



ACS Material – Updated 12/29/2009

Commanding for Dummies

Introduction

These are the basics: what you absolutely need to know to barely function in the command seat. We will attempt to cover all of the bases here, including con placement, tech purchases, team organizing and finishing the game. This article doesn't have everything you need to know (that's why ACS is a 9 week course), but it will get you started.

The Stack

Many games are won in the lobby, before the game starts. Don't try to command against someone with a vastly superior reputation than yourself. Ask for a commander of equivalent skill, or hand over command to someone else. You'll learn the other factions later, but for now, pick a strong opening faction (IC, Dreg, Rix, etc) and don't allow whomever has game control to stack the settings towards a comeback faction with lower costs, like Bios.

Passive vs Assertive Commanding

Weedman describes this best

QUOTE

The "Passive" commander. This is the commander who HOPES his players will somehow pull together as a team and do what he wants and he or she will say nothing all game. Nothing. When it comes down to it, Allegiance is a team game. A team can mercilessly negate skill factors when the single uber whore with uber whore tech is faced with 10 so-so skilled people in fighters. Get my drift? Yes the 10 will probably lose some of their pilots to the uber whore, but they should not ever lose once in the skirmish. The uber whore will run. Or be podded.

The "Assertive" commander. This is the commander who COMMANDS. Informs, communicates, advises the team on the next move. What will happen.. if you are lucky.. 50% of the team will have actually understood your intentions. 25% will carry out your orders. The other 25% will ignore them. Even though they didn't do what you asked, the other 25% may kill a Miner, or a Con. And the 50% who did not even respond will do what they want to do and you cannot expect anything from them. Fear not however because the same can be said of the opponent.

The Standard Opening

Lykourgos outlines the standard opening for most games

QUOTE

With your opening cash buy a miner, op, tp, and ref, in that order of priority. Buy a third miner ASAP. Buy a fourth miner when you can. 3 miners makes an economy but odds are very good that you're losing one, and a four miner

economy is better anyway. Also buy enh miners sometime soonish, or enh cons if you're going to be pushing bases. Or both.

Place your op con two sectors away from your garr. Make sure to get it in the MIDDLE of a sector, 3k away from the enemy aleph but not more than 5k. Place your tp in your home, near the GREEN door of your garr. Place your ref in the sector between your garr and op, as close to the he3 rocks as possible. As your miners dock at your garr, send them to the ref sector. NEVER EVER BUILD A REF BY AN ENEMY BASE. Always call for D on cons.

That last point is important. There is always a chance that both commanders sent their opening outpost to the same sector. You want your opening outpost to live, and your opponent's opening outpost to die. The best way to accomplish this is to send a lot of defense with your constructor, and ask someone to scout a couple of sectors ahead of the constructor's destination.

Understanding Garrison Tech

Garrison tech IS NOT a techpath, and unless you're BIOS, you can't afford most Garrison tech at the beginning of the game. Nevertheless, it is the only tech tree available to you at the beginning of the game, and there are a few useful items that you could buy. Enhanced miners and constructors are always helpful, if you can afford them, but don't wreck your economy trying to get both. Many commanders will put off purchasing their initial refinery, and instead buy enhanced cons to aid expansion. Just make sure that it finishes researching before the outpost is done preparing. Enhanced miners are a good purchase too, but they can wait a few minutes. If the enemy isn't very aggressive with your miners, you can skip enhanced miners entirely.

The other Garrison tech goodies (gunships, adv/hvy scouts, faction-specific whore ships) aren't available until you upgrade your Garrison. You will not be able to afford this purchase for a while, so do not bother trying. In most cases, you want to wait until you have advanced tech before upgrading your Garrison. There are some exceptions, and we'll discuss them throughout the session.

Bombers are a very popular and misunderstood ship that is available without a Garrison upgrade. Many commanders, not understanding what they are doing, buy bombers at inappropriate times and cripple their team. Accordingly, it would be worthwhile to pause for a second and discuss bombing in detail.

Bombing

The problem with bombers is that they cost as much as a techbase, tie up most of your team, and yield uneven results. Many commanders press the "Buy Bombers" button at the first sign of trouble, only to find themselves out teched and out expanded BECAUSE they spent their early money on bombers. There are some good times to buy bombers, but don't bother the rest of the time.

Lykourgos explains

QUOTE

Buy bombers only under the following circumstances:

1. You are BIOS or TF [maybe Belters].
2. The enemy has gone tac.
3. Your opening ops have planted in the same sectors [or not. Consider skipping bombers, whoring enemy miners and expanding with the bomber money].
4. You have \$#@!ed up, are desperate, and they don't have adv tech yet, so you're going to try to bomb their techbase.
5. You need to get SBs.
6. You know what you are doing, have planned a bombing game, and are getting adv/hvy scouts, cm3 (vs tac or sup), hvy bombers, ac3, ab3/xrm2, med shield 3, sm shield 3, tp2

So, now what?

Your initial outpost built and your miners are happily mining in your refinery sector. What do you do? At this stage, you have to balance 3 priorities.

1. For most factions, you want to buy a 2nd outpost/teleport and claim more of the map so you can continue to mine.
2. You also want to build a forward base that will impede enemy expansion and mining.
3. You also need a techbase.

Money is scarce, so it is important to try to combine these goals. Attempt to build your 2nd outpost/teleport in a place (two sectors from home) that will accomplish goals 1 and 2. As that con is preparing, dump all of the remaining money into a techbase (some people reverse this, buying the techbase first and additional op/tele after).

Which tech should you buy? The best place to look is in your refinery sector, but you have to work backwards. At the beginning of the game, look for good tech rock in the sectors adjacent to your home. What's a good tech rock? It is one that is not easily accessible from alephs that the enemy may control. Find a good tech rock, and send your initial outpost forward to protect that sector. Because the sector is protected, that's where you want to send your refinery, and that's where your techbase should probably go.

Understanding the techpaths

Now that your techbase is up, what should you buy?

Supremacy

Lykourgos will buy**

Enh fig, Ship Hull, Dumb2, Gat 2, Missile Dmg 1

Weed Explains

QUOTE

Sup. Hull. Do it. Always. If your opponent is Expansion you better have a plan. If that plan involves Bombers, see above. If it involves Galvs, by all means, get it on. But please, please do not make your men fight with Gat 1. You will lose. Going Sup versus Exp is a losing proposition IF you are not more aggressive than Exp team. You can win by killing what matters. Miners. Cons. Save your own Miners. Save your own Cons. Do that, you may well be able to Galv and 2nd Tech the Exp team to win.

Expansion

Lykourgos will buy**

Interceptor, He3 Yield, PW Damage, Mini 2

Weed Explains

When he wrote this, Weed was thinking of how to play against Tac with Exp or Sup, but the principles below apply to playing exp in general

QUOTE

Your opponent is Tac on a relatively normal map. Push a Constructor. Do it. Make your team defend it. Push that Con and be an ass. You can devastate any Tac with a base in their Tac sector and alot of hate. This is an aggressive and smart tactic. Waiting too long versus Tac is like feeding the Crocodile who sleeps in your bed. He will eventually taste your blood... Haha! Bombers up. Bombers go. Hopefully you have people camping their Tac door. Often called SPAWN CAMPING, I call it TACTICS. This will work better in the early game. It will be much more difficult and much more stressful if you wait. Do a Con push early.

Tactical

Lykourgos will buy**

Stealth Fighter, Hunter 2, Util 2, Sig 2, Ship Energy 1

Weed Explains

QUOTE

I hate Tac. And I love it. I only love it on huge maps. UTL2. Always. Hunter 1 is acceptable for taking Miner shields down, they will not miss. UTL2, must. Just buy it. It's an investment in actually killing a Miner. That is what SFs do. BUT if you still only have Hunter 1 after 10-15 minutes of Tac, kill your commander

immediately. Cut his dick off. Sig 2 is valuable. Ship Energy is valuable. EW Range is valuable. Ship Shield, not so much.

Shipyard

Don't. Not right now. Maybe later.

****Please note that all of Lykourgos's purchases assume that the team doesn't find the tech in the field, and that the enemy isn't the same techpath. If you see gat 2 floating in a sector, send someone to grab it instead of buying it. If both teams go sup, hold off on buying Gat 2 and try to steal it (especially if you are already stopping enemy runs).**

Advanced tech

Once your enhanced tech is finished, begin saving cash for your base upgrade. Many other purchases will tempt you, but you should be socking away most of your income to pay for the adv base. Once you have it, buy the advanced versions of all of the enhanced ships/weapons/gas you bought.

Be careful if the enemy is the same techpath as you. If you are both exp, buying mini 3 for your team will hurt you as much as it will help, so think ahead. If you don't *need* to buy galvs or gat 3 (for example), don't. Let the enemy buy it for you or make due with the enhanced weapons.

