

# Fleet Command

Large scale fleet command may be one of the most thankless jobs in the game. There are a couple things you can do to make the job of fleet commander easier.

## Organization

### Fleet Regulars

The average fleet in EvE is a rabble. On average you will have a number of sniper battleships put together with no fitting discipline whatsoever and then some folks in support ships that “rock for small gang PvP”. Covops? Dictors? Logistics? Did anyone even remember to bring a cyno? Fleet Regulars are those that routinely and reliably fill the critical roles in your fleet. These are the guy that you can go to when you need a certain ship or fitting. It’s not easy being a regular. That covops pilot who has a brain and speaks clear unaccented English is also a high SP battleship pilot and his CEO wants to know why his kill numbers are down. Ditto for your guys in logistics ships. Your dictor pilot could be another cog in the cookie cutter Dreadnaught fleet.

Find who the regulars are in your fleet and do everything possible to cultivate them. These are the guys who you’ll contact before hand when you need a specific for some tactic. These are the people who will make the difference between victory and defeat.

### Multiple Alliance Ops:

Picking up X’s in an intel channel for multiple alliance ops can be a pain in the ass. For a big op it can take more time then FCing. Don’t do it. Find somebody you trust that’s either in a capship that’s not getting cynoed anytime soon or in a support ship you can leave behind and hand off gang boss to them. Let the “coms officer” pick up the X’s while you get on to something else.

### What to Fly:

I once knew a FC who liked to command from a Scorpion. Needless to say he was a very popular primary target. It may not be glamorous but the best place for the FC is in a high tank, low target profile ship. Fleet commands are among the best for this for several reasons. Fleet commands can run ganglinks, have a fastish lock time, have descent default lock ranges and can get large benefits from remote reps. Fleet Commands are also, generally, the last thing somebody will bother to call primary.

If you will be bringing in capships, you should have a cyno on your ship. You shouldn’t be the designated cyno. If your cyno drops, logs, or you have a fuckup and don’t have one in fleet, it’s sure nice to have one sitting in a high slot.

### Gang Links/Leadership Bonuses:

One of the most powerful ships you can have in fleet is the max skill damnation with mindlink implant. With all three armored warfare ganglinks running this increases resists by 25% (and a little change), decreases cycle time on remote reps by 25% and decreases cap used by those remote reps by 25%.

A single rep dreadnaught might have 4 T2 Armor Hardeners, 1 DCU II, 1 EANM II (or faction) and a capital rep. If that pilot knows that the full gang link bonus will be available, he can swap out that EANM for a Megstab while maintaining his tank. For a Dreadnaught one damage mod is often the difference between a Tank and a Gank fit. That extra “virtual” low slot from a damnation is especially helpful to Minmater Dreads, who have only 6 low slots to start with.

For the rest of the fleet, an extra effective EANM II can make the difference between death in a Doomsday Blast and a ship that is still firing. An extra effective EANM opens up a world of possibilities (for example the BoB fleet mega can only tank a DDD blast if in fleet with a damnation). Faster remote rep speed increases offers a major advantage when “racing cycles” with slow rate of fire long range guns.

A fleet command pilot does not need to be a fleet wing on squad commander to provide bonuses. Instead a commander can “set [command level] booster” to somebody other than themselves. This allows the fleet to use somebody other than its commander to provide leadership bonuses. A character giving bonuses must be in the same system as the group he’s giving bonuses to. Everyone in a fleet gets the best bonus to any particular stat in their chain of command, if the chain of command is properly set up. If a squad commander is missing, nobody in the squad will get any bonuses. If a wing commander is missing or lacks the needed wing command skill, nobody gets wing or fleet level bonuses. Everyone still gets squad level bonuses in this situation.

**Fleet Structure:**

The gang boss can assign names to each wing and squad in the fleet. A well setup fleet might look something like this.

Fleet Commander (Damnation maxed)			
Sniper Wing (WC in Claymore)	Sniper Wing	Support	Capitals (Booster set to Carrier with Siege Warfare Command Link)
Squad 1	Squad 1	Tackle	Dreads
Squad 2	Squad 2	Close Range	Dreads
EWAR Squad	Squad 3	Close Range	Dreads/Carriers
Assassin Squad	(Vacant)	Sniper	Carriers

Notice that under this setup Capital ships get gang mod bonuses to both Armor and Shields. One of the most overlooked features in the game is that carriers can act as command ships. With a little luck, and good planning, this can give your capitals a marked advantage.

An assassin squad is a squad with a list of known enemy FC's, CEO's, alliance leads and directors. Their job is to pick these folks, hopefully cutting enemy command and control in the fight. An Assassin quad should have its own text chat channel, separate from the rest of the fleet.

## **EWAR:**

Nothing can become a mess faster than trying to coordinate EWAR. The average EWAR pilot has at least 4 different racial jammers plus a multi. Now picture a EWAR chat channel created for the fleet. Each pilot will link in the enemies he is jamming. Every EWAR pilot needs to remember what targets all the EWAR pilots have called. If you've got more than three EWAR guys this isn't going to work.

Now instead imagine that each EWAR pilot has only one racial type fitted. You've either set up some ratio or simply gone 1,2,3,4. If you have 8 or less EWAR guys, they can split off in pairs of two, one jamming the races ships they've fitted for A to Z the other Z to A. For extremely large fleet multiple EWAR groups are possible. Each group jams one race either from A to Z or Z to A and each has its own chat channel to sort jams. You now have the same or more number of racial jammers in fleet but in a more organized manner.

## **Scouts**

The requirements for a good scout are:

1. Scout has a brain.
2. Scout has a covops or recon.
3. Scout speaks the fleets language in a clear unaccented manor.
4. Scout has a good connection.

Have your scouts routinely check in, even if they don't see anything. Put your scouts on your buddies list. There's nothing like the feeling of getting wiped out because a scout lost connection and fell out of both eve and Teamspeak.

In general you will need a minimum of one scout for every gate in your target system and one additional warped cloaker to establish a warpin point on a hostile POS. If you're not POS busting, you still need at least one scout.

