What you want to accomplish is a volume check of all the stuff you are bringing. You want to know the total m3 (cubic meter). When you have that divide that number by the total amount of cargo space you have available. This will tell you how many trips you will have to make with all of your transporting ships pitching in. From this you can calculate the total mass you will spend just to get your stuff in the hole.

EASTER EGG: If you wish to increase the cargo capacity of a ship, buy the giant secure containers that have an internal volume of 3900 m3 but only take up 3000 m3 of cargo space.

The next step is crucial to minimize loss in case you get a transporting ship popped. Take the load and divide it equally between all of the transporting ships. Put the POS in one and then a bunch of non-essential items. Spread the fuel out equally among the ships. The POS defenses should also be split up. What you are looking for is to make it so that if one ship goes down you may still move into the wormhole and only have to deal with replacing a small amount of vital materials.

If, after doing your calculations you find that the entry wormhole will not allow all of your stuff, then you must be prepared to immediately scan down and find an exit. I strongly suggest getting in all of your equipment before you start to let in the other fighting ships. You want them all, of course, but between the two the fact becomes that your POSs shields can take a lot more damage. Enough damage for enough time for you to scan

down and find another way in for your fleet. It's a tough pickle, so use your best judgment.



Of POSs and Wormholes

The following is a list of general concerns and opinions based on my experience with running a wormhole based corporation. I realize that not everyone will be able to afford all of the equipment and will have to make sacrifices. Just don't say I did not warn you about maximizing your chances for survival.

1. If you can't afford a POS don't try to settle in a wormhole. You will eventually lose your ship and all that you worked for. Besides that you will need ample storage and defense that only a POS can provide.
2. Forget small POSs unless you are going for a roving or transient type of operation. If you do so you must consider them expendable. Unfortunately, they are too weak no matter what defenses you put on them. You will not be able to run structures that will make you money and defend them at the same time. Don't use them. Six battlecruisers can take down a small POS.
3. Use a medium POS if your corporation is not planning on staying for more than two or three weeks tops. The longer you stay the more likely it is that you will encounter a hostile force where you need a lot of defenses. Mediums cannot be defended and run the modules that make you money at the same time as there is simply not enough CPU or Power Grid.
4. Large POS, now we are talking. You can have an average defense while still processing gas or refining ore. It is expensive, sure, but with the right amount and level of corpmates you will still make a nice profit even after fuel costs.
5. Use faction stuff or not? If you have the money, then yes go faction POS equipment if you can. Faction equipment takes up less power and CPU and hits harder than the non-faction counterpart. This equates into you being able to put up a lot more bang for the CPU/Power Grid buck. *The secret to selecting the right POS is knowing that the visiting team has a mass limitation to overcome.* This means that the tougher your POS is the less likely they are to even attempt a strike.
6. ECM baby, use lots of it. Try 5 or 6 of each type, why? Again, the visiting enemy team simply cannot bring a lot of ships and if what they do bring can't lock onto you or your POS then all the better.
7. Don't bring just enough, bring lots. If you can power 5 guns, then buy and anchor 10. If one is destroyed then you start to online the next. Attacking forces hate that.

8. Bring two Corporate Hangar Arrays. If you mine or have a lot of corpmates you will need the room. Another thing you could do is to bring in an XL ship assembly module. It stores a whopping 20M m3 and as long as you have a lot of stuff in it then it becomes more efficient to use than multiple corporate hangars.
9. Bring two Ship Maintenance Bays. Again, the more peeps you have, the more of these you will need, especially if you have a capital ship or even sub capital ships.
10. Bring all of those money making machines like refineries or labs or reactors. Even if you won't be running them day and night, bring all you could possibly want while you can still get them in safely.
11. FUEL FUEL FUEL. Bring twice the normal amount when you first move in. You never know when getting out of your hole will be too difficult to achieve, and don't forget the Strontium!
12. Permission settings. Only the experienced corporation members should mess with the settings. A wrong setting could allow someone access to critical equipment, or even worse *deny* them access to critical equipment. Get it right the first time and don't mess with them again.

General Principles of Wormhole Living

1. Redundancy is king. Don't be afraid to bring 4+ of anything. Bring way more than one ship. Bring way more than just one setup for your ship. Bring way more than you need. Bring 3 of the *same* setup for your ship.
2. You will get Podded. If you get popped and podded it's a long hard road to see your wormhole again. Entrances and exits get camped by hostile forces, sometimes you are shoot on sight to the only known way back in. You may even have to go 40+ jumps to dive back into the hole!
3. Don't get podded! Just don't. But you are going to anyway (I can feel it).
4. Everyone scans. You can't find your way out, your way in or find those lucrative exploration sites without these skills. Without scanning skills wormholes are just not possible.
5. If someone exits the wormhole make sure they come back with a full cargo bay. Keep shopping lists handy for those on "shore leave". If nothing else, bring extra ammo or fuel back because you never know when you will need to siege an enemy POS or put up with the enemy camping the exits for days on end.

6. Maybe it goes without saying, but no one goes AFK while setting up your POS. Wormholes can spawn entrances made by other players that were scanning for wormholes and can swap scanners for guns in under a minute. You will have no warning when another wormhole is formed.

Executing Some Wormhole Control

Every day you should scan. When you find an undesirable wormhole it should be an immediate priority to close it. Depending on the size of the wormhole you will need either multiple players or a lot of time on your hands (remember the four minute timer?). The basic concept is not rocket science, but it does require control in order to avoid stupid mistakes causing a corpmate to be stranded in the middle of nowhere. Follow these steps and keep careful track of the total mass.

Note: to find your ships exact mass, right click it and choose Show Info. It is under the attributes tab. That is what Eve will use to subtract from the allowable mass of the wormhole.

1. Drive the largest mass ships you have through it and back. Each time you do this, keep track of the mass and pay attention to when the wormhole changes description. When it shrinks for the first time you leave one battleship cloaked on the hostile side with a bookmark leading to Kspace. Giving such a bookmark to all of the other ships is not a bad idea either.
2. You then slowly tick down the wormholes allowable mass with big mass ships at first or small mass ships at first, either way can work, just be careful and drive only *one* ship through and back at a time. After enough mass has gone through the wormhole the description will change to say "...on the verge". The wormhole graphic will also shrink again.
3. At this point a battleship will usually close it. Unless you have accurate records and know all masses that has passed through then you risk trapping a ship. Make sure that all of the passing ships are on the friendly side of the wormhole.
4. Drive that last battleship through to the friendly side. If it closes then you are good, if not, don't fret and do not send more ships through. At this point it is very likely to close on the first ship to pass through it. And at any rate, the very next battleship going through will be trapped on your side of the wormhole for sure. If you have even half followed this guide you should be able to handle either scenario.

The Actual How To

The following is a step by step description of a method that provides a lot of security for

the move and setup of your POS. I acknowledge that this is just one way to do it but, I say again, break from the guide at your own risk. If you wish to be more efficient you can start to assemble and pack while your corpmates are out scouting a wormhole as the finding of just the right place can take a very long time.