Running your economy

The first thing we discuss in ACS is running your economy, so we don't need to go too deep here. A few principles should guide how you run your economy. Stick to these for now, and we'll flesh them out later

1. Miners are stupid and lazy. Check in on them every 45 seconds.
2. Think of your miners when you claim the map. Try to claim sectors that will reduce the amount of time the miners spend backtracking. This is sometimes difficult to do, but if you can do it, it will speed up your cashflow.
3. Keep an eye on the enemy's probable routes to your miners. If you respond to enemy raiders when they are 1 sector away, your miners will have a higher chance of surviving. Save your miners before they are in peril.

Team Priorities and Communication

By now, you should be sufficiently familiar with the game to understand what needs to be done at various points in the game. Still, it is helpful to remind your pilots as to what needs to be done. A good commander understands the flow of the game. A great commander communicates that understanding to his/her team.

Early game

Team priorities during a game's opening stages include scouting the map, basic probing, and constructor defense/offense. As soon as you decide where your initial constructor should go, tell your team. When the constructor is 60 seconds from building, you should see several ships waiting for the constructor to launch

or flying ahead of it. If you don't, tell your team. Call people out and put them on con d. Get someone in the enemy's home so you can see where their constructors are going. Eyeing them early increases your chance of killing their opening cons.

As the initial constructors plant and the map takes shape, inform your team as to what needs probed, and where the enemy is mining. You'll probably be building a 2nd op and/or your techbase, so inform your team where those constructors are going, and once again call for d. Call people out if need be.

Miner hunting/protecting is also very important at this point in the game. Both teams' economies are very fragile, supported by one (maybe two) miners. If a team loses a full miner, it will pose a significant setback to their economy, expansion, and tech. Send a couple of expert pilots to go after enemy miners, and keep an eye on your own. Against an unorganized/non-existent defense, a handful of pilots can win the game by killing a team's initial miners. Even if they don't kill a miner, they can stall a team's economy for several minutes by harassing miners.

Your enemy will try to do this to you. Assign people to miner d (two is usually sufficient against casual miner hunters). Likewise, assign people to do it to their enemy. Economics is paramount in Allegiance. Ignore this truth, and you will be sorry.

Mid game

Once your techbase is up and your enhanced tech is researching, the game revolves around impeding the enemy's economy and watching enemy movements via probes. Scan the minimap for dropping He levels, and send your pilots to those sectors. Assure that all of your border sectors and the enemy's home are adequately probed to spot enemy miners, constructors, bombers, and enemy miner killers. Constantly scan those sectors in f3. The size of your miner d should be in proportion to the enemy's aggressiveness and the miners' proximity to enemy bases. There should be one or two ships with your miners at all times, however. Expect it, and assign people if need be.

As your tech is researching, tell your team about major purchases, finds, and when important tech is about to complete. It will help them decide whether they should launch and raise a ruckus, or stay in base for 45 seconds and wait for gat 2. Again, communication is essential the midgame. Don't let 15 pilots to 8 different things. Make them do a couple of things, by telling them which is which.

Late Game

Once you get sufficient endgame tech, your priorities shift. Miners are still important, but not necessary. Don't keep half of your team on miner d. Instead, focus on probing to eye enemy attacks, dep probing, and organizing your team into 1-3 offensive runs. Don't trust your team to organize themselves. Give the base

killing ships to a experienced folks and assign them targets. Call people out by name and assign them to the run. If you are doing multiple runs (or counter runs), assist in synchronizing your pilots. Tell them when to go and when to camp. Don't rely on them to figure it out for themselves. Get involved.

Constantly scan border sectors are evidence of enemy deprobng (or your team's apathy). Keep sectors probed. Information means the difference between a total victory, a Pyrrhic victory (you kill their garr, but lose your techbase), and failure. Get those probes out. If there is one really important sector, get a shieldless scout in there to spot enemy activity.

Booting

Spidey explains booting.

QUOTE

Booting is something that can be done to increase the morale of your team or protect your lofty station as a decent yet fair commander. In my experience the following is considered good booting time:

- Player is actively working against the team
 - Player has a very bad attitude(not the motivational anger kind) which is bad for morale
 - Player stops donating
 - Player is flying in circles or afk and can be replaced with an active player
 - Player backseat commands and sends conflicting messages
- In almost all cases, you want to warn before you boot, especially if the player is a newbie.

Ending the game

If you are sup, your endgame will probably be based around heavy bombers, SRM or XRM AB missiles, and TP2. This tech relies on Adv Sup and Starbase. Galvs are usually not an endgame strategy for sup, but will buy you time and slow the enemy's endgame while you buy your endgame tech.

If you are tac, your endgame revolves around stealth bombers. You need Adv Tac and bombers for SBS. Cloak 3 is very helpful, as is heavy cloak.

If you are exp, your htts will end your game. You need Adv Exp, troop transport, heavy troop transport, and srm emp. Sig upgrades are very very helpful.

Despite your techpath, a successful endgame relies on a mix of teamwork, brute force, and distracting the enemy. Multiple runs, con pushes and/or getting every single pilot in the enemy's tech sector will do the trick.

Credits: Weed, Lyko, Clay, Spidey

Week One – HiHigher



This is the most common map played on Allegiance, so there are a number of good strategies that you can use.

Shiz writes:

Capturing the middle

Begin with putting your outpost in 2 or 4 and your tp in the opposite sector (4 or 2, respectively). Plant your ref behind the op (1 or 5) and begin building a loop from your home, to the middle sector (3) and back. This loop will provide plenty of money for adv tech, and keeps your miners from having to backtrack. Many clueless comms (I don't understand) place their refs in 10 or 6. I cannot understand how this benefits them, as it exposes miners and increases their travel distance to their next drop off point.

If you do not have many teammates, you may not want to split your team. I usually send my op to the middle sector (2 or 4) that protects my tech rock (1 or 5), so I can build my tech in a safe place. If the enemy commander does not then take the opposing middle, be quick and get it right away. If you can seal the middle you will be at a great advantage.

This is the most common strat used on this map, and to counter it simple take one of the middle sectors (2 or 4), disrupting the miner's

path. Planting an op high or low will also give you easy access to their miners.

Bastard maneuver

I learned this one from watching Bastard do it to me. Whether or not he invented it, I don't really care. Send your op to 2 or 4. If his op is heading to the opposing mid sector, you've almost sealed the deal already. Now that you've sent your op midlow (for example), send your tp high (or visa versa). Once the tp goes up, quickly buy another op and push it "behind" their outpost sector (11 or 12 if you are yellow; 1 or 5 if you are blue). You've backdoored his op, sealed the map, disrupted his econ and generally made life painful for the enemy comm. This method is less applicable if the enemy's op goes to the same sector as yours, but you can adapt the principle to fit many different situations. Note that because of ripping miners, this approach is less effective vs ic.

Anguriel writes:

Extended Middle

The 10/6 mining strategy is as follows -- 1 and 5 are safer sectors to mine, so early game you expose your miners while you can and pull them back once tech is up. This gives you one extra sector mined out before you complete the middle loop. As an example: OP to 2 or 11, first ref to 10. If you intend to push to 11, TP to 2 or 3 with OP con so you don't need to split Con D, giving you one or two extra for miner D. Second OP goes from TP to 4, second TP plants at home, second Ref goes into 1 or 2 (2 is a special strategy that only works with specific settings -- if you mine a sector out in a single pass, send your ref to 2 and you can mine 1 in passing and dock your miners at the ref in 2, then mine 2 and dock there, then be ready to head to 3).

After that, you usually need to react to what the other team has done, so I can't spell out exactly what you intend to do. I like to try to take 9 or 7 next, usually with TP + second tech base so I have a forward tech for them to futz on while I build up my primary and mine smoothly.

Taking Top or Bottom

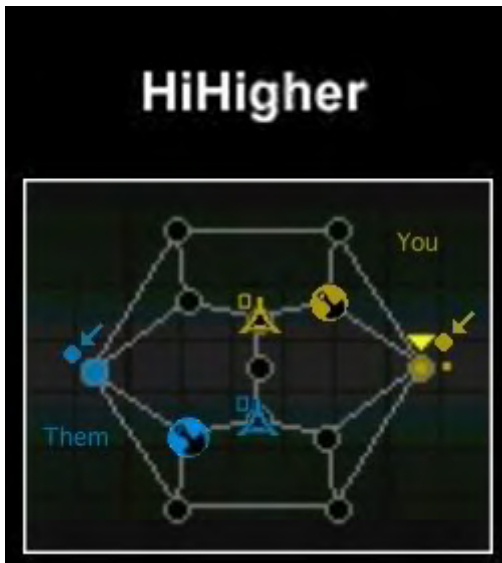
Taking the middle is nice, but you can leave your flanks very exposed

while doing it (to something like this or the Bastard maneuver). This sort of strategy is only going to work with a strong starting faction. Dreg, Early Exp or Sup Giga, Rix, IC. Belts, Bios, Other Giga, and GT just aren't likely to manage it. First OP high or low - you want 9 or 7 first. I recommend a home TP for this one, since home TPs are usually very useful. Let's assume you went for 9. The rest of this strategy requires knowledge of what the enemy has done...