## **Overview Settings:**

Everyone's overview should always show the following: Gates, Stations, Planets, Control Towers, Jump Bridges, Cynojammers and Titans. Everyone should have three distinct overview profiles: Fleet Heavies (Show only Capship, Supercapship, Battleships, Command Ships and

Recons), Fleet Light (Command ships and smaller, normally this setting will not include, shuttles and rookie ships), Fleet Combined (everything).

Normally these will be set up with overview settings to only show hostiles. Some FC's will added T1 frigates and cruisers to the list of ships excluded from overview. If this is the case everyone should have a fourth setting to add these back in. Rifter's can tackle capital ships to.

If you're in 0.0 you should set known hostiles to show on your overview as orange or red, neutral as yellow and blinking for folks that have wardec'd your corp / alliance (for when you forget and leave fleet settings on in empire). Turn blinking red off for low sec status, in 0.0 it doesn't matter if somebody likes to blow up macro haulers in lowsec.

All your 0.0 overview setting should show neutrals on the overview with a yellow bar. This pulls neutrals out of general overview clutter and, on average, improves response time by an extra second or so.

### **Brackets Settings:**

One of the most common reasons folks get lost in fleet is that they have friendlies off overview and all bracket settings off. In large fight loading brackets generates heavy client lag. **TURN DRONE RENDERING OFF FOR A FLEET FIGHT!** Hell turn drone rendering off anytime a carrier is going to drop fighters. For some reason rendering fighters causes heavy client side lag. Turn off all effects for a fleet fight. EvE does not wait for a signal for your client that it's loaded grid before placing you on grid. If you're waiting for 15 minutes for the grid to load, you're ship is sitting on grid subject to getting blown up.

### **Fleet Ships:**

Getting good, high skill, battleship pilots is hard. By the time a pilot has battleship V and Large Racial Guns V, they are well on their way to a dreadnaught. If at times it seems like nobody in your support fleet has any decent battleship skills, it could be that all your best battleship pilots are being bleed off into capships.

Fitting discipline is critical for a Battleship fleet. If every ship is its own individual little snowflake, a ship that goes pop is a ship that can't be replaced without a trip to Jita to pick up fittings. Pick four battleships, have both a T1 and T2 fit for them and make those THE fleet Battleships.

Just as a generally suggestion, absent special circumstances (Eagle) consider banning HACs from fleet. They tend to result in expensive lossmails without much to show for it.

### **Codecs**

Make sure any teamspeak or vent server you are using is running a descent codec. The last thing you want is to be in a battle and realize that nobody can understand what's being said on TS. I've seen major alliances go into battle on servers that sounded like a bad cellphone

connection in a blizzard, don't let this be you. The reverse, of course, is that spies changing codecs can cause no end of problems.

## **Tactics**

### **Lag**

Lag is the enemy of tactics. The worse the lag is the simpler tactics need be. The bigger the fight the simpler the tactics need to be. All the remote repping in the world isn't going to do any good if 600 battleships are trying to alpha the same person. Either he's dead or the node is dead and he should warp out, it'll take 20 minutes for the enemy to activate a gun on him and thirty before anyone can get a remote rep on.

### **Target Calling**

Quick who's primary? Yeah you called it, in a hurry, with a Romanian accent. It doesn't help that the other side have an alt name Abkaha (or some other tongue twister name starting with A) in a tanked up bait scorpion just to cause your calling to go to shit. Every Fleet, Wing and Squad commander can broadcast target to their command. Always broadcast the primary target and ONLY the primary target. No matter how confused the battle gets, your fleet mates need only click on target in broadcasts to determine the primary.

### **Orders**

Repeat all orders three times if you can. It's not "jump" it's "jump, jump, jump" or "Akzbah, primary, Akzbah primary, Akzbah primary". One variation on this has primary called three times, secondary twice in territory once. Put long term orders in fleet chat. If the order is "hold on gate NM- gate until I X" put it into chat so that folks that aren't paying attention can reference it.

### **Target Groupings\**

The more people who are trying to call targets in TS the more confusion the situation is going to be. Somewhere between 40 to 80 sniper battleships, the point of diminishing returns is reached on focus fire. As a general rule, a fleet can have two target callers on TS plus an assassin squad in a text chat channel, without to much difficulty.

To set this up you will need two groupings (fleets, wings, whatever). These groupings need to be by location in fleet. If you try to split up people in fleet chat, you'll have guys get confused. One group calls targets A-Z. The second grouping calls targets Z-A. To help keep things straight orders should be phrased by their group designation. For example "One, Axbzah primary, Axbzah primary, Axbzah primary", "two, Zeb primary, Zeb primary, Zeb primary."

Even very large fleets rarely have more then two target callers. The more groups calling targets, the harder command and control will become.

### **Picketing a Gate**

Titans and jump bridges mean fighting on gate happens less than it used to. Instead of a massive amount of fighting on gate, now we simply have a lot of fighting on gate. Generally, gate defense will look something like this.

### *Bubbles*

Set up multiple T2 large bubbles on gate. Multiple bubbles make it harder for an attacker to simply kill the bubbles and warp off.

### *Support*

Support zero on gate. For most support this is a suicide mission. If you're in the middle of a bubble when a hostile fleet lands on you, the chances of getting out in one piece are minimal. A couple things can be done to help with this. With the size of T2 bubbles reduced in Quantum Rise both logistics ships and carriers can reach to the center of a bubble to provide remote rep. Receiving remote repping can GREATLY increase the survivability of support on gate.

For all that survival is unlikely, support on gate can provide a number of useful functions: support normally has higher DPS than sniper battleships, support can web, warp jam or disrupt hostiles or apply neuts. A plated and trimarked Domi on gate can have 160,000+ EHP, in a midsized fight that can suck up quite a lot of enemy DPS time before going down.