1. Send out multiple scanning ships only to the high, low and null sec systems you would feel comfortable passing transports through. The more systems you scan the better the odds of finding the right Class with the right side effects you are seeking.
2. When you find a wormhole send in one ship that can scan and cloak. If you find another POS setup inside already *abort* that wormhole, get out and go on. There are thousands of wormholes, find one that will not make for a hot landing with you at the disadvantage.
3. So you found the right class and effects with no POS and no other ships in it already. The next step is to scan it down completely. All anomalies and all signatures pinpointed and bookmarked. You never know when a hostile ship is being careless and engages a Ladar site not knowing that you are there. Knowing all the regular places that a hostile ship could be will greatly cut down on your response time and could stop you from losing your POS before it even goes up.
4. The next step is to get your stuff inside. I should not have to tell you about the dangers of low sec or of the gate camps that could annihilate your wormhole expedition before it even gets started, but I will anyways. You are warned.
5. Use scouts to get your transports through, not escorts. Escorts tend to invite trouble and unwanted attention. Your escorts should be used as guards when you are *inside* the wormhole setting up. If a pirate sees you going through a wormhole he can slip inside and wait until you are trying to anchor your POS or worse. *Do not underestimate the destruction one ship can do to you at this stage.*
6. You are at the wormhole entrance with some or all of your transports. Have a scout inside the wormhole. Then slip in your guards and then your transports. Remember, nothing can stop you from jumping through a wormhole (except for CONDORD), but there are jump timers that limit how fast you can jump back and forth from the same wormhole.
7. Immediately warp to your new moon, anchor the POS and get those POS shields up ASAP. At this point no one is screwing around. Everyone is using 360 degree directional scanning every minute and your transports are cloaked and away (as in at another location) from the POS itself. Make sure everyone BOOKMARKS THE POS NOW.

8. Once the shields are up you are in good shape. Anchor your Corporate Hangar Array while your corpmates are repping the POS shields to 100%. Have your transports dump everything into the Corporate Hangar Array while you anchor the Ship Maintenance Bay. At this point the defenses must go up. Online them as you go. How you setup the defenses is subjective and will be covered next.
9. All defenses are up and online. At this time I suggest leaving everything else unanchored unless you are in need of the module. At this point you need to start bringing in all of those extras you did not want to bring in on the first wave and to bring in all of those stragglers and things forgotten. Load up because it's going to be a bumpy ride!



But First, a Word About Diplomacy

Diplomacy is very much a matter of personal style and the level of knowledge of game mechanics. Be sure your wormhole buddies have selected a diplomat with an even head who knows what is at risk. The diplomat must also be able to calculate war based odds to determine how strong each side's position is. CHOOSE AND SPEAK WISELY, it could be the last step before you lose your hole. A diplomat must also acknowledge that some will want to fight to the death even if it makes no sense to do so.

Your corpmates must know that an organized force can setup a medium sized POS with ample defenses inside of 45 minutes. Because of this ninja ability you must and should be willing to use diplomacy before you attack. If you go guns blazing you risk making them mad enough that they will not talk, on the other hand, if you talk first you lose the element of surprise.

While a good portion of Eve is devoted to PvP this does not mean that all that enter your hole are hostile. Most will be explorers that luckily found you, talk a bit first to see if you can discover intent, hell, offer him a place in your corporation if you are so inclined.

And a Note On POS Ransoms

It sucks to have someone come into your house and tell you they're going to burn it down if you don't pay up, but it happens in Eve a lot. When considering a ransom you should size up whether or not you could pop at least one hostile ship. If you can cost them, be sure that they pay an equal amount in ships as you would lose with the total cost of your POS. In other words, if your POS costs 1 Billion, can you take out 1 Billion worth of enemy? If you cannot, then you should consider the ransom.

Do not pay more in ransom than the net worth of all the assets you have in that POS and don't forget you have Strontium on your side (right?) that will cause the attacking fleet to have to scan out a new entrance and stick around a boring old wormhole for up to 1 day and 17 hours plus the time it takes to destroy your POS.

POS Setup and Defense

What is it all about anyways, right? Why do you anchor a POS and put up billions for the privilege? POSs are for one thing a stronghold, and it is also the only real way to make money in a wormhole. POSs must balance two things for a corporation that sets up in a wormhole. One is to make that corporation money. This means things like refineries, hangars, manufacturing assemblies and many other modules that will take up valuable and scarce CPU or Power Grid from the other important thing to balance, defense.

Defending your POS is an absolute must, the question is, how do you do it? There will be more than just a dozen ways to do it, but in a wormhole it gets a little easier than say, defending one in low or null sec. Before we get into modules you must understand that any hole's real defense is that one, *they are hard to find* and two, *they have limited access*. Keep those points in mind when skimming through the modules.

Worthless POS modules

Stealth Emitters. These have been removed from the game as far as I know and I've never seen them used, but maybe you can buy them. A directional scanner will still pick up everything, including your ships, so it is worthless.

System Scanning Arrays. Can you even get them anymore? They were taken out when CCP changed scanning with the Apocrypha expansion but in case they put them back in you need to know that it needs sovereignty which you will never get.

Capital ship Construction Array. Can't anchor due to no sovereignty. You can anchor an Extra Large Ship Assembly Array if you want to build capital ships in your hole.

Cynosural Jamming Array. No sovereignty and can't jump to a cynosural field in any wormhole anyway.

Jump Bridges. Can't use them in wormholes by dev design.

Moon Harvesting Arrays. There will be no moon harvesting in wormholes. This was specifically stated by the devs during the design and implementation phases.

Sensor Dampening Array. Why dampen their sensors at 150Km when you can jam them completely out to 200Km?

Essential POS Modules

Control Tower. The real question here is small, medium or large. This question was covered previously.

Corporate Hangar. This provides 1.4 million cubic meters of space. At least one is needed and you should expect to have more if you mine. Online only what you NEED as these suck up CPU and Power.

Ship Maintenance Bay. Allows you to fit on the fly and store your ships. Have at least one, more if you have large ships like an Orca or Carriers or Dreadnoughts to store.

Good Modules for Defense

ECM modules. As long as the target is within range (200 Km) the only thing that nullifies this defense tactic are Dreadnoughts in siege mode. They will jam the target with a racial base score of 45 points, and a non racial value of 15. Both are pretty damn good for jamming. These will randomly cycle on enemy ships without player control. Having just one of each is not effective. You need at least three, preferably six of each. They don't take up but 25 CPU each and will completely pacify a hostile ship. Remember, they can't bring a lot of ships.

Stasis Webification Battery. I'd say at least one active with one in reserve. These are best used to keep a hostile from getting out of range of a POS gun. Used with a POS warp scramble and the hostile will usually pop because holding them still increases the amount of damage they take when hit and they are not likely to be able to warp off.

Warp Scrambling Array. Quintessential here. Unless you can alpha strike a ship you need this. Keep one online and another one offline in reserves. The only time this becomes useless is if the hostile force comes so prepared that they never need to leave.