If they went for 2 or 1, you are now placed perfectly to kill their miners in their home and 11. Buy your 2nd tp immediately after your home tp builds (your first op probably hasn't built yet). Put your 2nd tp in 4 or 7, depending on what you can reach safely. If you can plant at 7, OP to 12 from it (timing wise, this should be almost perfect unless 6 is very large or 10 is very small). They now have no safe sectors to mine. Neither do you, but that's a sacrifice you need to make and anticipate until you can claim low. Mine 10, then send one miner to 9 to distract them (and maybe bring in a little cash), moving the other miners through your home to 6. If they fail to claim 4 when you have 12, you can go for 4 or 3 with an OP and mine 5 and then 4.

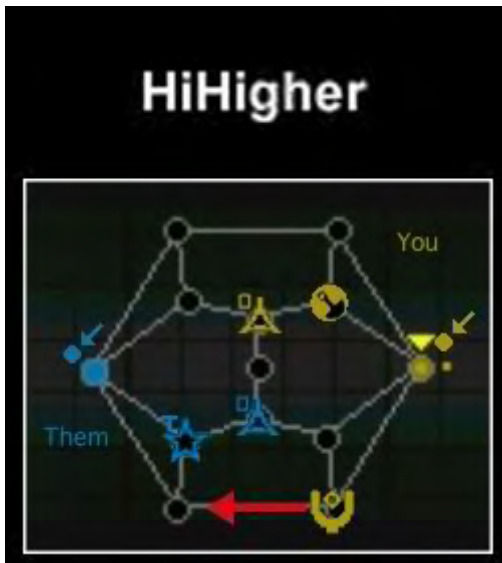
Back to only having 9... If they went for 4, 5, or 6, you finish claiming high. Second TP to 2, OP to 11 and then OP to 3 or (if at all possible) 4. Caltrop off your front sectors when your miners are forward, Caltrop off 3->4 or 2->3 when your miners come back to 2. Build up your tech and expand anywhere they fail to claim, or get ready to push into their sectors.

Weedman writes:



Here is a common scenario. You have taken middle high and your opponent took middle low. What do you do next? Well, Allegiance is a game of economics: miners are the key to success. Take away your opponents miners, and you should win. So knowing that, look at where he plans to mine.

He put his refinery behind his outpost, which is always a good, safe position. After the refinery sector is mined out, some of his miners will then go to his outpost to mine. If you are quick enough, you can push a teleport or outpost low next to his refinery, and totally disrupt miners in that sector. Better yet, build your second teleport low and rip an outpost con in and build it in his refinery sector (Bastard manuver) thus cutting his miners off from his outpost. Now your opponent must either push some miners to his outpost, or try to remote mine sectors high or middle high. This slows down his economy.



This too is a common scenario. You discovered your opponent bought a tactical laboratory. It is behind his first outpost, which is again a safe position. You will have a limited time to deal with it before your miners are dead, and stealth bombers take the map from you.

My advice is always, always just bomb the thing. I used to try to out-tech the other team in this situation. I would expand, and then keep some players on my miners, and try to get Heavy Troop Transports, or Advanced Fighters with Galvs to deal with the situation. What usually happens is that your miner defense gets lax. They respond to defend a base from a bomber or something, and the next thing you know, all of your miners are dead because your miner defense left them (or you did not keep the miners in base).

My advice is push a constructor adjacent to the tac, and blow it right the hell up. In this picture, the commander sent an escorted teleport constructor low and ordered his team multiple times to bomb the tac. Now you can try this with any tech path your opponent went, but I feel it's only absolutely necessary when you discover a tac. Player skills obviously can sway the favor to a given team, but technology also plays a role. An average player with a Hunter 3 Advanced Stealth Fighter will usually beat a very skilled player in a gat2/dumb2 Enhanced Fighter. You want to kill the tac as soon as possible before the enemy destroys your miners and gains the technological edge.

Allegiance is about money, and getting your side the tech needed to finish the job. No miners, no tech, no wins.

Your economy

Managing your economy is one of the most important functions for a commander. Teams win or lose by the success of their economy. As commander, it is important that you manage your team and your economy as efficiently as possible.

After you are done with this article, you should be able to plan your economy, determine where to send your initial constructors, manage your miners, structure your miner defense, manage your cash flow, and understand how to enhance your economy. All of these concepts will collectively give you a basic sense of how to run your economy.

Like any investor, you want your investments to be working at full efficiency to make the most money. Your mining operations are no different. Keeping the miners working at all times will maintain a steady stream of income, which you can invest to keep territorial and technological edges over your opponent. Great commanders that plan their economy one or two steps ahead, rather than as the need arises. In order to do this, you need to control enough sectors so that your miners have plenty of safe sectors to mine. Safe sectors are sectors that the enemy cannot penetrate easily.

The economy plays into the decisions you make with each constructor you build. Ideally, your miners will move from one sector to the next with each sector containing the maximum amount of He3 to mine. This concept is what we call the "mining chain". Keeping the miners moving toward untapped He3 is essential to getting advanced tech up quickly.

I. Constructor Placement

From the perspective of managing your economy, constructor placement is the means by which you form "mining chain", so that your miners run efficiently. If your miner have to travel between multiple sectors to unload and resume mining, then your miners are constantly working, but aren't working efficiently. Mining in this fashion presents two problems:

- more time elapses between incoming miner loads
- you have full miners running around exposed to attack.

If you set up your base placements so that the miners are able to mine and unload in the same or adjacent sectors, your cash will come in quicker allowing you maintain your technological edge.

One quick note to remember: you can reduce miner transit times by building your refineries equidistant from several He3 rocks. While this may seem trivial, it gives you two benefits:

- It takes miners less time to go from the rock they just mined to offload at the refinery.
- A refinery acts as a giant probe.

If it is near the center of the sector (which also generally happens to be where the He3 rocks are located), then a low-sig enemy has to travel a greater distance to avoid the refinery's sensors.

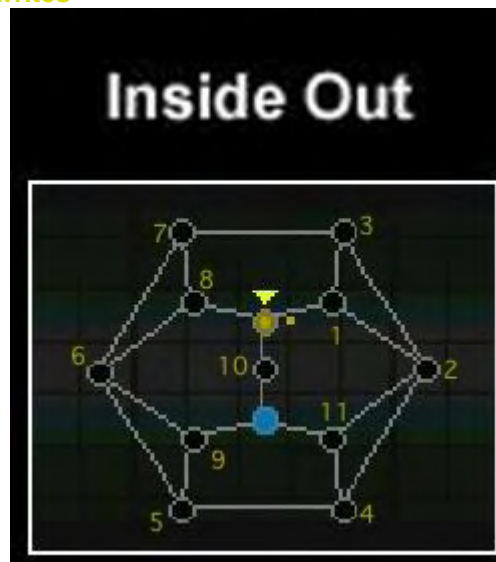
Avoid building 'Naked refineries'. Naked refineries are built in sectors that are not covered by an outpost or teleport in the sector forward from it. If you don't control the sector forward from your refinery, your enemy most likely will work to take that sector (if they haven't already). Forcing the enemy to travel across a hostile sector to get to your miners makes miner defense much easier.

The Mining Chain

When your miners finish mining your home, they should only have to travel one sector to begin mining again. They should be able to offload in either the same sector, or one sector further forward where they will continue mining. You have a mining chain when you have a string of bases that allow miners to go from sector to sector, always with something to mine and a place to offload.

Constructor placement is the start of forming a mining chain. Using the map Inside Out, we have a couple of examples of how you could potentially arrange your economy:

One example -- Shizoku writes



The preceding picture is of a commonly used map in allegiance, Inside Out for two teams.

First of all, the first place you will mine is of course your home; build a ref, op and tp. The op should go to either 2 or 6 and the ref should be built in 1 (or 8). Your

miners will be heading then to sector 1. While they busily mine away, purchase a tech base and another refinery. Place the tech base somewhere, and the ref in 3. Now your miners should be mining in 2. If the enemy can easily access 2 (perhaps from a tp in 11), build mines/drones to cover the aleph and order specific people to defend. Once you have enough money build an op in 6 (perhaps after successfully bombing their outpost) and a ref in 7, the miners should be out of harms way and mining in 3. You should easily have adv tech up, and may be contemplating another tech (depending on settings). When the miners mine in 6, build a ref in 8 so they will have a nice place to mine after. While they are mining in 6, you may need to put up mines and drones to slow down enemy miner hunters. The miners will then go to 8, and you may have enough money to get a secondary tech or consider expanding to their back sectors. After your miners finish mining 8, the He in the home sector will have regenerated enough for your miners to return to mine there. If it's safe, you may want to send a op/ref to 10. That's usually a dangerous move though. it is safer to send them on the round trip of 1-7 again.