### *Tracking Disruptors*

A sniper fight is normally conducted at 150km+ ranges. With a gate defense you know where the enemies snipers will initially be deployed. A single T1 tracking disruptor, properly scripted, with minimal EWAR skills, can drop an enemies range from 165km + 30km to 106km + 16km. In other words one tracking disruptor = one hostile sniper out of the fight. Even better, nothing visibly happened to that snipers ability to lock or lock range. If the disruptor is on a ship not normally shown on fleet overview, a T1 cruiser or frig for example, the enemy may not even realize what has happened. This is especially true if he has damage notification turned off.

### *Heavies*

Many fleet commanders are still refighting the ASCN war. In the ASCN war BoB forces had a distinct range advantage. This was in the days before T2 became common, before tier 3 battleships, before rigs were introduced and, for most of the war, before a HP boost made plating a battleship an effective strategy. For most of the war, battleships would have around 20,000 EHP.

Today most battleships will have AT LEAST 80,000 EHP if not more. The question is, are setups designed to shred a paper tank still the best idea with today's bullet sponges? There are three responses to this.

The first is to setup at the edge of the bubble loading faction close range ammo and deploying sentry\* drones. This has the advantage that sentries can be assigned to assist the target caller, putting damage immediately, and hopefully with little confusion, onto the primary. This setup works best if supporting carriers, also close in on gate, that are providing remote rep to support and battleships. This setup puts your carriers at a high risk of being tackled.

The second method is to set up a sniper point, aligned out some distance from gate. This is the traditional method. The more battleships you have, the better this method is.

The third is to go all out fitting for range and ignore the ability to tank a doomsday device. The thinking behind this setup is that the fleet will either warp off before a doomsday will be deployed or face a double doomsday, in which case most tanks will fail. The lack of tank is of relatively minimal concern if the enemy can't hit you.

## **Remote Repping**

A remote repping ball puts all the repping that you can get onto target against all the dps that the hostiles can bring on target. At some point CCP will probably stacking nerf remote reps, but they haven't yet. Both armor and shield remote reps, rep the same in amount in the same amount of time. Remote repping becomes ineffective when the hostiles bring enough alpha damage onto target to instapop it. In most cases this will take 85,000 or so EHPs of incoming damage.

Setting up a remote repping ball is not hard. One person should declare themselves to be the remote rep point. Everyone to be in the ball should add that person to their watch list and approach them. Once approached, everyone should align to warp out at zero m/s (this can be done at speed if need be, though minmater pilots especially, may need to reduce speed). A pilot in the ball should broadcast "need armor" when the hostiles BEGIN TO LOCK HIM.

Properly used remote repping can make a huge difference. Lets take an example of two fleets. One is remote repping the other is not. The remote repping fleet need only burn down their targets EHP. The fleet that is not remote repping must get through both target EHP and an average of two cycles of remote rep per enemy battleship. As a general rule each large remote rep will offset 2/3 of the DPS incoming from a hostile battleship.

Remote repping starts to lose effectiveness in fight involving 100 or so battleships a side. Each battleship is going to average around 1000 damage actual realized alpha. About 20% of any sniper fleet is going to miss their lock for some reason or another. That leaves around 80,000 alpha incoming, roughly equal to the EHP of a doomsday tanked battleship.

## **Setting up a Sniper Spot**

Unless you are going for a close or long range fight, sniper spots should be between 150 and 160 km from your targets location. Sniper points are normally setup by initially warping to a fast ceptor. Subsequent sniper points are best made by warping to a covops (if you can find one). Ideally, you will have two covops working as a team to establish sniper points. One being the

point you just warped to and the second being your next sniper point. The real world is rarely ideal. In practice most sniper points will be setup by interceptors on the fly.

### **Busting an Enemy Sniper Point**

At 150km off it'll take the best post quantum rise interceptor about 25 seconds to reach a hostile sniper point. If the hostiles are still there, they deserve what they get. The best way to break a hostile snipe spot is to station a covops with probes off grid but close to the fight. The covops probes the hostiles out, warps to 10-20km from the hostiles then attempts to get a warp in spot for a friendly dictator. Once bubbled support can warp to the hostile fleet to tackle/chew them a new one. Alternatively, you can use a Recon to hotdrop caps (though the result of this sucks a bit for the Recon pilot who's about to get popped).

### **Changing Sniper Spots**

It's possible that you will be in a snipe spot around a station or gate with hostiles at a POS. Put a covops watching the hostile fleet. When they commence warp in, warp to a new sniper spot. If you're trying to drop in on top of an enemy fleet its best to do it from a safe spot that the enemy does not have eyes on.

### **Warp Outs**

Your fleet will need to align to a planet for warp out. That doesn't mean that ships should be warping to a planet. First off all simply by zooming in on your ships, with planet brackets turned on, an enemy can deduce what planet you are warping to. That's a good way to end up in a bubble.

There are two options for warp outs. One is to set up a staging POS. This can be very effective if done right, as it gives your pilots a secure place to warp to for repping. Also a POS may be bookmarked for quick warp to.

The second option for a warp out point is to have a cloaked carrier or logistics ship (preferably a logistics) at a midsafe. That's a safe spot between where you are engaged and the celestial that is your align point. Everyone in the fleet should have this character on their watch list. When necessary they can warp out, receive repping and warp back to the fight. This type of repping setup lacks the security of POS guns but has the advantage that your safe can move.

### **Bookmarks**

If you know ahead of time that you will be fighting around a specific object, make a series of six bookmarks. One at a direction you choose as North, another at South, East, West Up and Down all at 150km. Pass these to your covops pilots. In all likelihood hostiles will be no more then 75km from at least one of these points.

### **Blockades**



Blockading is the practice of putting a midsized camp on the route that enemy stragglers or reinforcements will take to the target system. This is most often done when standing issues prevent one corp or alliance from working alongside the main fleet. Blockading can be an extremely effective practice if your enemy is operating early in their timezone. As pilots login (generally after work or the like) and attempt to travel to the fight, they are intercepted piecemeal by the blockading force. This limits the main fleet solely to the ships that they brought to the initial conflict or have in system.