Energy Neutralizing Array. 50/50 on this one. Some ships are passive and you could drain their cap all day with no effect. The best way to use them is to have enough of them on one ship that they are darn near insta-drained. This module is very effective against active tankers. In some wormholes this is less effective (a wormhole with a cataclysm event for example) due to "bonuses" a ship receives.

Shield Hardening Arrays. 50/50. These will add 25% resistance to your POS WITH STACKING PENALTIES. Every POS has 0/0/25/50 resists. Where those resists are depends on which racial tower you use. These also take up a fair amount of CPU and

Power, so the main thing these modules do for you is to increase the amount of time it takes to get your POS into reinforced mode. That is the bottom line. These are best used as "anchored but not onlined" modules. When a force starts attacking you can turn on the appropriate module.

Hybrid, Laser and Projectile Turrets. This is choice meat for good defense. They will work even when your POS is in reinforced mode as they pull no CPU. Covered later in more detail, it matters to a great degree as to what type of ammo you put in each!

Bad Modules for Defense

Missile Batteries. This is to include Cruise, Torpedo and Citadel Torpedoes. They may be slow but have massive damage. The problem with these is that when your POS goes into reinforced mode they STOP WORKING. This means that at 25% shields your enemies can just sit there forever and hit what is left of your defenses for free.

Principles of POS Defense Setups

Rule #1 - THERE IS NO PERFECT DEFENSE.

Rule #2 - A POS IS BETTER DEFENDED WHEN PLAYERS ARE CONTROLLING THEM.

Rule #3 - A POS IS BETTER DEFENDED WHEN THERE IS A FLEET GUARDING THEM.

Rule #1 exists because of game balancing issues. If there was a perfect defense then everyone would know by now and that is all you would see. The fact of the matter is that there are so many ways to attack someone in Eve that for every offence there is a corresponding defense. Couple that idea with the fact that there are more than 400 ships in Eve and you begin to realize the scope of the POS defense problem. There are however, some very bad ways to defend your POS.

Some Really Bad Ways

All of the same size of guns. POS guns have ranges so if you only have the ability to hit me at 30km, I'm going to move to 35km and not lose a single ship.

Having only one type of defense. Having nothing but guns is a bad idea. The hostile fleet can do a straight forward adapt on your POS and have nothing else to worry about. All ECM and no guns means it is only a matter of time before they take down your POS. All neuts means they just need one more ship than you have neuts or use weapons that

do not require energy to use or worse, use passive setups.

Using just enough. By this I mean you bring in only what you can power 24/7 and nothing more. When they are attacking they will simply kill one POS module and know that the worst is behind them. Scare the poo out of them and have 10 guns even if only 2 of them are capable of being powered. It is only 3 minutes to online the next one even while under fire.

Not paying attention to gun ranges. Some fleets will find your range and deliberately sit outside of it. Mix up your ranges or be prepared to change out ammo while under fire to be able to hit the attackers.

Crazy positioning of defenses. As with most things in Eve, there is a better way to do anything. Putting your defenses up in a willy-nilly way means they will be less effective than say, putting them up in the fashion I will describe later.

Some Really Good Ways

Keeping in mind Rule #1 here is how you should approach a good POS defense.

1. Use a mix of gun sizes and group them in a + shaped pattern. This means one in the middle and one on each end of the plus symbol. Like north, south, east, west and one in the middle. Put them just close enough that you can reach all five of them with one ship at the middle weapon to make loading easier and more unpredictable to the enemy.
2. There are six places you should position an identical set of 5 around your POS. It is hard to describe, but put one set above, one below, one to the left, one to the right, one in back and the last in front. This ensures that a hostile fleet will not be able to gain a positional advantage on your POS. They will have to work at gaining it by blowing up your POS modules instead of just looking at it and figuring it out.
3. Remember which guns have what ranges. This is *very* important only if you can take control of them.
4. Mix your gun ranges within the sets. You want short, medium and long ranges. Most attacking forces will be right up on your POS due to the fact that using long range weapons on ships usually takes more effort than using say, just using torpedoes which will do massive damage without the need for long range rigs/modules.

5. Have guns *and* electronic warfare. Going strong on the electronic warfare or the guns instead is a matter of taste and guesswork. The important thing here is to have the mix so an attacking force has multiple headaches to deal with.

POS Defense Tactics

1. Wear them down! It takes a lot of time (usually!) to take down a POS. The more hours you add to their effort the more likely one of them must go to bed soon. Make them suffer, even if they take down your POS!
2. Make them suffer even more. Make them lose at least ONE ship anyway you can. A fleet can usually accomplish this task, but if it is just you and your POS and you can't control the guns, good luck.
3. Switch targets. The idea is that since it takes hours to bring down your POS the attacking force will eventually become complacent or inattentive. This is when you strike! Rapidly switch to a target you have never hit before and hit as hard as you can. You want to catch the off-guard noob!
4. Puff up. Hey, it works for lizards! If you put out a bunch of mean ships inside your shields the enemy has no way of knowing if they are actually piloted or just sitting there...LOOK MEAN!



Wormhole Tactics

Lots to say here, there will be a mix of tactics involving POSs and/or ships.

Camp the entrance wormhole. You must know where they are coming in at. If you don't know where your static wormhole is or if there is a new wormhole in town that you know nothing about then you have FAILED. You must scan your system often, at least once every 24 hours. Camping the entrance keeps them from using the remaining mass to bring in or out ships. Be very careful about using this tactic. They might just leave your POS alone and end the battle at the wormhole by podding every last one of you!

Close that wormhole. This is perhaps the best thing to do. Under fire though, it is very risky and stressful. You must evaluate your chance of successfully closing it without being on the wrong side of the hole or your POS will have one less defender.

Choke that chicken! Put that hole "on the verge"! This is the best defense for wormhole control while you are under attack. It is the best because at most they can get only one more battleship in and you can get one more ship out (with your goods for example). If you close the wormhole then a smart attacking fleet can scan out the next static wormhole and start to bring in a second volley of ships or use it as an escape route.

Warp Bubbles. Remember, this is double O baby! Double bubble the offending wormhole entrance. Make sure that the bubbles overlap each other with the wormhole inside the double layer. The idea is that from no angle can they instantly use the wormhole on arrival. Smalls are generally not good enough, mediums are where the fun starts and one well placed large could do it by itself. If you are sneaky you can warp from your POS to the wormhole at minus 100 km and drop the bubble. That way any POS hitting ship that must leave for any reason will get a nasty surprise!

Bubble your POS from every known object. Bubbles do not run out of fuel and they last past downtime. So put up smalls (or whatever size) between your POS and all planets or perhaps cosmic signatures (if you think they are staging in one). The idea is to put the bubble so that incoming ships are at optimal range for the majority of your POS weapons.

Have a LOT of spare modules available for your corpmates. If they did not bring what you told them to bring then make sure you flog them later. Nothing says loving like having access to any type of ship setup possible while your enemy has only what they are fitted with.