This is the **ideal** economy, and it is how DrS ran his miners. Miners were always mining and bringing in cash for tech. With a good team, you should be able set this up. Expect resistance though: the enemy will try to expand into your backsectors (7 and 3) early, making it harder for you to mine.

Another example -- mcwarren4 writes:

Your first miner (#1) will launch and mine at home immediately. You build a miner, outpost, teleport, and refinery. Let's assume the tech rocks you want are on the right side of the map. You send miner #2, the outpost, the tele, and the ref to the right. Order miner #2 to mine in 1, the ref to build in 1, and send the outpost and tele to 2. Now you can make a choice: push the outpost to 11 or (if it is safe) push it around the back side of the enemy to 5. The tele can build in 2 (where you will send your tech base). If you send the outpost to 11 you've sealed off 2 for safe mining for the time being, if you send the outpost to 5 you've got 2 and 4 as semi-safe mining sectors, but you've also taken away 5, 6, and 9 as safe mining sectors for the enemy. More on this in the Inside Out map week. Let's assume that you send the outpost to 11 though.

By the time your outpost builds, miner #1 should be close to finishing mining your 2nd home rock. Miner #2 will be nearly done with its first rock and ready to unload at the ref. This should give you the cash to finish your tech base and get a 3rd miner up. Miner #1 will move to sector 1 to start mining there. When miner #3 launches, it will pick up the last he3 rock in sector 1. Miners #1 and #2 will probably finish their rocks and unload before #3, moving on to sector 2. With these two loads you can get your 4th miner up and get another refinery and start your tech investments.

The next ref that you buy will either have to build in 2 or you can send it to 3 (if that sector is still safe to mine). If the enemy hasn't put a base in 3, they are likely to have something in sector 7. Putting a caltrop and tower up on 3/7 is probably a

good investment. If they built in 3 then get the calthrop and tower up on 2/3. Either way, you will need someone to defend the miners. If you are able to put the ref in 3, miner #4 should be sent there. After miners #1, #2, and #3 fill their holds with He3, they will offload in sector 3 and continue mining there. If you are forced to build the ref in sector 2, then buy another calthrop and tower and put it on the enemy's home aleph. Your miners will need to move to the outpost in sector 11 to continue mining. Either way, you should have mined plenty of He3 to get the tech base upgraded with cash to spare. By using the tech, you can push the enemy back and start your end-game strategy.

The problem with this strategy is that your miners can get scattered if you aren't paying attention. They will naturally want to go to 11 to offload. I've been lost track of the miners many times, and next thing I know they end up to the enemy home (and under attack). I often find that having a veteran pilot micromanage my miners (keeping them safe) is a good way to manage the game.

Summary

In both examples, the miners always have a place to go once they finish mining a sector. That is the mining chain at its best! Always make sure that you've prepared the next logical sector for your miners to work. If you can do this, you will simplify running your economy.

II. Miner Management

Introduction

Miner management is one of the more important concepts in running an efficient economy. It is partly done by placing refineries and outposts in sectors, but there is more to it than that. Allowing the miners to "run themselves" will result in disaster, so you have to always keep an eye on them! It seems that when given the opportunity to make a choice, a miner will almost always make a bad choice and place itself in harm's way. In reality, there is a decision tree that is programmed into the artificial intelligence (miner AI). The problem is the hierarchy of importance within the miner AI's doesn't always align with what you as the commander would see as the next logical step (or realities of the current game). A good commander remains aware of the miners' activity and orders them to safe sectors when they finish mining their current sector.

Inside the miner's mind

Like bees to honey, a miner will go where it can safely mine He3. Ever hear the phrase "Build it and they will come"? Miners are attracted to sectors where there is a friendly base and enough He3 to fill their hold. They will go there, whether you want them to or not. Sometimes you find yourself saying, "**STUPID MINER AI!**" You can avoid this by understanding what your miners are "thinking" and how to control their behavior.

Miners really have only three basic needs. They want to mine, they want to

offload what they've mined, and (most importantly) they want to live. Understanding these three needs is all it takes to effectively control your miners.

Need to mine

Miners are always searching the map for He3 in friendly sectors. In order to get them to mine, three conditions must be met:

1. There must be enough He3 present in a single asteroid to fill half of their capacity
2. There must be a friendly base in that sector AND there must be friendly bases in all sectors between where the miner is and where it wants to go
3. There must be EITHER no enemy craft in the sector it launches from, OR if there are enemies in the sector, then there must also be friendly craft

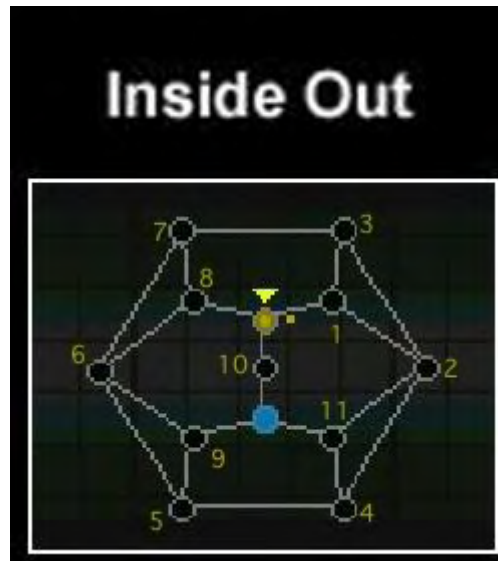
The third condition is a little tricky sometimes. The miners will always launch in a sector if all three conditions are met, but will get scared back to base if they are ever alone in a sector with an enemy ship. So, a miner might go to a sector to mine but see an enemy ship and immediately turn around and go back home. If it isn't damaged at all, it might turn right back around and try to re-enter the same sector only to be scared back again. They will do this over and over until it is damaged (which then it WILL go back to base) or the enemy is no longer visible when it enters the sector. Veteran miner hunters will take advantage of this. We call it "miner bouncing", which we will describe in more detail later.

If all three of these conditions are met, then the miner will automatically go where there is enough He3 to fill half of its hull. If one of these conditions is missing you must order the miner to go where the He3 is.

Example

When the game first begins (assuming there is He3 present in your home sector), your initial miner comes to life. It senses the He3 present in the safe sector, and leaves base to mine it. In the meantime, you invest in your initial constructors and send them off to build. Ever notice that after the first miner docks it often just sits in base? That's because one of the three conditions have not been met. Usually, the first miner will offload before your initial refinery builds. You know that if the miner immediately left base, travelled to the ref sector, and began mining, then the refinery would be ready by the time the miner was done. Unfortunately, the miner doesn't know that and will wait for the refinery to build (or for you to order it). Most often you need to order your first miner to start heading to where your refinery is building as soon as it unloads the first load.

2nd Example -- Using the InsideOut example again



Let's say you get aggressive in the opening and send an outpost constructor to 2, a refinery to 1, and a teleport to 6. You fully mine your home sector and you fully mine sector 1 (your ref sector). Both your outpost and teleport built, so your miners will go to 2 next. But wait a minute! The enemy's outpost ALSO built in sector 2 and newbies are dogfighting in that sector! Logically, you wouldn't want your miners to go to sector 2, but the three conditions have been met (He3 in sector, base in sector where He3 is, enemy ships in the sector, BUT friendly ships in the sector!! IT'S A PARTY!). If you do nothing, your miners will stroll in there, get noticed by vets, and die. You have to order the miners to sector 8. It doesn't stop there though. Once they finish mining sector 8, they will return home to offload, then will try again to go to sector 2 (as long as the three conditions are met). If the miner sees an enemy ship once it enters sector 2 and no friendly ships are present, it will attempt to dock. It will probably be too late though. The ONLY way to remedy this situation is to either constantly watch your miners, OR destroy the enemy outpost.

Another side note: miners have a one-track mind. Once they decide to go to a sector, they will go there. If the enemy bombs and kills your outpost in sector 2 before the miners get there, any miner that was already headed to sector 2 will keep going until it successfully mines a rock or it sees an enemy.

3rd Example

Sometimes game settings are set to where there is no He3 in your home. MOST commanders (unless you are the one who has game control) forget what effect this has on your miners. Rather than launching at the start of the game, your initial miner will sit idle. This is because the three conditions haven't been met. Conditions 2 and 3 are met, but you are missing condition 1. In this case, you have to send your first miner to one of the adjacent sectors at the start of the game. Your second miner will launch, but it will turn around and dock because your initial constructors will also just now be launching. So you will also have to

tell your second miner where to go. You will also probably have to tell your 1st miner to leave base again because it will probably offload at home before your first refinery has finished building on its rock.