## **Bombing the Gate**

Stealth bombers look good in theory. I've rarely seen them work in practice. Area of effect damage from a bomb will not break a gate cloak (though wrecks will appear). The best setup I've seen for bombing a gate had multiple bombers on each side of the gate set so that bomb blasts from each group would overlap without bombs from one group being within the area of effect of bombs from the other. For a large fleet fight void bombs, nucking 1800 cap each, may be the best choice. Of course this has the downside of nuking the cap of any support caught in the blast. Getting significant amounts of cap nuked will make it hard to MWD out of a bubble.

## **Capital Ships**

All power in EvE comes out of the barrel of a gun on a capship. If your corp or alliance has high end moons and you are not using them for a cap program, you're doing something wrong. NOTHING is more important than a cap and supercap building program. Subcap ship reimbursements, forget about it. Buying towers, hold a mining op. Capships break the rule of EvE, don't fly what you can't afford to lose. Your corp can not afford to lose its caps. When things are looking bad, the support guys want to pull out all their ships and make a pyre of the wrecks, less to haul out if it gets popped in combat. You can't do that with capships. People have abandoned space instead of risking their caps. Remember at the end of the day caps are power, nothing else much matters.

## *Communications*

One of the great issues with fleet co-ordination is the habit to put both capital ships on a separate channel from the support fleet. There is a very good reason for this. Dreadnaught pilots are immobile for their 10 minute siege cycles. A Dread fleet should attempt to enter siege at the same moment. The exact timing of the siege timer should be one of the closely held tactical secrets of the fleet.

Carriers will normally be in TS with Dread to direct fighters against POS modules or support dreadnaughts should the caps get hotdropped. The problem here is that there the carrier pilots have absolutely no idea what's going on with the support fleet. If there are no dreads involved, or the critical fight is the support fight, then your carriers need to be in the support channel.

## Gear

A ship, both capital and support, and refit at a carrier configured to allow access. Due to lag issues support has only rarely if ever refit on the field until now. With the addition of the Orca we may see more fights that involve refitting in space.

All capships should carry, in cargo, enough Warp Core Stabs to refit all of their low slots. It might not look good on a killmail but refitting stabs can keep you from losing the cap in the first place. All carriers should carry at least one ECCM either fit or in cargo. If available, all Dreads should have one to two loads of faction XL ammo onboard (or a set of replacement crystals for Amarr). Within reason, Dreads should have modules to switch between a tank and gank fit on the fly (obviously some things, such as swapping between short and long range XL gun types are space prohibitive).

### Carriers

Carriers are the tanks of EvE. Every squad of infantry (support) wants one and every commander wants a division of them to drop on the other guy. The most powerful tool of the carrier pilot is not the dps of his fighters but the remote repping that a carrier brings to the field. Each unbused capital remote rep mitigates the damage of between two and three enemy battleships (400-700rpm depending on tank).\* A squad of 5 carriers bearing two remote reps each can mitigate out the dps of 20-30 enemy battleships

#### *Fun Fact:*

According to EFT, warfare link modules are effective with capital remote repping. The EvE item database does not indicate that they should not. I suspect this is a bug in EFT. If this actually worked half the game would be using it by now.

### Carrier Range and Lock Times.

Carrier Time to Lock <sup>#</sup>				
	Battleship (400 Sig)	Dreadnaught (1700 sig)	Carrier (2900 sig)	Cruiser (140 sig)
Base Res: 68mm	13.16 sec	8.89 sec	7.8 sec	18.53 sec
With T2 scripted sensor booster: 110mm (110mm used for following two rows).	8.128 sec	5.49 sec	4.48 sec	11.45 sec
- Celestis; Cruiser V, 3 T1 scripted damps, negligible EWAR skills: 38.4mm	23.31 sec	15.74 sec	13.872 sec	32.80 sec
- Celestis, all skills V, T2 scripted damps: 21.76mm	41.14 sec	27.16 sec	24.48 sec	58 sec
No onboard, 3 T2 Scripted	3.14 sec	2.12 sec	1.90 sec	4.42 sec

Remotes Sensor boosters (i.e. gatecamp): 285mm				
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Carrier Targeting Range (Long Range Targeting IV = 120km)		
	With Onboard Sensor Booster Scripted for Lock Speed.	With Onboard Sensor Booster Scripted for Range (192 km range).
Celestis; Cruiser V, 3 T1 scripted damps, negligible EWAR skills	41.9 km	67.1 km
- Celestis, all skills V, T2 scripted damps	23.72 km	38 km
Celestis Rigged, T2 scripted damps.	18.68km	29.8km

So what does this mean? The most obvious is that you can damp out a carriers ability to aid support, but Gallente EWAR is unlikely to put a carrier out of a capfight. Secondly is that all capships should be within at least 35km of all other capships unless with a very good reason.

## Dreads

Dreadnaughts tend to hanger queens, rarely flown. When they are flown they're taking a good battleship pilot out of the fight and putting him in a cookie cutter siege engine shooting at a POS. Dreads can not receive any remote effects, except for Nos and Neut, while in siege. In effect every Dread in siege is an island.

A sieged dread can tank around 8000dps, 11,000dps on overhead with a single cap repper. Overheating will kill your cap rep in around 3 minutes. Fitting two capital reps will rep around 6,500 with one going or around 12,000dps with both, best case you will cap out in about 3 minutes. In most cases a dread will be better with a less cap intensive one rep setup.

A Gallente Dread can get 1000 or more DPS from Tech II sentry drones. Nobody else is so blessed. Dreads die either to overwhelming incoming damage or from cap death. If you're not flying gallente this is a great application for 5 heavy neut drones. This gives you the equivalent of one heavy neut, per dread, on the enemy. Hey it beats the extra 300 or so dps you'd get by sicking Ogre II's on them.

## POSeS

Player Owned Starbases come in three sizes, small, medium and large. Each takes twice as much fuel to fly as the next smallest type. In general small POSeS are fragile enough that they should only be flown in empire or in highly secure space.

Player Owned Starbases have several functions:

Service

Defense  
Deterrence  
Speed Bump

### **Service:**

A Service POS is one whose primary function is research or manufacturing. These are normally small or medium.