Make SAFE SPOTS! This should be done well before anything has happened. It's standard practice for the majority of Eve veterans. The ideal safe spot is one that is not directly between any two warpable-to objects. You want them to be as far off the beaten path as possible. Remember, there are probes that can find you out to 256 AU, but the

further away from everything the better the safe spot!

Recon type ships. As in any ship that can use the Covert Op Cloaking Device. These are extremely useful in POS defense. Not only can they scan down offending wormholes and provide useful intelligence in relative safety but they can provide warp in points for a clever fleet.

One good way to do this is to have your recon-type ship warp out to a safe spot and then cloak. Warp back to your POS at minus whatever so that you are sure to not uncloak yourself. At this point, start driving it close to vulnerable enemy ships. Upon reaching the optimal range for your defending fleet have them warp to the safe spot you have already bookmarked. When they are assembled at the safe spot, they use the Warp to Member option to warp to the waiting cloaked recon-type ship. The instant the defending fleet is in warp the cloaked ship warps away so as to not get decloaked and wind up in the line of fire that will ensue!

BOOKMARKS! Before you get attacked you should make sure everyone has a set of bookmarks to various strategic places around your POS. What is strategic? Your POS minus 100km is good to have; they will likely use that at some point. Perhaps you want a six point set based off of your POS gun arrangement that I described previously. It is difficult to guess what will be useful, but something is WAY better than nothing!

The sneaky hole control play. I love this one. Find that offending hole and drive ships through it and back. Do this WITHOUT changing the wormhole description of mass available! This can seriously throw off an incoming fleet. They think they have 500 million kg left but with your deviltry they really only have 200 million!

If you are attacked by players while in a combat site, don't fret. The Sleepers will aggress them the same as you in there.

If a hostile fleet decides to do combat sites in your hole (this DID happen to us) and you have a capital ship, then get in your capital, start the warp to the site and then cancel it after a few seconds. This makes 6 additional top of the line Sleeper battleships spawn out of nowhere right on top of them! This works for class 5 and 6 only.

Skim the shields! Put your ships right on the edge, just enough to fight and plenty of closeness to the shields that should you get into trouble you can duck back in.

Drones don't like the shields. They don't navigate around them well AT ALL. They can also get stuck inside your shields and be deactivated because of it. Use this to your advantage.

A matter of choice. Some wormholes have constant direct to low, null or high sec static wormholes. These offer the inhabitants a great way to get in and out at will, but far worse is the fact that it allows Kspace pilots to come in at will. The best way to defend your wormhole is to pick one that is buried. These are generally the higher end wormholes (4, 5 and 6 Class). If you are two holes deep then it is very unlikely that you

will be found as quickly as someone with a constant direct connection.

Don't go running around. As much as possible, stay in your hole. While trips to Kspace are inevitable due to fuel not being available you must know that every time you make use of an exit you run the risk of having an open door to your hole. All holes should be choked or closed if they are not to be used. You also will start to lose ships due to pirate/gatecamp activities, so don't leave home without good reason.

Nasty Stuff They Can Do To Your Hole

The things that keep me up at night are as follows:

The spy. Yup, we all have to deal with them, but a spy in a wormhole is especially dangerous due to you being more isolated from help. A smart spy will know when most of you are offline for the night and give a hostile force the entrance system and perhaps even drop off a set of bookmarks to boot!

The logged off scanning ship. He gets in, cloaks up, makes a safe spot and logs out after adding your entire corporation to their address book. He occasionally logs back in, counts how many of you are online and when the timing is right he finds and gives a hostile fleet the way in.

The patient pirate. Gets in with a cloakable ship, waits for you to start a mining operation and then strikes. He gets a kill or two, warps off, cloaks and logs for a few days.

Direct Null sec openings. These are just as bad as high sec ones only they could drive your worst enemy through it, a Dreadnought with lots of Strontium for siege mode. Keep in mind they could bring in three capital ships if they don't care about getting them out the same way they got in!

Dreadnoughts in siege mode. They are immune to ECM and can repair like a son of a bitch. This is not to mention that they are designed to kill your POS.

The Ninja POS. This happened once. A medium POS went up with defenses inside of an hour. Constant harassment failed to stop this. Once the shields are up things get a lot harder for the home team.

Being attacked while players are out of the hole. Many players make their money or occasionally sow their wild oats outside of the hole. This absence of players is magically linked to causing an increase in the chance that you will be attacked right then and there.

Direct High sec openings. Every damn noob/corp/alliance wants to know what's in

your hole. There is a constant flux of players in and out. This makes closing your hole difficult and ends safe mining/exploration efforts. Not to mention a hostile fleet of 2.3 billion mass could come through (around 23 battleships).

Talk the Talk

I almost put this under diplomacy but left it here as it defiantly goes to defensive tactics. Be very careful about what you say and when.

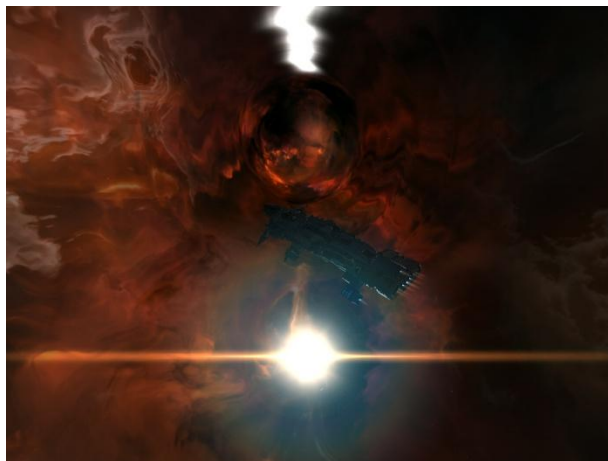
Run Yer Mouth

File this under psychological warfare. The goal here is to get under the skin of your attackers and make them commit a grievous error and then capitalize on it. Try name calling, blackmail or extortion, hell tell them you'll kill a baby bunny if they don't leave. Do all of this in local. Whatever you do to deliberately piss them off just keep in mind CCP does have policies in place about verbal garbage.

It has been my experience that this tactic rarely works. It fails because Eve covers the globe and therefore you come across many different people and cultures without knowing a thing about their personal lives. This means that whatever you say is basically a shot in the dark at their temper. You'd have to know the attackers personally in order to make this a viable tactic.

Don't Run Yer Mouth

Nothing is more satisfying than ignoring all of the ransom offers they give and wiping the floor with them. Say nothing. This keeps them guessing as to who you are and how you are doing. In my experience, keeping your mouth shut and your fingers on the trigger gives you a much better chance at responding quickly to a situation. Think Terminator!



The Pre-Fight Check Off List

If you are ready to go do a Sleeper site, try using this check off list to avoid nasty surprises. Just before you are ready to hit the warp button you go down the list. Don't skip anything.

Go to the bathroom!

Is the home system completely scanned?

Is the target system completely scanned?

Did you close/choke all other wormhole entrances?

Fleet is properly set up as (boosters and pilot familiarity with Eve)?

Everybody has insurance that wants insurance?

Everyone has a full drone bay with the proper drone types?