Need to offload

A miner wants to offload when it is either full or has drained a rock. Where it offloads depends on what options it has available. What option it chooses is based on a hierarchy.

1. A miner's first choice will always be to offload in the same sector it just mined. So, if an outpost or refinery exists in the sector it will always offload there.
2. A miner's second choice will be to offload where it can begin mining the quickest. If you sent your miners to mine a sector without a base or refinery, but you have an outpost in the sector just beyond that, they will move forward and offload at the outpost.
3. If neither of the first two options are available they will backtrack to the nearest offload point behind where they just completed mining. For example, if you send a miner to an empty sector at the beginning of a game, it will mine there and return home to offload.

The miner's need to offload can sometimes get you into trouble. Using the Inside Out example again, imagine you have a refinery in sector 1, a teleport in sector 2 and an outpost in sector 11. Your miners will mine sector 1 first, offload in sector 1, then move to sector 2. They will fill up in sector 2 and then try to offload in sector 11, right next to the enemy's home!! This isn't always bad, but most commanders would prefer not to place their miners in harm's way like that. You could always build another refinery in sector 3 and order your miners there as they finish mining the rocks in sector 2. One thing to remember though is that miners have a need to mine. So eventually they will attempt to mine in sector 11. This may be an unintended consequence of pushing your first outpost, but it is the reality of miner AI.

Need to survive

Miners have low morale. They WON'T take one for the team. The Miner's Union has strong representatives, and miners know their importance to your operation. If they feel threatened, they will attempt to dock and don't care what you think about it. Your job as commander is to MAKE them mine when they don't want to. A miner will attempt to run if the following conditions exist:

1. They are in a sector that has no friendly base and they see an enemy.
2. They are in a sector with a friendly base (including a refinery) and their shields are damaged by 50% or more.
3. If they have any hull damage that hasn't been repaired, they will eventually run back to base even if they are no longer under attack. Once they've taken a sufficient amount of damage, they will continually attempt to go back to base (even if they have been repaired). Once they dock, it resets

this condition, so its usually a wise move to just go ahead and dock the miner so you don't have to keep reordering it back to the He3 rock.

Trusted Economic Advisor

In real life, you can get so busy you don't have time to do the things that keep your everyday life going: cleaning house, mowing the lawn, fixing your car. You get the picture! What do you do? You have someone else do it for you! Having a veteran pilot control your miners is very helpful to a commander that is learning, and even veteran commanders benefit from this practice. There are plenty of instances where you can lose track of your miners while looking at enemy activity, coordinating a bomb run, or even placing a constructor. A veteran pilot controlling your miners ensure that at least one pilot is on miner defense at all times, and prevents one of the miners from slipping through the cracks.

The key to having someone run the miners for you is to make sure that you and this person are always on the same page. Talk to them via TeamSpeak, or pm them, but make sure they know where you would like the miners to go. Keep building offload stations (refs, outposts, etc.) ahead of where your miners currently are. Tell the person controlling your miners where you will be mining next. By allowing someone to control your miners, you can be looking at other areas of the map for opportunities (noticing enemy mining and constructor activity) and threats (holes in your probing nets, inbound miner offensives, or that odd stealth scout slipping into your tech base sector). It also gives you the opportunity to call out where inbound enemy ships are coming from, allowing your miner defense to set up to stop them before they even get close to your miners.

III. Basic Miner Defense

Introduction

Most of your success in a game is based on disparity between the economies of the teams. If one team's economy is rolling along unhindered while the other team's economy is a wreck, you can pretty much guess which team will win the game 90% of the time. Depending on what faction you are, there are a number of ways to create this disparity. In this section we will focus on the basics of miner defense. Miner offense is discussed in a later section.

Allocating Pilot Resources

The number of pilots you place on miner defense may vary widely, depending on the size of the game, stage in the game, tech paths, map, and faction choices. Much of it may depend on the "safety" of the sector that you want to mine. In the average pickup game, many commanders send all of their pilots forward with the constructors. While this may all but guarantee the safety of your constructors, a single scout can disrupt your ability to get your initial loads of He3. Usually this results in the commander having to leave base to tend to the miners. Its always a good idea to reserve at least one pilot for miner defense so that the command

can focus on the bigger picture.

There are probably a million scenarios that could play out. So rather than try to describe each one of them, we will focus on what factors need to be considered in deciding what pilots you place on miner defense.

1. Choice of map

The size of the map, connectivity (how many connections there are to each sector), and total number of pilots playing will affect the allocation of pilots to miner defense. On a map where there are many safe mining sectors, such as HiLo42, less defenders are needed than on a map like Star where the enemy is usually no further than two sectors away from your miners. On a larger map, one fighter/interceptor and a nan scout can usually defend miners during the early stages of the game.

2. Probing

How well has your team probed? Probes within the sector you intend on mining help, but probes in sectors adjacent to where you are mining (and even two sectors away) give you time to react to a rush of miner hunters. If you see enemy pilots coming, you can either pull your miners back to base or request additional defenders.

3. Size of the game

As the size of games gets larger, so does the need for increased numbers of defenders. This is something for which there is no formula; it is part of the art of commanding. In a 10 versus 10 game, you can probably get by with one or two defenders most of the game. In a 30 versus 30 game, you may considerably more.

4. Faction choices

What unique properties does each faction have? Technoflux miners also double as small rips (ships that fighters, stealth fighters, and scouts can ripcord to). Its easier to defend them. Iron Coalition miners can usually ripcord to teleport stations before a solo attacker can kill it. GT enhanced miners are tough. These factions probably need less defense than other factions, but don't ignore the need to miner defense.

You have to weigh this against your opponent's faction. Rixian ripscouts will allow a steady stream of miner killers to rip to your mining sector. Bios ships can cloaks and appear beside your miners, killing them before you have the opportunity to defend.

Know the properties of your faction, and that of your enemy. If your strengths and weaknesses don't match up well to your enemy's, then you may need to request extra defenders sit on your miners though there is no apparent threat.

5. Presence of a launch point

If you are mining near in a sector where you have an outpost, you probably don't

need as many pilots babysitting the miners. As the commander, you can launch with a nanite loaded and repair the miner while the rest of your team has time to react. Again, you have to take into account the other factors like your enemy's tech path, but quicker reaction times may warrant less defense.

On the other hand, if you are mining near a refinery, little can be done if a lone scout starts plugging your miner with dumbfires. It's dead unless you have someone defending it.

6. Enemy tech path

If the enemy only has an Expansion Complex and you are mining 4 sectors away from their nearest base, your miners are safer than if they have a Tactical Laboratory. Don't feel too comfortable if they only have interceptors though. Ints are stealthy, fast, and can deal a lot of damage quickly. If your probing is good, you will see them coming long before they are a threat to your miners. If stealth fighters are running around your mining sectors, you better have a massive defense set up.

7. Stage of the game

In the early stages of the game, being able to mine is critical. If your mining is constantly being interrupted, your team will quickly fall behind in the technological race. On the other hand, mining is less vital if you are in the late stages of a game, own the map, and have maxed out a couple of lines of tech. Put more pilots on offense.

8. Number of miners your team has

If you have all four miners, it isn't too bad to lose one while your team is busy killing 3 enemy miners. If you are down to one miner, you better defend it or you will find yourself paydaying a miner. This makes a bad situation worse, because if the enemy KNOWS it has killed all of your miners, then they will know where to look for the next miner. An enemy scout will camp somewhere in your home to alert the team when it is launched.

Decision factors in purchasing caltrops/towers for miner defense

With any investment you are looking for a return on your capital. In Allegiance it is no different. When considering purchasing caltrops and towers for miner defense, there are a number of factors that could play into whether the purchase is a good investment or not.

Placing caltrops and towers in an already-safe sector is usually a waste, particularly if there is more than one way in or out of the sector. Even against tac, it might only buy you an extra minute on most maps. The stealth fighters will just find another way in.

Most commanders will buy caltrops and towers to cover an aleph where an enemy base sits on the other side. Generally you want to avoid mining in sectors that are unsafe, but caltrops will at least force the attackers to slow down, giving

your miner defense increased response time.

Another factor that is often overlooked is the cost/benefit ratio. Caltraps cost \$1500 and towers cost \$1000. If the money settings for a map are lower, you could wind up spending \$2500 to mine \$10,000 worth of He3. If you do this two times during the game, you've essentially paid 1/2 a sector's worth of He3 to mine 2 sectors. What's worse, is most often the first attacker through usually dies instantly. Once alerted, enemy miner hunters proceed through the aleph more carefully.