### **Defense:**

A Defensive POS is set up to protect something. Everyone's first instinct is to drop as many guns as possible on one of these. I've seen at least half a dozen capships killed by smallish gangs while cynoing into POSes. Stop and think, what am I trying to protect? What size ship is likely to attack what I am trying to protect? Can the weapons on my POS hit the ship types that are likely to attack? Sure a large artillery battery has great alpha, it's not going to be able to hit a HAC bumping a Rorq away from a force field.

The best idea I've seen for protecting a jump in point was deployed on a Red Alliance moon mining POS. RA had literally a ton of Sensor Damps and EWAR supplementing a selection of small and medium guns. Not the most effective against a Dread in siege but nothing was going to be able to get a lock onto their Rorq! This approach can also be taken with several types of medium POS. Remember to put some guns on your POS even if you're packing the thing out with EWAR!

### **Deterrence:**

A Deterrent POS is one that costs more than it's worth to attack. These will normally be packed out with guns, neuts and hardeners. The idea here is for the POS to inflict the maximum amount of loss in time and isk to an attacker.

A couple things can help enhance deterrence. Capship pilots hate hitting hardened POSes. Most POSes have their hardeners in nice neat rows so that any covops pilot can work out what's active. If you anchor 3 of each type of hardener in a jumbled cube, the only way to figure out what is active is from the POS management screen. An adequately hardened POS will have at least 2/2/1/0 hardeners on its 0/0/25/50 resist.

It takes on average ten large short range guns focusing fire to break the tank of a Dreadnaught in siege. As a Dread in siege can neither move nor receive remote repping during the siege cycle, energy neutralizing batteries can be particularly deadly. In general > 2 batteries will have an enhanced deterrence effect.

### **Speedbumps:**

A speedbump POS comes in two types. The first type is a heavily hardened Amarr or Minmater POS. For a minute forget your shield resist percentages. The first hardener you put

on means it takes damage on that resists 25% longer to put the POS into reinforced, the second 20% and the third 12.5%. A triple hardened resist will take 68.75% longer to be put into reinforced. A 40 million shield HP Amarr POS triple hardened will take about 6 dread/hours to go into reinforced.

A proper speedbump will have 3-4 online neuts and several online warp disruptors and a token amount of online guns. This type of speedbump is designed to give you the maximum time to arrange a hotdrop of the enemy fleet and render them in the most disadvantageous situation possible when you do hotdrop.

The second type of speedbump is a Gallente POS designed for efficient repping when it comes out of reinforced. A Gallente POS has only 35,000,000 shields, the lowest of any POS in the game. A Gallente POS has a natural 50% kinetic resists and 25% thermal resist. Unlike hardeners, natural resists do not go offline when a POS is reinforced. Almost all Dreads do at least some damage on either the kinetic or thermal resist. This type of speedbump is designed to have the fastest possible rep time when coming out of reinforced while taking as long as possible to go down.

A word of warning, Gallente POSes are in general horrible. Railguns are PG heavy and the Gallente POS lacks powergrid. Blasters have extreme range issues when fitted with antimatter ammo. Even with the Amarr and Minmatar speedbumps, a more active defense may score one or more capital ship kills. Such speedbumps are generally only recommended if you are facing an enemy in a vastly different timezone rendering it impossible to get gunners to the POS. Or to put it more bluntly, I've never actually seen a speedbump POS used effectively but I hear that it can be done.

### POS Choice

LARGE POSes				
Ranked in Order of Powergrid				
Race	Powergrid	Shields	50% Resist	25% Resist
Amarr	5,000,000	40,000,000	Explosive	Kinetic
Minmatar	4,375,000	45,000,000	EM	Thermal
Gallente	3,750,000	35,000,000	Kinetic	Thermal
Caldari	2,750,000	50,000,000	Thermal	Kinetic

Other than as a speedbump Caldari and Gallente POSes are useless. Both POSes lack powergrid. Railgun batteries are extremely powergrid hungry. Blaster batteries, when loaded with antimatter ammo, can easily be outranged with proper Dread placement.

So now that you have a POS what guns do you want to put on it. Well for starters don't put on a cruise missile battery, each battery does less DPS than a single cruise launcher on a Raven! That said you should almost always put on guns of the type that get bonused by the POS.

### Medium Guns

Name:	Torpedo Battery*
Powergrid:	80,000
Alpha	1125
DPS	62.5
PG Nominalized Alpha	1125
PG Nominalized DPS	62.5
Range:	250+ km
Ammo:	Bane Torp

Torpedo's have the lowest PG requirement so we'll figure nominalized alpha and dps as PowerGrid Requirement / 80,000.

Name:	Medium Artillery Battery
Powergrid:	202,500
Alpha	3383
DPS	190
PG Nominalized Alpha	1353
PG Nominalized DPS	76
Range:	250+ km
Ammo:	Fleet EMP L

Name:	Medium Autocannon Battery
Powergrid:	165,000
Alpha	2175
DPS	490
PG Nominalized Alpha	1055
PG Nominalized DPS	238
Range:	60 km (10 + 50)
Ammo:	Fleet EMP L

Name:	Medium Beam Battery
Powergrid:	225,000
Alpha	1861
DPS	207
PG Nominalized Alpha	661
PG Nominalized DPS	73.5
Range:	250+ km
Ammo:	Amar Navy MFQ

Name:	Medium Pulse Battery*
Powergrid:	157,500
Alpha	2566
DPS	325
PG Nominalized Alpha	1303

PG Nominalized DPS	165
Range:	70km 60+10
Ammo:	Amar Navy MFQ

### Large Guns

Large guns generally can't hit anything smaller than a capship. Large long range guns lack the DPS to kill a Dread before it can exit siege and are not dealt with here.