Got all the ammo you need?

Is the ammo type correct?

Everyone has a bookmark to the POS?

Everyone has a bookmark to a safe spot?

Everyone has a bookmark to the site you are going to?

Got the correct modules on that ship of yours, T2 not T1?

Do you have an "approved" ship setup?

Go over the plan for the first 2 minutes of the fight again.

Add planets to the overview for a slightly faster escape.

Everyone knows to communicate only important information.

Turn your damage modules on.

Make your watch list!

Set your orbit distance if you need to.

How to do a More Secure Mining Op in a Wormhole:

First off, you must concede that there is not a way to be 100% secure in anything in Eve, especially when you are using mining vessels that are slow and weak to begin with. So, with that in mind here is one of several ways you can increase your odds of surviving a mining op in that fat juicy gravimetric field you just found.

Make sure you understand the system you will be mining in first and foremost. This means scanning down and pinpointing all wormholes. If you fail to find ALL THE WORMHOLES you can expect trouble to come through the one you did not find because there is a hostile wormhole corporation on the other side. It WILL happen, oh yes, it will.

After you have found all the wormholes make a decision on what to do about them. You can close them entirely (see other section in guide about how to do this) or you can merely choke them so that a hostile fleet is limited. You can also assign a recon to watch the hole while you mine away. If you do nothing, you get what you deserve. At the very least you ASSIGN someone to be the directional scanner guy/gal. This job is very very important. They are looking for hostile ships or probes. If you see either one, get the hell out ASAP.

So you have executed some hole control. Now you are ready to mine. If you are in your home system then however you want to haul/mine is up to you. If you have a wormhole between you and your POS then you must take into consideration mass restrictions. Here is how.

Take the mass of the ship that will be doing the hauling and compare it to the cubic meters of ore it can carry. The ship that has the lowest mass to cubic meters ratio is the ship you use. For example, a Bustard has 40 million kg of mass but can haul 30,000 m³. An Orca has 250 million kg and can haul say, only 90k m³. Which is better? The Bustard is! Although the Orca can carry 3 times what the Bustard can it also sucks up almost twice the mass the Bustard would to do the same job!

Now you must consider what happens when a hostile ship does make it through and arrives at your mining site. In general if they use a warp bubble then you scatter from each other to force the bubble to pick a ship and the other can maybe get out. If you don't carry some sort of ECM to jam the ships warp scrambling your mining vessels then you'd better pay a ransom because you are done. You MUST have at least one ECM based ship on standby, that's my biggest pearl of wisdom for mining ops.

All About Carriers

I debated whether or not to put this information in this guide and decided to include it both as another way (as it is now in the Evelopedia) of preserving the information and also because having even one carrier in your hole with you is a very good thing. Not only have most players that will attack your hole never seen one, they have also never fought one. On top of that a single carrier can repair your POS, repair your fleet under fire and provide excellent support for running hard Sleeper sites. These carrier based facts are primarily for Kspace application but all rules for them still apply in Wspace. I kid you not, these ships are the *chad!*

Carriers in General

1. Price range is 650 million + for the carrier itself and another 230m for insurance (with about 730m payback). For T2 fittings and drones/fighters expect another 200-300m, for faction fittings expect another 500m+. On average, it's going to run you ABOUT 1.5 billion.
2. Battleships can easily bump a massive carrier away from a station.
3. The carrier 50% range increase bonus only applies to CAPITAL remote repair modules, NOT regular ones.
4. A carrier can do level 5 missions like a hot knife through butter. My shields never went below 98%.
5. EVERYONE WANTS A CAPITAL SHIP KILL MAIL. Remember that, EVERYONE wants one. FREAKIN EVERYONE! If your grandmother that doesn't play Eve heard about their awesomeness, she'd want one too.
6. At Carrier level 3 a capital remote repair module has 37.5 km range, at level 4 it is 45 km.
7. The ability of a carrier to lock onto a target is VERY slow; most use a Sensor Booster II module with a scan script to speed it up.
8. The sensor strength of a carrier is a base of 80; a faction battleship by comparison is only 27.
9. Normal tanking ability of a carrier is between 2000-6000 dps. Triage mode can boost that to 16,000+ dps and be perma-capped. A personal best was tanking 26 ships at 3.45 million damage before succumbing to a couple of Dreadnoughts.

10. Capital modules have a volume of 4 to 5 thousand m3 each.
11. Carrier damage output is on par with a nicely fitted faction battleship but can do no damage at all without drones or smartbombs.
12. Carriers have a million m3 of space to put ASSEMBLED ships inside it. For your convenience a Raven takes up about 486,000 m3. The only thing that can be in any stored ship's cargo are charges.
13. Carriers now have about 900 m3 of regular cargo space and it is no different than any other ships cargo hold.
14. Carriers have a CORPORATE HANGER BAY. When you open it, it looks just like the Corporate Hangar Array display of a POS and looks the same as the hangar in a station where you have an office at. It has 10,000m3 big and it is real buggy too.
15. As the pilot, you can turn on or off the ability to allow your fleet (all or none only) to access the Corporate Hangar Array of your carrier.
16. If a fleeted ship is 1500 meters from you, they can swap out modules as if they were in a station. They can use your hangars at 5000 meters. These are abilities that must be turned "on" via the configure ship option.
17. You can dock a carrier at a station in low or null sec station; it is the Titan and the Motherships (now called Super Carriers) that cannot dock in a station. All capital ships (supers too) can be stored in a Capital Ship Maintenance Bay.
18. Carriers can NOT fit any launchers or turret hard points as they have ZERO slots for them. Neuts, smartbombs, drone control units and remote reps are generally the best options for high slots.
19. If you are disconnected with fighters out, they will warp to you and return to your drone bay automatically.
20. Items in your carrier's Corporate Hangar Array do NOT show up in kill mails.
21. You can open secure containers in your carrier's Corporate Hangar Array, but you may not remove items from it.
22. To scoop an unmanned ship in space the carrier needs to be 1500 meters from it. It will go into your Ship Maintenance Bay.

23. Carriers CAN go through a wormhole, but only very large ones. Motherships and Titans are the ones that can NOT.
24. The only implants that affect capital modules are the implants that SPECIFICALLY say they do, otherwise capitals are affected by normal implants the same as a non capital ships are. In other words, capital ship modules are exempt unless specified.
25. You will never get any capital ship into high sec via a wormhole, sorry.
26. Using a Carrier in a Class 5 or 6 wormhole to do magnetic, combat or radar sites WILL spawn 6 ADDITIONAL Sleeper Battleships. Confirmed: 4 caps will spawn 28 additional Sleeper Battleships! The pattern is 6 then 8 then 6 then 8 etc.
27. You can NOT clone jump into or out of a wormhole via a player's clone vat module, not that a super carrier (mothership) can even get into a wormhole to begin with.