On the other hand, if money settings are higher and it's worth the investment, purchasing multiple towers may increase the effectiveness of your caltrop/tower combination. Where a single tower is easy to kill, multiple towers are hard to kill and can effectively close off that attack point. In any case, monitoring the health of your towers is a good thing to do as you can nan towers just like any other AI object in the game. If you see that your towers are damaged tell someone to repair them, making your investment last longer.

In larger games where you have a pilot to spare, purchasing only a caltrop and using a human as your tower may be smarter. A camping scout can see anything that comes through the aleph and can deal out more damage than a tower. An enemy ship caught in the caltrop is an easy target for even a basic scout.

Lastly, consider whether the caltraps and towers will serve more than one purpose. If your tech base is close to an aleph leading to a sector with an enemy outpost, then buying a caltrop is a no-brainer. Your purchase will not only help you in miner defense, but they will also help protect your tech base.

In any case, you have to look at purchasing caltraps and towers as an investment, and determine whether it is "good" investment or not. Consider the circumstances when you are making the decision. In many cases commanders are wasting the team's resources by purchasing unnecessary miner defense enhancements.

The Best Defense

A commonly known term "The best defense is a good offense" definitely applies to Allegiance. The more pressure you put on the enemy, the less resources they can deploy to harass your miners. If you have all four miners going and have the means to reach the enemy's miners, then get out of your comfort zone. Send everyone except maybe one pilot after the enemy's miners (forcing the enemy to react). Games become stressful when you spend most of the game reacting to the enemy, rather than forcing the enemy to react to you.

If your miners are constantly being harassed by a large number of enemy pilots (despite the size of your defense), then it's time to go on the offensive. The enemy team isn't respecting your firepower and its time to make them pay. If you

have to, dock your miners to make your point, but don't let the enemy mine freely. If you hit the enemy miners hard and quick you'll see less pressure.

Another tactic is to get a bomber out. "Enemy bomber sighted" has a strange effect on the enemy. They get paranoid. The threat of losing something is sometimes more real when a bomber is lurking. If the threat runs home to defend, undock your miners and get them back to work. If the bomber is gone uneyed while they are looking for your docked miners, even better!

In general, the average commander freezes up when their miners come under heavy pressure. Good commanders fight for control of the pace and use the enemy's leverage against them. If your economy is under pressure DO SOMETHING ABOUT IT!

Keeping Miners Mining

Losing active mining time is something any commander should work to avoid. As stated under the Miner Management section, miners will find any number of reasons to stop mining or to not mine at all. More often than not, even a miner under attack should be reordered to continue mining

You'll often see groups of enemies running into your mining sector and attack one miner together. The problem is if the attackers outnumber the defenders, ALL of the miners will attempt to run back to base. They will do this even if 4 scouts are attacking one miner that has two ints and a nan scout defending. Keep tabs on your other miners. Reorder them to mine if they aren't under any threat.

Your mining can also be interrupted by an enemy scout flying around your mining sector with a disruptor loaded. Miners will also run as soon as they eye a piloted enemy ship if there are no friendly piloted ships in sector. This is miner bouncing. It is annoying, but you have to keep telling your miners to mine. A good pilot can stall your economy by doing drive-by after drive-by. The pilot knows s/he can't KILL a miner, but will keep denting the miner's shields (until it runs) and flying away. The miner doesn't understand that the threat is going 150mps directly away from it. It just knows that its shields are damaged. Keep your miners mining.

This scenario doesn't fit anywhere in particular so I'll just say it here. When a miner is attacked, it will run to the nearest base. If there is a refinery in the sector (and the miner has no chance of living), send it to the refinery. A full dead miner is a terrible thing to waste. If you can get it to offload before it dies, at least it isn't a total loss. You'll have to obsessively keep right clicking on the ref, reordering the miner over and over to go there. The miner will keep trying to break off the commanded route and dock.

Summary

Miner defense is paramount to your team's success. Your economy can be thwarted any number of ways, and we've just scratched the surface. Pay attention to your miners, or make sure you have someone competent paying attention for you. It's too easy to lose track of your miners unless you make it a priority. "I don't get paid enough for this, returning to base" -- Listen for it, and don't forget it. If you hear that phrase, something is wrong with one of your miners and you need to fix it. Fail to do so, and you're wasting valuable mining time (at best).

IV. Managing Cash Flow

Managing your team's cash flow is an important aspect to commanding. You need to have cash available when you NEED it. While most of this seems obvious when you read it, in practice it often gets overlooked.

Investing in Technology and Expanding

There are commanders that are great at taking the map in a short amount of time. There are other commanders that seem to have advanced tech up quickly. Striking a balance between these two is something that a good commander must be able to do.

All too often you see games where one team expands quickly only to lose the territory they've gained. This is known as over-expanding and happens because investments in technology have been sacrificed for expanding. As a general rule, if you know you don't have the technology to hold a sector, there is no use in wasting the money and manpower to take the sector.

On the other hand, you will sometimes see a team with a leg of the tech tree fully researched but boxed into two or three sectors while the enemy team owns the rest of the map. This is a difficult situation to overcome in pickup games, even with superior technology. If the enemy owns most of the map, they will most likely be able to match your technological level quickly. As a general rule, if you see that you are running out of mining territory, create more BEFORE you have fully mined out the sectors you own. Use the technology you've researched to muscle or finesse your way in. Having an Advanced Tactical Laboratory isn't much use if you are stuck in two sectors that are completely sealed off with calthrops, towers, and campers.

To achieve this balance, consider what your team needs in order to perform the tasks that you are asking them to do. For instance, you can't expect your team to fly three sectors and kill enemy miners with any consistency. If you are sup, they will need either forward outposts, teleports, or carriers. Additionally, your team will need tech that can kill the miners with some degree of ease. So first, you will want to get a useful base forward. You will also need the tech to defend the base and kill the miners. If you break the game down into a series of tasks, it becomes much easier to manage from an investment perspective.

Going TacSpanion? Be sure to buy the necessities first. For miner killing you will want Utility Cannon 2, Hunter 2, Sig Cloak 2, and the Ship Energy 1 upgrade. Each of those items is worth 1/2 a techbase, so you may forgo (for example) Sig Cloak 2 if it means the difference between getting your Expansion Complex up now or five minutes from now. Just make sure you finish purchasing the basic tech to do the job as soon as you've bought your interceptors.

Rushing Shipyard? Get an expansion complex up, interceptors, mini 2, yield upgrade, and damage upgrade... then get to work on the Shipyard and the mining infrastructure to get caps up quickly.

In short, give your team what they NEED first. Give them what they WANT afterwards. You will always have the oddball pilot requesting research into bombers long before you actually need them. Don't cave in to make someone happy. Explain to your team what you intend to do ahead of time and that will cut down a lot of the random requests.

Timing Your Investments

It makes an enormous difference to have investments in constructors, miners, and technology complete when you need them. For instance, GT constructors take 90 seconds to finish once you purchase them. GT enhanced constructors take 120 seconds to research. It is a bit of a waste if your GT con launches 30 seconds before enhanced constructors are complete. By waiting 30 seconds after you purchase enhanced constructors, you avoid having to dock the constructor after it builds to enhance it.

This also applies to technology. If you intend on bombing with medium shield 2, don't invest in bombers a minute before you can also invest in medium shield 2. Otherwise, you will have bomber spam requests when bombers complete, and most voob pilots will just launch the bomb run before the tech is ready, dragging half the team with it. By the time they reach the target aleph, medium shield 2 will complete and your bomber will still have medium shield 1.

Be sure to look at research times and compare them to build times. If you make a mistake, explain your intention to the team so they know to wait for the proper tech is finish.

Avoiding Economic Crisis

You've probably heard of the term "paydaying" by now. What it means is that you have no source of income other than the small paydays you get once each minute. If all of your miners are dead and you have no special mines or special refineries, you can bet that your enemy is outpacing you in expansion and research.

A few thoughts on avoiding a payday economy:

- If you are down to your last miner, act as if you have no miners. Start saving some cash to buy another miner. The enemy probably realizes you have only one miner so they will be coming hard and fast for it.
- Don't underestimate the value of having someone search for cash boxes. Veteran commanders will instruct their pilots to pick up all cash that they see -- even before they reach crisis mode. A probe scout scouring the map for cash is like an extra half miner. On large maps, this is especially true.
- Don't put all your eggs in one basket. If you are operating a four miner economy, they can all be dead within minutes if your miner defense is caught off guard. Sometimes it pays dividends to have one or two miners operating away from the ones that are being harassed.