Name:	Large Autocannon Battery
Powergrid:	270,000
Alpha	4048
DPS	639
PG Nominalized Alpha	1199
PG Nominalized DPS	189
Range:	75km 15 + 60
Ammo:	EMP XL (not faction) <sup>@</sup>

Name:	Large Pulse Battery
Powergrid:	315,00
Alpha	10,820
DPS	922
PG Nominalized Alpha	2747
PG Nominalized DPS	234
Range:	100km 80 + 20
Ammo:	Dark Blood MF XL

### Offline Guns

Modules, including guns, can not be anchored while a POS is in reinforced. Ammo can not be put into offline guns when a POS is in reinforced. All CPU using modules go offline when a POS goes into reinforced (this includes shield hardeners, EWAR modules and energy neut batteries). An offline module also does not use powergrid. Silo's and corp hangers become inaccessible. Ships can be removed from a maintenance array.

You will need two setups for your POS. The first is your online setup with hardeners, EWAR, energy neutralizers and the like. The second is an all gun reinforced setup. All the extra guns you need for reinforced plus a couple extra, should be anchored and offline.

### Tower Setup

What does this mean? Once upon a time, when Armor had a natural 60% EM resist, all proper Deathstar POSes used Autocannon's, the thinking being that you could attack against a number of damage types. What a difference 10% makes. Now you have the choice between make the attacker guess the damage type with a Minmater tower or simply stipulating the damage type in return for 30% more DPS.

## Deathstars

If you're expecting attack from capital ships go Amarr. At 15km optimal Large Autocannons are going to be operating in falloff unless the hostiles do a stupid and park right on top of the things. Being in falloff will drop your AC's DPS around 25% to about 450dps. The worst a Dread pilot can do is fit a T2 EM Hardener, most won't bork their fits by putting on two. On the other hand that same dread pilot is likely to throw on 3 T2 Hards on the other resists + either an EANM II or DCU II for a normal tower. You don't lose much by going Amarr and gain a 100% effective bonus to DPS.

## Rippers

Cynojammer towers and those expecting attacking from Battleships are a different story. If you are doing a known damage type, there is a very high chance that the hostile fleet will fit for it. Add to this that medium autocannons are highly efficient. Like all things in EvE that aren't done every day, there are a number of opinions on how to set up a ripper POS. After we've had cyno jammers in game for a couple of years we'll probably have some idea what the best way is. Off the top of my head the following would probably not result in you making to LOL section of CAOD.

Domination Control Tower (Large)
Cynosural System Jammer
Ballistic Deflection Array * 3
Explosion Dampening Array *3
Heat Dissipation Array * 2
Photon Scattering Array * 1
Domination Medium AutoCannon Battery * 10
Domination Small Artillery Battery * 2
Domination Stasis Webification Battery * 2
Sensor Dampening Battery * <b>63</b>
Shadow Warp Disruption Battery * 2

Even if the other guy bring a 200-300 man fleet the sheer confusion factor that many damps will generate will probably result in a selection to fight within 100km of the tower. (Actually they're likely to get right up kissing the cynojammer meaning that you should deploy your autocannons 10km on either side of the jammer. The remainder can go either under the tower on with the main battery depending on what you think is best.)

If you're alliance is a major sov claiming alliance. Consider having say 3 to 4 accounts that are composed all of gunner alts situated at the jammers in your station systems.

## How to Defend a Tower

First, let your friends and allies know that your tower has been attacked. Either the attack is ongoing, in which case you should be screaming to high heaven on all coms channels or the



tower has been reinforced. Rest assured that the folks that want your tower know exactly when it's coming out.

### **The Initial Attack**

Stront your POS. What time do you want this POS to come out of reinforced? Once the shields get below 51% you can no longer change the stront levels. Take an estimate on when the attack will finish and aim for midway between the acceptable times for the POS to come out. In general coming out later is better than coming out earlier. Be sure you are choosing the correct timezone. If you're a US corp, being attacked by the Goons and all your allies are in EU time, don't set the POS to come out after dinner.

Jet the corp hanger / silos. This is controversial as you may lose the jetted items if you can't pick them up before their cans pop. When your POS gets reinforced the corp hanger arrays and silo's become inaccessible. You can still get ships out of a maintenance array (this is a change that was made after somebody got a capfleet trapped in a capital array).

Start offlining anything that does not add to the tower's defense and start online guns and hardeners. It takes five minutes to online or offline a module.

The first target in a POS attack will normally be either neut batteries or warp disruptors. If your enemy has overwhelming force they may decide simply to go for the tower. You can anchor POS modules from within the forcefield. It will take you 10 minutes to anchor and online a new module. Have a couple extra neut batteries and disruptors in a hauler floating at the POS is never a bad idea. Having them anchored and ready to online is a better idea, but does subject them to loss without use if the POS is attacked in the dead of night.

As a general rule a tower without gunners can not present an effective defense. Call, PM, E-mail, ectra all the gunners in your corp that you know may be available.

### **Coming out of Reinforced**

The first question is whether or not to defend the POS at the POS or on the gate. This will depend on a number of questions such as, does the enemy have a Titan or other way to enter the system besides the gate. Is the system cynojammed? Fighting on gate is dealt with under the fleet command portion of this guide.

#### **Setting up:**

Rep all guns up and arrange to have a corp member online at least two hours before the POS comes out of reinforced to insure that the enemy has not attacked the guns again.

Set up several "intel frigs" and find a corp member willing to fly them. An intel frig is simply a frigate with one or more ship scanners on it. An intel frigs job is to pop outside the shields, scan enemy capships and pass that info along to gunners and fleet command. I've seen

fighters where the first capship to die had 10bil in faction mods, the second had the weakest tank of the group and everything was just downhill from their.

One of the worst places a support ship can be during a POS fight is within the force field. Inside the FF of a POS a ship can neither rep nor be repped. Unless you're passive shield tanking, this is a problem. Have a logistics or carrier cloaked at a midsafe (a safe in line between the POS and a celestial object) to be used as a remote rep warp to point. Move the safe every so often to prevent hostiles from probing it. Alternatively, you can set up such a remote rep at a staging POS elsewhere in system. There is some risk to this as a very large or well organized enemy may bubble the staging POS.