Cynosural Fields and Carriers

1. A normal cynosural generator makes a cynosural field that EVERYONE in the system can instantly warp to. The ship making it cannot move or dock for the 5-10 minutes that the field will be active. Be sure to turn it OFF before it recycles or you will spend another 5-10 minutes frozen if you have the liquid ozone in your cargo hold.
2. The ship generating a cynosural field is NOT invulnerable. A good tactic to use is to make the cynosural field with a throw away ship for low threat areas or use a tougher ship (carrier, battleships, etc.) if you think it will be a HOT landing.
3. If you are popped while generating a cynosural field you can warp away in your pod.
4. Liquid Ozone is the fuel for making a cynosural field and starts at 450 units with level 1 Cynosural Field Theory skill. It drops by 50 units with every level after level 1.
5. You must be in a fleet to activate a cynosural field. You must also be in the fleet to jump TO a cynosural field. If you joined AFTER it was created, the cynosural field must be "re-broadcasted".

6. It takes about a month to be able to use the covert ops cynosural generator. It does NOT appear on other player's overview like the REGULAR cynosural generator does. It also makes an awesome black cloud that no one can see into!
7. Only a ship that can FIT a Covert Ops Cynosural Generator module can jump through one. Capital ships can NOT lock onto one.
8. Yes, Cynosural fields are the ONLY way a capital ship can get out of a Kspace system, they will NOT be able to use a standard gate.
9. You cannot start a regular cynosural field while in high sec but you can jump to ANY regular cynosural field FROM high sec.
10. You cannot start a covert ops cynosural field in high sec although you can jump TO a covert ops cynosural field FROM high sec.
11. You CAN NOT eject while the regular cynosural is active.
12. Some ships (Force Recon for example) get bonuses to Liquid Ozone consumption and a reduced timer for their cynosural field (5 minutes).
13. The capital ship lands in a 5km wide bubble around the cynosural field. This means you could potentially "bounce" off a station and wind up away from the docking ring. Use your tactical overlay to verify you are at least 5km away from the station.
14. If your cynosural ship gets popped while jumping ships are enroute they will land RANDOMLY in the cynosural's system at a speed which will take minutes to decrease from.
15. You CAN NOT cloak with a cynosural field up.
16. You CAN NOT Cynosural field yourself within the same system (anymore).
17. You CAN self destruct while you have the Cynosural field up.
18. A log off or disconnect with a Cynosural up means your ship STAYS until the Cynosural has run its course.

Jumping/Warping

1. Capital ship navigation for jumping is accessed via the Shortcuts tab in the Esc menu. It will tell you a number of things like distance in light years, fuel

consumption and what jamming fields are active. Some use external jump planners you can find by searching the web for “jump planner, eve”.

2. A good idea is to only jump to systems that have a station you can safely store your carrier in if you get into trouble upon arrival. Pop the cynosural field right at the station.
3. A single warp scram can stop you from jumping AND warping.
4. They take about 6 seconds to jump plus the load time for the new system.
5. It takes about 30 seconds to go to warp.
6. The starting jump range is 6.5 light years and get go up to 11.5 light years.
7. The only skill that increases the jump range is the Jump Drive Calibration skill which takes about a month to start to train.
8. Jump Drive Operation reduces the amount of capacitor you need to jump by 5% per level. At level 3 you need 80% capacitor power to jump.
9. Jump Fuel Conservation reduces the amount of racial isotopes you need for any given length of jump.
10. You must be in a fleet to jump to a cynosural field. You do NOT have to be in a fleet to jump to a Jump Beacon (0.0 only).
11. You cannot jump a carrier into high sec. A capital ship in high sec means it was BUILT in a .5 system BEFORE they removed that ability.
12. Capital ships can no longer use Jump Bridges.
13. You CAN NOT jump into or out of a Wspace

Carrier Tactics

1. Dock hugging is not just for care bears.
2. Cloaking will break your control over drones AND fighters.
3. If your fighters are set to follow an enemy through warp you can lose them if they warp to a hostile POS.
4. Carriers make your fleet much more powerful, but are weak by themselves.

5. Pay attention to cynosural fields being generated that are not your own because it will be a Dreadnought which are designed to kill other capital ships as well as POSs.
6. Run away to fight another day but I doubt you will be able to.
7. Do not sit your carrier in the exit path of a station; move it so that an exiting ship cannot ram it away from the stations docking range.
8. Keep a variety of fighters so that you can do your best to match damage types to enemy ships natural weaknesses.
9. Watching local is more important than ever, assume all of them will gang up against you (because they WILL).
10. Keeping aligned to a station is always a good idea if you can.
11. While you certainly have room for a lot of drones/fighters the current interface makes them difficult to use sometimes. Don't have any more drones than you really really need!
12. Assign your fighters to ships that can not normally use drones. This maximizes the amount of drone/fighters your fleet can field.
13. Keeping a "cynosural alt" account is common for capital ship pilots. Keep that alt in another system ready to drop a cynosural field.

Fighters/Drones

1. Compared to cruiser or larger ship types, Fighters do not fair well against frigates. You should carry light drones or webify a frigate.
2. All fighters do the SAME amount of damage and the SAME amount of effective hit points, they only vary in the amount of armor, shield and hull hit points they have but all have the same total amount of points.
3. They also vary in what type of damage they do and at what optimal range they do it at as well as their speeds.
4. Firbolgs seem to be a favorite because of its particular mix of those factors.
5. The ONLY skills that relates to fighters is the Fighters skill and the Carrier skill. Nothing else!

6. Drones (which are not FIGHTERS) do not get the 200% range bonus. Without another module or skill level, drones have whatever range you always have with them.
7. A full complement of fighters will cost 180 million + depending on what fighter and what carrier you use.
8. You can set your fighters to follow a target if they warp out. A common tactic is for your enemy to warp to a POS where you automatically lose your fighters.
9. Fighters will NOT follow you through a jump, but they WILL follow you through a warp.
10. Fighters can be sluggish to respond to orders; I think this is a bug.
11. Fighters have a universal volume of 5,000 m3 each. Average cost is 12-15 million each.
12. As the carrier pilot you can Delegate your fighters to any number of ships in your fleet. This DOES count against THEIR drone control skill limit but NOT their bandwidth limit. The fighters will follow them through warp, but NOT a jump.
13. When you assign someone fighters it is YOUR Fighters skill that gets applied, so your assigned fighters do the same amount of damage as usual.
14. A fighter controller may return their assigned fighters via the "return control" option. The fighters will immediately warp to the owning carrier.
15. With Carrier skill at level 5 and Advanced Drone Interfacing at level 5 a carrier can have up to 15 fighters, a mothership will have 25.
16. Fighters cannot be warp scrambled and when the controller "relinquishes control" they automatically return to the carrier.
17. You CAN NOT assign fighters to gang mates in a .4 system.
18. Carrier pilots cannot monitor their fighters health if their fighters are not on the same grid.