V. Purchasing Economic Enhancements

All factions can purchase enhanced and advanced miners. If you go expansion, you can purchase He3 Yield and Faster He3 GAs. Giga can purchase special mines, and Dreg can purchase Helium mines. Depending on the circumstances, you may or may not want to purchase these enhancements to your economy. While we cannot pinpoint every possible combination of circumstances that arise in game, there are factors that should influence the decision to purchase an enhancement. Here is an examination of the factors:

Enhanced miners

Enhanced miners have a lower sig and more hit points than standard miners. With some factions, this boost can be quite helpful. For instance, GT enhanced miners are considerably harder to kill than basic GT miners, and factions with a .9 hull modifier can really benefit from the extra hit points. Some maps almost require that you buy enhanced miners if you want an economy. It is generally a good idea to purchase enhanced miners, since they are the life blood of your economy. They are not necessary, however, if you are rushing a specific tech or playing on an easily defensible map. If you do purchase enhanced miners at the start of the game, make sure you time the purchase so that it completes before your 2nd miner builds. This saves you the trouble of manually redocking the miner to enhance it. Usually your first miner will dock after the enhancement has completed.

1. Choice of faction

As previously stated, its not a bad idea at any point to purchase enhanced miners, but with some factions its usually a good idea to get it out of the way. Its better to purchase enhanced miners and keep the ones you have rather than spending the money on additional miners throughout the game. Generally buy enhanced miners if you are the following factions: GT (you can afford it), Belters (cheap purchase), Bios (cheap purchase over time), Dreg/Rix (makes up for the .9 hull), IC. Giga begins the game with enhanced miners, so no purchase necessary. Don't place a priority on buying enhanced miners if you are Technoflux, since defense can rip to them anyway.

2. Choice of map

Small maps with high connectivity (such as grid) make it a necessity to enhance your miners. If I try to get by without this purchase, the enemy makes me pay. On larger maps, initially enhancing the miners can be detrimental to your expansion. On Hilo42 for instance, it may be wise to wait until you've purchased your 2nd outpost or first tech base before you enhance the miners. It does depend on the specific situation though (if the enemy rushes tac).

3. Enemy choice of tech

It's a given that defending your miners against tac is much more difficult than with any other tech tree. It's generally a good idea to purchase enhanced miners the instant you see a tac con. It's also a good idea to purchase enhanced miners if the enemy is pushing carrier to your mining sectors. Be sure to monitor what the enemy is doing with its carriers. If you see it moving toward your miners, don't wait to upgrade them.

Advanced Miners

Advanced miners research can be purchased from an Advanced Expansion Complex. They require research into enhanced miners as a prerequisite. Advanced miners are even more difficult to kill than enhanced miners, and they travel faster than std/enh miners. If you've ever seen a Belter or Dreg advanced miner racing across a sector, you'll understand. Just catching up to them is next to impossible. Even with an enemy stealth fighter in the mining sector, advanced miners can go unnoticed by the enemy team due to their low signature. The same general factors apply to buying advanced miners as enhanced miners, with a few exceptions. If it is late in the game and you already control most of the map, buying this upgrade can be a waste (especially if the total money is low and you need a 2nd tech). If the enemy is tac, it is still a good idea to buy advanced miners. Enemy stealth fighters are always likely to be roaming.

Special Mines (Gigacorp Only) and Helium Mines (Dreg Only)

Special refineries can be researched in the Gigacorp garrison and then purchased like any other base. There are three types of special refineries, Carbon, Uranium, and Silicon. As you might have already guessed, they build on the corresponding tech rocks. They provide an income stream of \$1250 - \$2000 per minute. For more specifics on special refineries refer to the Gigacorp faction topic.

Helium Mines can be researched in the Dreg garrison and then purchased like any other base. They build on helium asteroids and provide an income stream \$750 per minute. For more specifics on helium mines refer to the Dreg topic.

This kind of economic investment carries a lot of risk, but potentially unlimited returns. It is generally never a good idea to consider these investments as your primary source of income. If you buy them, wait until that middle/late stages of the game. The overriding factor with both of these investments is the question: will I get a return on my investment? If you can't defend the mines long enough

for them to pay for themselves and begin generating a net profit, then it is a bad decision to purchase them.

With Giga special mines, you need to make sure that there are enough of the corresponding rocks to make the investment worthwhile. The U-mine research costs \$10000 and the constructor costs \$6000. If you only have access to one good U rock, then this is a bad investment. It would be better to go with another kind of mine, so that you can leverage the cost of the initial research.

Dreg Helium mines are rarely a smart investment. If your team can't defend miners, and you have lots of safe sectors to build He mines (a rare combination), then it may be worth it.

Closing Remarks

It is often overlooked that every new technology and GA affects your constructors and miners. Ship shield 1 (under the tac lab) boosts the miner's ship shield strength. If you are IC, Ripcord 1 (under supremacy) will improve your miners' rip time, making them easier to defend. Purchasing Medium Shield 2 equips all of your miners and cons with Medium Shield 2. It is usually not a good idea to buy a whole tech base for a couple of GAs for your miners. However, the effects of these upgrades should be considered. If you are purchasing a Supremacy Center for purposes of taking the last C rock on the map, you get access to Ship Hull 1 as a bonus. All of your ships (including utility craft) get an increased hull. It could save a miner down the road.

Credits: mcwarren4, Phrase, NightRychune, Shizoku, NakPPI, Terralthra, aarmstrong, Anguirel, Paradigm, CronoDroid, Clay_Pigeon

Giga Corp

Faction Perks

- Great speed(1.1)
- Great ship shield (1.1)
- Great economy, miner capacity(1.25), starting money(1.25), paydays(1.25)
- Cheap Lt bases and Lt carriers
- Enh Miners/Con's at start
- Lux Ships available(\$500 each)
- Spec Mines available
- Patroller Research available

Faction weakness

- Weak Ship Hull(.85)
- Less Accel(.9) and Agility(.8)
- Scout only starting ship
- Basic tech must be researched(Boost1, Dis1, QF1 etc.)
- Lt outposts and Teleport's can be damaged by any weapon

General Philosophy

Giga is a faction where everything is cheap. To command giga properly, expanding voraciously is a must. Spamming ops/teles is a must, for any techpath. Their tech generally doesn't stand up well to most other faction's tech, so they need to be commanded like commanding zerg on starcraft. Swarm your enemy with as much as you can, and overwhelm them with bases and players.

Ideal Settings

Giga's miners can pull in a lot of money, they have a large capacity and rarely get filled to the brim. High total money will allow you to pull in a wad of cash, Plentiful resources will allow you to spam spec refs

Tech Paths

Garrison (Patty rush)

Patrollers with It boost are immediately available from the Garrison, and their range can be extended with Giga's cheap Lt Carriers. Lt Carriers cost very little with Giga, and are very easily spammed. On most settings, you can buy patrollers, It boost, a carrier, and still be able to afford an op, ref and tele con. While you expand, use carrier spam to impede their expansion and harass/kill their miners. In fact, it's almost better to spam carriers than bases because carriers can be moved. Be careful though! Lt carriers have limited hull and energy. Keep an eye on your carriers, and they should never die. With one or two

carriers, you can be quite aggressive and push carriers through enemy sectors to their mining points. This is a great opening strategy as long as you continue to maintain your economy and buy an actual techbase.

Tactical

Giga can get its tech up very quickly, so the enemy will be attempting to bomb you before you get adv tac. You are safe once you get Hunter 3, so buy Hunter 3 as soon as your tac advances. Defending before your tac advances is difficult, but you can spam ops/TPs to distract the enemy and buy time. Giga can afford to lose a few ops/TPs. Just be sure to replace them. If you see a bomber heading towards a light base and you can't defend, purchase a replacement and rebuild it. The more small bases they have to blow up, the better. Once adv tech is up, your lux SFs will be able to defend with hunter 3, while you get stealth bombers (and a sup for AB2 if needed). This strategy is deadly in small games, because the enemy cannot muster large bombing runs to take you out when you're weakest. Instead, they will be concentrating on defending their miners. If they have their entire team bombing, their miners are candy for one sf.

Supremacy

If you go Sup, you need to spam carriers/teles to impede their expansion and econ. Sup is a very viable strategy AGAINST Giga, because of galvs are very effective on Giga light bases. If you plan on going sup, make it a priority to keep the enemy from mining, so they can't get galvs. Think of it as a patty rush with better ships.

Going sup has some additional bonuses. Lux figs are great miner hunters with 4 gunmounts and good scan range. Lux scouts are 700M short of being walking pulse probes, and mount a full ac turret for enemy miners. If you are having SB or HTT problems, these little buggers are great for finding them. Follow up lux scouts with TP2/XRM AB runs, and you are in good shape.

Expansion

Giga's expansion is fairly pathetic. While int models are decent, the gunmounts on non-lux Ints are difficult to use. Giga's HTT is easy to ram and does benefit from the faction-wide speed perk, so you can do some fast HTTing. Both yield GAs will ensure that your miners bring in an insane amount of money, letting you claim the map with ungalvable techbases and branch out into secondary techs.