Forming a remote repping ball during a POS defense can be extremely difficult. It is nearly impossible to visually tell where the POS shields end. Moving in and out of the force field can confuse the location of the remote rep point. One of the ballsiest solutions to this I've heard is to strip all the drones off a carrier, 100% insure it then put it into triage mode as a rally point. A carrier in triage at a POS is likely to be the first thing primaryed by a hostile cap fleet. A better solution might be to have a Drake or other high durability ship function as a rally point.

We may all owe our god one death but until a defender is poded out of system, there's no reason they should be out of the fight simply because of the loss of one ship. If possible have carriers deploy a number of "replacement" T1 cruisers into the POS shield when they cyno in.

### **POS Gunners:**

**USE THE POS GUNS TO SHAPE THE BATTLE!** Medium guns can be used to target enemy EWAR. A single POS gunner with a high DPS output at his control is more effective killing hostile fighters than a support fleet trying to figure just which one of a hundred fighters they should primary. POS gunners can be given the names of enemy FC's to primary without revealing to the fleet as a whole that enemy coms have been infiltrated.

If gunners will be attacking hostile caps they should focus fire with any friendly capships. Yes I have seen fights where the caps went after one target and the gunners another.

The bottom line will be the number of POS gunners available. An Amarr POS coming out of reinforced might feature, for example 12 Large Pulse Batteries, 4 Medium Pulse Batteries (for fighter control) and 2 medium beam batteries to engage enemy snipers. Gunners are difference between an ineffective POS that cycles targets all over the place and 12,000 dps on a hostile dread, dead enemy fighters all over the place and enemy EWAR that spends more time in warp than on the field.

### **Drones:**

I've never actually seen any group the discipline to pull this off. I have seen a number of battles where the friendly support fleet was very close to hostile caps, with a hostile sniper fleet maneuvering on the field. Such a situation cries out for energy neutralizing drones to be assigned to a ceptor to go ruin a couple capships day. To employ this in practice, I would

suggest setting out several cans full of neut drones at a rally point and making a carrier available to fit them at the rally point. Five heavy neut drones = 1 heavy energy neutralizer at no cap cost to the fielding ship. Being hit by multiple short cycle energy neutralizing effects is a nightmare for any capship pilot.

## APENDEX A SHIP FITTINGS

### T1 Mega:

<p>[Megathron, sniper T1]          1600mm Reinforced Rolled Tungsten Plates I          1600mm Reinforced Rolled Tungsten Plates I          Damage Control II          Magnetic Field Stabilizer II          Magnetic Field Stabilizer II          Tracking Enhancer II          Tracking Enhancer II</p> <p>Quad LiF Fueled I Booster Rockets          Sensor Booster II, Targeting Range          Sensor Booster II, Targeting Range          Tracking Computer II, Optimal Range</p> <p>425mm Compressed Coil Gun I, Caldari Navy Iron Charge L          425mm Compressed Coil Gun I, Caldari Navy Iron Charge L          425mm Compressed Coil Gun I, Caldari Navy Iron Charge L          425mm Compressed Coil Gun I, Caldari Navy Iron Charge L          425mm Compressed Coil Gun I, Caldari Navy Iron Charge L          425mm Compressed Coil Gun I, Caldari Navy Iron Charge L          425mm Compressed Coil Gun I, Caldari Navy Iron Charge L          425mm Compressed Coil Gun I, Caldari Navy Iron Charge L          Large 'Solace' I Remote Bulwark Reconstruction</p> <p>Trimark Armor Pump I</p>
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One of the best T1 Sniper fits for a mega that I've seen. This ship alphas around 1000 damage at 156km.

### T2 Mega

One of my favorite T2 sniper setups. This requires a 1% powergrid implant to

<p>[Megathron, Long Range Mega]          Trimark Armor Pump I          1600mm Reinforced Rolled Tungsten Plates I          1600mm Reinforced Rolled Tungsten Plates I          Adaptive Nano Plating II          Adaptive Nano Plating II          Damage Control II          Fourier Transform I Tracking Program          Magnetic Field Stabilizer II</p> <p>Quad LiF Fueled I Booster Rockets          F-90 Positional Sensor Subroutines, Targeting Range          F-90 Positional Sensor Subroutines, Targeting Range          Tracking Computer II, Optimal Range</p> <p>425mm Railgun II, Spike L          425mm Railgun II, Spike L          425mm Railgun II, Spike L          425mm Railgun II, Spike L          425mm Railgun II, Spike L          425mm Railgun II, Spike L          425mm Railgun II, Spike L          Large 'Solace' I Remote Bulwark Reconstruction</p> <p>[empty rig slot]          [empty rig slot]          [empty rig slot]</p>
---

gitt. This setup has a 165km optimal with 1500 or more damage alpha and uses no rigs to get there. This gives some idea of the possibility normally overlooked modules have in very specialized circumstances. Adaptive Nano Plating II require no CPU and one Powergrid, perfect for a mega running short on CPU. A Fourier tracking link provides less of a bonus then the 15 CPU Tracking Enhancer II, but at a cost of only 9 CPU.\*

### **Double Doomsday Proof Mega**

[Megathron, Rigged Long Range Mega] 1600mm Reinforced Rolled Tungsten Plates I 1600mm Reinforced Rolled Tungsten Plates I Adaptive Nano Plating II Adaptive Nano Plating II Damage Control II Fourier Transform I Tracking Program Magnetic Field Stabilizer II  Quad LiF Fueled I Booster Rockets F-90 Positional Sensor Subroutines, Targeting Range F-90 Positional Sensor Subroutines, Targeting Range Tracking Computer II, Optimal Range  425mm Railgun II, Spike L 425mm Railgun II, Spike L 425mm Railgun II, Spike L 425mm Railgun II, Spike L 425mm Railgun II, Spike L 425mm Railgun II, Spike L 425mm Railgun II, Spike L 425mm Railgun II, Spike L Large 'Solace' I Remote Bulwark Reconstruction  Anti-EM Pump I Anti-Thermic Pump I Trimark Armor Pump I
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Double Doomsday Blasts are becoming more common. Tanking a double doomsday can be done, if you have some information on what your are facing. The above mega can survive either a double Amarr or an Amarr and Gallente Doomsday blast.