Triage Mode

1. You CAN NOT use drones or fighters while you are in triage mode.

2. You CAN NOT receive ANY type of remote rep while in triage mode.
3. Triage mode eats Strontium Clathrates, 225 units at level 1, 25 less units per additional level.
4. Triage mode lasts for 5 minutes and cannot be interrupted.
5. Generally speaking you can tank 14,000 to 21,000 dps. Some carriers can be specifically fitted to do this in perma-cap mode while others will last only minutes before the cap burns out.
6. Unless you have a very good plan, triage mode means you're going to die.
7. Your scan resolution jumps by 900%
8. You can NOT move, dock, warp or jump at all while in triage mode.
9. You gain the ability to target 4 more objects.
10. You x4 your ability to repair yourself and remote repair others. (-50% duration along with 100% repair bonus)
11. Your cap requirement for E-war modules while in triage mode makes them impossible to use.



All About Dreadnoughts

While Dreadnoughts in wormholes are indeed a rare site this does not mean you will never come across one. I personally do not drive a Dreadnought so I asked Cambarus to make a thread on them. What is listed below is from his thread (linked near the beginning of the guide). I have cleared it up and organized it.

I'd suggest reading the carrier fact sheet first, as it contains several pointers that apply to dreadnoughts as well. This page will focus on things directly relating to dreadnoughts only.

General:

1. A dread costs about 1.5billion ISK. To fully buy, fit and insure one will most likely cost 2.5 billion total.
2. As with carriers, everyone and their mother wants a dreadnought kill. Aside from the Moros, Dreadnoughts are extremely vulnerable to smaller ships, so flying one solo is not advised.
3. Dreads are the bread and butter of any space holding alliance's fleet. Carriers are nice as well, but any big alliance wants more Dreadnoughts, as when you're fighting for space you're shooting towers, which involves Dreadnoughts, or defending towers by shooting Dreadnoughts, which involves, you guessed it, dreads.

The only pirate implants that affect capital ships are those in the Slave line.

4. You get capital turrets by learning Large Turret to 5, Gunnery 5 and the corresponding XL turret you want to train.
5. You get capital missiles by learning Torpedoes to 5 and Missile Launcher operation to 5.
6. You get Capital Armor Repair by learning Repair Systems to 5, Hull Upgrades to 5, Mechanic to 5.
7. You can use Siege Mode after you learn Weapons Upgrade to 5, Advanced Weapon Upgrades to 5 and Tactical Weapon Reconfiguration to 1.
8. The navigation skills are the same as carriers.
9. You only need to train Capital Ships to level 1 in order to pilot Dreadnoughts.

10. Crystal implants do not affect Capital Shield Repairs.
11. Slaves, Snakes, Nomad and Halo do work on capitals.
12. The Revelation and Moros armor tank.
13. The Phoenix and Naglfar shield tank.

Out of siege:

1. A dreadnought only has a base of 5 LY jump range. This means you won't be getting as far as you would with a carrier, though most large capital ship moves are planned using a dreadnought with Jump Drive Calibration 4.
2. A dreadnought out of siege mode can do up to 1000 dps with drones alone.
3. A dreadnought out of siege mode does about 200-500 dps by itself.
4. A dreadnought out of siege can tank 1000-3000 dps.
5. A dreadnought out of siege is effective against battleship classes.

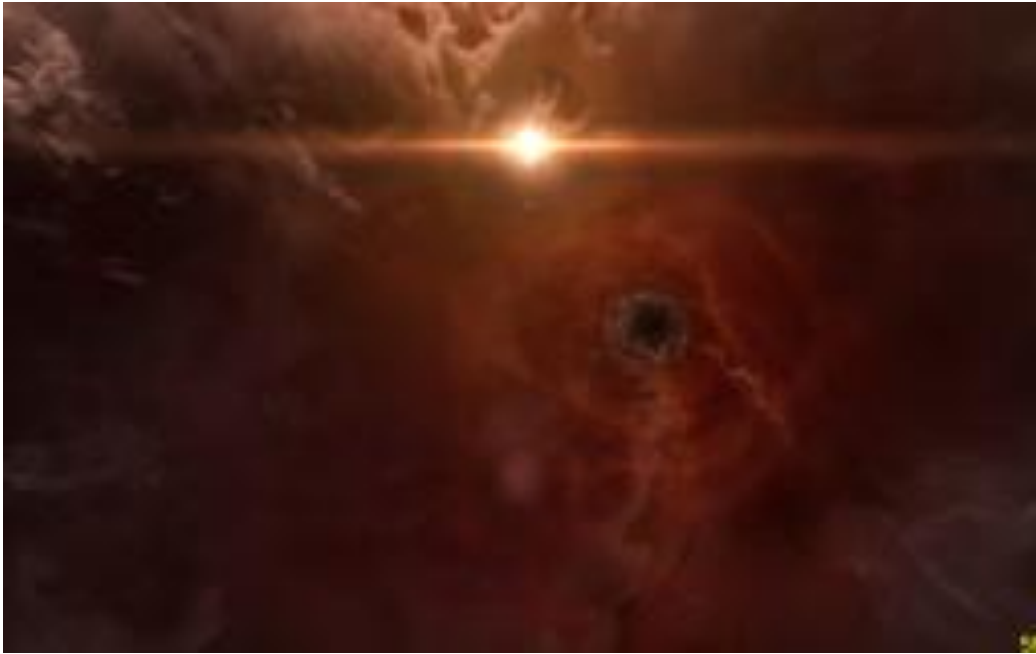
In Siege:

1. A dreadnought in siege gets a 625% damage bonus to their capital class guns.
2. A dreadnought can do a volley of 16,000 to 22,000 while in siege mode.
3. Citadel torpedoes still flying while you switch between sieged/unsieged modes will hit for zero damage.
4. Dreadnoughts in siege get a 100% bonus to repair amount and -50% bonus to repair amount duration. Because of this it can be pretty difficult to get a dread to run two repairs for any extended period of time, and most people choose instead to run just 1 repair module.
5. Your maximum number of targets in siege mode is 2, and your lock time increases drastically.
6. Any locks you had before entering siege are lost.

7. Tracking and explosion velocities also take a huge hit when in siege mode. Because of this sieged dreadnoughts are mainly used to kill POSs and other capital ships.
8. A dread in siege cannot be remote repaired.
9. You cannot be jammed or damped by hostile ships.
10. Energy Neutralizers still work against you.
11. A dread in siege mode cannot move, cannot dock, and cannot jump.
12. Siege mode uses Strontium Clathrates as fuel, and each siege cycle lasts 10 minutes and cannot be interrupted.
13. The level of Tactical Weapons Reconfiguration determines how much Strontium per cycle you consume.
14. When you enter Siege Mode this happens:

Max Velocity Bonus
-100 %
Activation time / duration
600.00 sec
Damage Multiplier Bonus
625 %
Scan Resolution Bonus
-75 %
Tracking Speed Bonus
-92.5 %
Explosion Velocity Bonus
-92.5 %
Armor Repair Bonus
100 %
Armor Repair Duration Bonus
-50 %
Shield Boost Bonus
100 %
Shield Boost Duration Bonus
-50 %
Maxed locked targets
2

Courtesy of Eve-Online 1 The Black Hole.