### **Throwaway Blackbirds**

[Blackbird, Multispec ] Compulsive Signal Distortion Amplifier I Compulsive Signal Distortion Amplifier I  Large Capacitor Battery I 10MN MicroWarpdrive I Compulsive Multispectral ECM I Compulsive Multispectral ECM I Compulsive Multispectral ECM I Compulsive Multispectral ECM I  Heavy Missile Launcher I, Thunderbolt Heavy Missile
--

Heavy Missile Launcher I, Thunderbolt Heavy Missile  
[empty high slot]  
[empty high slot]  
  
[empty rig slot]  
[empty rig slot]  
[empty rig slot]

A very nice ship for empire wars. This version of the blackbird can reliably jam out one enemy BS.

[Blackbird, Racial Jammers]  
Compulsive Signal Distortion Amplifier I  
Compulsive Signal Distortion Amplifier I  
  
Large Capacitor Battery I  
10MN MicroWarpdrive I  
Induced Ion Field ECM I  
Induced Ion Field ECM I  
Induced Ion Field ECM I  
Induced Ion Field ECM I  
  
Heavy Missile Launcher I, Thunderbolt Heavy Missile  
Heavy Missile Launcher I, Thunderbolt Heavy Missile  
[empty high slot]  
[empty high slot]  
  
[empty rig slot]  
[empty rig slot]  
[empty rig slot]

Blackbirds with various racial jammers are great ships to kick out of a carrier at a POS to use as replacements when people loose their main ship.

## Caracal

[Caracal, Siege Ship]  
400mm Reinforced Rolled Tungsten Plates I  
Damage Control I  
  
10MN MicroWarpdrive I  
F-392 Baker Nunn Targeting Scrambler, Optimal Range Disruption  
F-392 Baker Nunn Targeting Scrambler, Optimal Range Disruption  
F-392 Baker Nunn Targeting Scrambler, Optimal Range Disruption  
F-392 Baker Nunn Targeting Scrambler, Optimal Range Disruption  
  
Heavy Missile Launcher I, Scourge Heavy Missile  
Heavy Missile Launcher I, Scourge Heavy Missile  
Heavy Missile Launcher I, Scourge Heavy Missile  
Heavy Missile Launcher I, Scourge Heavy Missile  
Heavy Missile Launcher I, Scourge Heavy Missile  
  
[empty rig slot]  
[empty rig slot]  
[empty rig slot]

A throwaway ships designed to bring some both alpha and tracking disruptor to a gate defense.

[Caracal, Tanked Caracal] 1600mm Reinforced Rolled Tungsten Plates I Damage Control II  10MN MicroWarpdrive I F-392 Baker Nunn Targeting Scrambler, Optimal Range Disruption F-392 Baker Nunn Targeting Scrambler, Optimal Range Disruption F-392 Baker Nunn Targeting Scrambler, Optimal Range Disruption F-392 Baker Nunn Targeting Scrambler, Optimal Range Disruption  [empty high slot] [empty high slot] [empty high slot] [empty high slot] [empty high slot]  [empty rig slot] [empty rig slot] [empty rig slot]
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Or you could loose the launchers and put on some tank.

**Vexor**

[Vexor, Throwaway] 1600mm Reinforced Rolled Tungsten Plates I Damage Control I Energized Adaptive Nano Membrane I Energized Adaptive Nano Membrane I  10MN MicroWarpdrive I Stasis Webifier I Warp Disruptor I  Small Remote Armor Repair System I Light Neutron Blaster I, Antimatter Charge S Light Neutron Blaster I, Antimatter Charge S Light Neutron Blaster I, Antimatter Charge S Light Neutron Blaster I, Antimatter Charge S  [empty rig slot] [empty rig slot] [empty rig slot]  Ogre I x2 Hammerhead I x2 Hobgoblin I x1
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Vexors are good PvP trainers for empire or lowsec based corp. They're cheap, can be tanked to take some time to die and drone are relatively simple for new PvP pilots to use. These ships can also be quickly upgraded by adding T2 drones.

## Moros

[Moros, Onerep]  
Armor EM Hardener II  
Amarr Navy Energized Adaptive Nano Membrane  
Armor Thermic Hardener II  
Armor Kinetic Hardener II  
Capital Armor Repairer I  
Armor Explosive Hardener II  
Damage Control II

Sensor Booster II, Scan Resolution  
Cap Recharger II  
Cap Recharger II  
Cap Recharger II  
Cap Recharger II

Dual 1000mm Railgun I, Antimatter Charge XL  
Dual 1000mm Railgun I, Antimatter Charge XL  
Dual 1000mm Railgun I, Antimatter Charge XL  
Siege Module I

Capacitor Control Circuit I  
Capacitor Control Circuit I  
Capacitor Control Circuit I

Warrior I x5  
Ogre II x5  
Bouncer II x5  
Praetor EV-900 x5  
Valkyrie II x5  
Vespa EC-600 x5

A single rep Dread setup.

\* A sentry drone will only shoot to a maximum of your drone control range, regardless of its rated optimal and falloff ranges.

\* A properly tanked capship will receive about 1000rps.

# As per <http://www.thehumblecrew.org/tools/targeting.pl> assuming locktime skills are maxed.

\* Torpedo Batteries were last examined by CCP two major missile nerfs ago. Putting missiles on a POS is not recommended.

\* Before you get too excited, remember that the Autocannon battery is 10 + 50, meaning some damage out to 110km. By contrast the pulse battery is 60+10 i.e. damage dies off at 80km. Before you ask, no I don't have a clue what happens if you range tracking disrupt a POS Battery.

@ At 30,000 isk/round you are not going to be loading faction into autocannon batteries.

\* A Tracking Enhancer II provides a 15% optimal range bonus and a 9.5% tracking bonus. A scripted Tracking Computer II provides only a 15% optimal range bonus.