Black Hole	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6
Inertia Multiplier	1.25	1.44	1.55	1.68	1.85	2.00
Max Range Multiplier	0.90	0.81	0.73	0.66	0.59	0.50
Falloff Modifier	0.90	0.81	0.73	0.66	0.59	0.50
Missile Velocity Multiplier	0.90	0.81	0.73	0.66	0.59	0.50
Maximum velocity multiplier	1.25	1.44	1.55	1.68	1.85	2.00
Control range multiplier	0.90	0.81	0.73	0.66	0.59	0.50

Courtesy of Eve-Online 2 The Cataclysmic Variable.



Cataclysmic Variable	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6
Armor repair amount multiplier	0.90	0.81	0.73	0.66	0.59	0.50
Shield repair amount multiplier	0.90	0.81	0.73	0.66	0.59	0.50
Shield transfer amount multiplier	1.25	1.44	1.55	1.68	1.85	2.00
Remote repair amount multiplier	1.25	1.44	1.55	1.68	1.85	2.00
Capacitor capacity multiplier	1.25	1.44	1.55	1.68	1.85	2.00
Capacitor recharge time multiplier	1.25	1.44	1.55	1.68	1.85	2.00

Courtesy of Eve-Online 3 The Magnetar.



Magnetar	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6
Targeting Range Bonus	0.90	0.81	0.73	0.66	0.59	0.50
Tracking Speed Multiplier	0.90	0.81	0.73	0.66	0.59	0.50
Gravimetric strength multiplier	1.25	1.44	1.55	1.68	1.85	2.00
Ladar strength multiplier	1.25	1.44	1.55	1.68	1.85	2.00
Magnetometric strength multiplier	1.25	1.44	1.55	1.68	1.85	2.00
Radar strength multiplier	1.25	1.44	1.55	1.68	1.85	2.00
Target painter multiplier	1.25	1.44	1.55	1.68	1.85	2.00
Dampening range reduction multiplier	1.25	1.44	1.55	1.68	1.85	2.00

Scan resolution reduction multiplier	1.25	1.44	1.55	1.68	1.85	2.00
Tracking penalty multiplier	1.25	1.44	1.55	1.68	1.85	2.00
Optimal range penalty multiplier	1.25	1.44	1.55	1.68	1.85	2.00
Damage multiplier multiplier	1.25	1.44	1.55	1.68	1.85	2.00
AOE velocity multiplier	0.90	0.81	0.73	0.66	0.59	0.50
Drone velocity multiplier	0.90	0.81	0.73	0.66	0.59	0.50

Courtesy of Eve-Online 4 The Pulsar.



Pulsar	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6
Shield HP bonus	1.25	1.44	1.55	1.68	1.85	2.00
Targeting Range Bonus	1.25	1.44	1.55	1.68	1.85	2.00
Signature Penalty	1.25	1.44	1.55	1.68	1.85	2.00
Armor EM resistance bonus	+10%	+18%	+22%	+27%	+34%	+50%
Armor kinetic resistance bonus	+10%	+18%	+22%	+27%	+34%	+50%
Armor thermal resistance bonus	+10%	+18%	+22%	+27%	+34%	+50%
Armor explosive resistance bonus	+10%	+18%	+22%	+27%	+34%	+50%
Capacitor recharge time multiplier	0.90	0.81	0.73	0.66	0.59	0.50

Courtesy of Eve-Online 5 The Red Giant.



Red Giant	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6
Heat damage multiplier	1.10	1.18	1.22	1.27	1.34	1.50
Overload bonus multiplier	1.25	1.44	1.55	1.68	1.85	2.00
Smart bomb range multiplier	1.25	1.44	1.55	1.68	1.85	2.00
Smart bomb damage multiplier	1.25	1.44	1.55	1.68	1.85	2.00

Courtesy of Eve-Online 6 The Wolf Rayet.



Wolf-Rayet	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6
Signature Penalty	0.90	0.81	0.73	0.66	0.59	0.50
Armor EM resistance bonus	+10%	+18%	+22%	+27%	+34%	+50%
Armor kinetic resistance bonus	+10%	+18%	+22%	+27%	+34%	+50%
Armor thermal resistance bonus	+10%	+18%	+22%	+27%	+34%	+50%
Armor explosive resistance bonus	+10%	+18%	+22%	+27%	+34%	+50%
Shield EM Resistance	-10%	-18%	-22%	-27%	-34%	-50%

Shield Explosive Resistance	-10%	-18%	-22%	-27%	-34%	-50%
Shield Kinetic Resistance	-10%	-18%	-22%	-27%	-34%	-50%
Shield Thermal Resistance	-10%	-18%	-22%	-27%	-34%	-50%
Small weapon damage multiplier	1.25	+44%	+55%	+68%	+85%	+100%

Useful Websites

<http://www.staticmapper.com/> Wormhole based database used to find 2 days worth of activity, what the static wormhole type is as well as general wormhole information.

<http://eve-survival.org/wikka.php?wakka=WormholeSpace> This is the specific page you need from Eve Survival to run any site within wormholes. If you want an idea of what is in a site or what site has what you are looking for, this is the website for you.

www.battleclinic.com One of the older Eve Online fan sites that has grown to include many original works for Eve Online. If you're looking for a nice killboard then this is, arguably, the one to post and boast with.

<http://www.eveonline.com/devblog.asp> The Dev Blog. If you want to know more about what is going on with Eve before your buds do, this is one place that will make you seem like an Eve God with your Eve Knowledge. Only the game developers post these articles so the information is usually very interesting for both in game and out of game reads.

http://wiki.eveonline.com/en/wiki/Main_Page Started by CCP, this website section is nothing but pure information mostly submitted and maintained by the player base. It has many entries on just about anything you can want to know on Eve.

<http://www.eve-search.com/> Started well after the original Eve Online Forums (which is now closed and a new one is up) this website does an outstanding job of making searches both fruit full and accurate.

<http://www.eveonline.com/ingameboard.asp?a=topic&threadID=817184> A thread on the old Eve Online Forums that extensively goes over POS defense and tactics, much more so than what is in this guide.

<http://fazenda.w-space.org/> Best if used with the in game browser this site makes figuring out what PI products and planet types you need.

<http://www.lsp-eve.com/survival/index.html> Very nice and concise website by Lone Star Exploration that gives detailed information on all wormhole sites. Highly recommend browsing here when you just flat out need to know how much ore is in a Rarified gravimetric site!

Useful 3rd Party Programs

<http://evemon.battleclinic.com/> Evemon keeps track of any number of characters via an API access key that Eve Online supplies to you. It can also help plan skills and allows you to browse items and ships at will. This is a very VERY useful tool for playing Eve.

<http://evehq.battleclinic.com/> Perhaps the most complete "use in conjunction with Eve Online" program in existence. You name it, it can do it. Read the "What is Eve HQ" section and you will get the idea.

<http://www.eveonline.com/ingameboard.asp?a=topic&threadid=548883> A lightweight dedicated ship fitting program. Easy to use, accurate and will make 3 hours whiz by. This link is from the "old" Eve Online Forums which is now archived and read only.