On Specmines (Supplemental Material)

Buying specmines is always a gamble and exercise in delayed gratification. You are spending (at least) 16k of your team's money now, in hopes of making much more later. When you spend that money, you are assuming that you won't need it for the next 10-20 minutes. You are also assuming that the mine will live long enough to generate enough cash to make it worth your while. Both can be risky assumptions. Spec mines are vulnerable to small weapons fire, and your techbase might die four minutes after you research the mine.

The first question you should ask is: do I need a spec mine? If you still have plenty of sectors to mine as you're upping your 1st techbase, you might just want to get tech and go for the end-game. With Giga's econ, spec mines may be unnecessary unless you're planning on advancing multiple techs and spamming the map. Many commanders successfully play Giga without ever getting a spec mine.

Secondly, ask yourself: will my spec mine live long enough to make it worthwhile? Is this a map with a lot of protected backsectors (like hilo4for2 or beachball)? If so, the mine might live long enough. Do you have enough of the map that the enemy has to walk several sectors to get to your mine? If so, then the mine might live long enough. Is the enemy exp? If so, then the mine might live long enough. Don't bother if the enemy is sup, unless it is a really big map (and even then, plan on it dying). Tac is a toss up, but I wouldn't (sbs and/or killers will take it down).

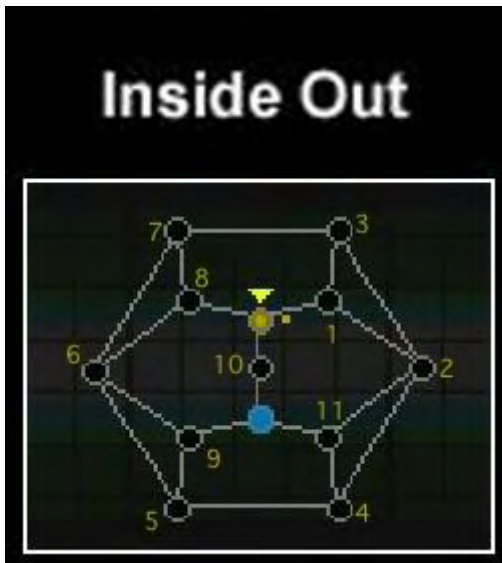
Thirdly, ask yourself: what kind of mine should I buy? You most likely won't have enough money for more than 1 type. What kinds of rocks are in your defensible sectors? You obviously don't want to buy a mine that you have to build next to the enemy's home. Is the map heavy with one type? Lots of rocks means lots of mines. What tech did the enemy go? You can use mines to deny them backup/replacement techbases. What tech did you go? You might not want to consume rocks for your own backup/replacement techbases.

It may also help you to know the differences between the types of mines. Specmines generate \$1250/min, except for si mines, which generate \$2000/min. Specmines have a sig of 125, except for carbon mines, which have a sig of 75. Specmines have 6000 hull and 4000 shield, except for uranium mines, which have 8000 shield and double the regen rate. Honestly, the only difference worth paying attention to is silicon mines(2000/min) vs the rest (1250/min). Carbon mine's stealthiness probably won't matter to an attentive enemy. The uranium mine's durability may help vs enemy dis 2 runs, but won't make much of a difference otherwise.

When should you buy a spec mine? Don't open with a spec mine unless the starting cash is turned up to stupid levels. You need that early money for miners, bases and tech. Buying a specmine after the enemy has adv sup or adv tac (or is likely to get there) is also silly. The mine will live for 3 minutes, then it will die. Buy a specmine if you have a clear advantage over the enemy, but know that your team can't close to deal with your primary techpath. Use the cash from that mine to pay for a secondary tech that will let your team finish the game. Buy it after you've paid to advance your first tech. Until that happens, you can't afford the cost.

The Top3 of the most common week1 mistakes with Giga.

1. Not buying Basic/Lt-Tech (**Do NOT forget!!** Buy Lt booster for Patrollers, Booster1 for Ints/Figs, Sig1 for SFs, SkyCap1 for GS etc..)
2. Building 'assault refineries' in unsafe sectors. (Build them behind your OPs and not in sectors easy to access by your opponent)
3. Rushing Specs under bad circumstances (make sure you read the spec mine article twice before you use them in game 😊)



Overview

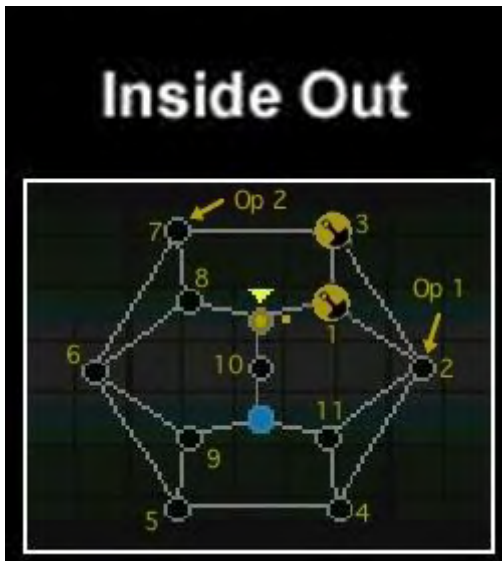
The difference between IO and HiHigher illustrates how much starting sectors matter in map design.

You have two choke sectors (2 and 6), which are vastly more important to control than any one sector on HiHigher. If you control both of them, you have a 7-5 advantage in controlled sectors. Even better, you have 4 safe mining sectors while your opponent has 0 safe mining sectors. The possible directions for your opening cons have been reduced from 4 to 2; you are twice as likely to have coincident opening ops. The map (without changing size or connectivity) has become a lot tighter. Good tight game factions are Dreg, Rix, IC, and the new Bios. If you play TF or Belts, make sure to play tight. Buy bombers and get enh tech up fast, then concentrate on finishing expansion. Enh cons and miners also become more important on tight maps.

Lykourgos writes:

Securing your backsectors

If your opening op plants 2 or 6, you have managed to secure zero mining sectors. The enemy is perfectly capable of sneaking bases into your back sectors, and they will do so if you don't keep expanding. With some fast opening factions, you may be able to get away with claiming 2 and 6 before the enemy can stop you. If I can't claim both 2 and 6 (and I probably can't), I prefer to start by claiming sector pairs 2 & 7 or 6 & 3 for initial expansion.



Assuming that you control a sector pair such as 2 & 7, the textbook econ for IO is

1. Mine home
2. Mine opening ref 1
3. Mine opening op 2
4. Mine second ref 3
5. Mine second op 7

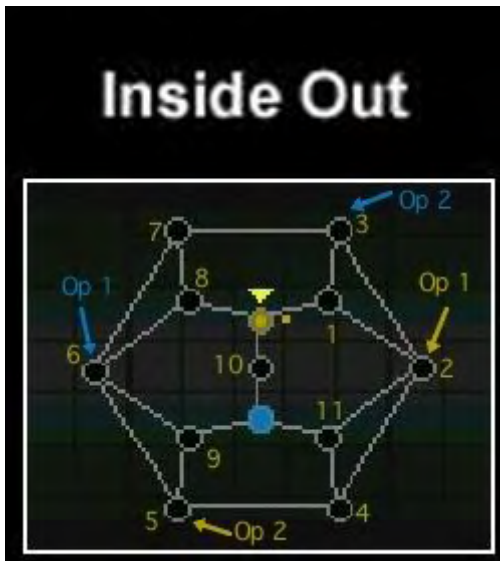
(And you built the second op before the second ref because you have NO NAKED REFS, right???)

That's enough cash for adv tech plus extras on most settings. I don't think I've ever managed to actually get that far without something going wrong or the game being done.

Clay observes:

Role Reversal

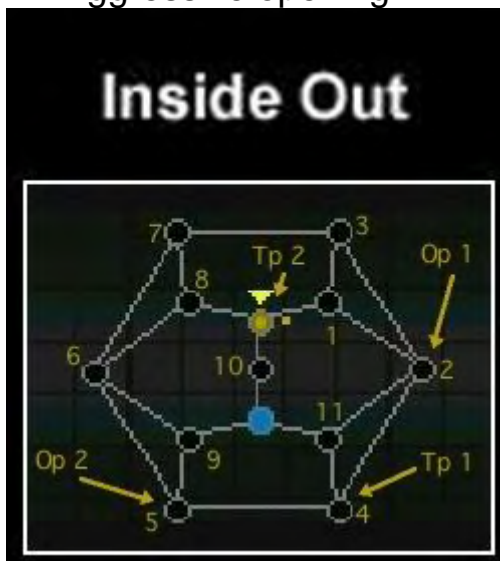
Many commanders will neglect securing their own backyard, and instead try to send their 2nd op (or 1st teleport) through the choke to 5 (if they took 2) or 4 (if they took 6). Some commanders will even look to those sectors for their techbase. This approach works fine. The problem is that if the enemy commander hasn't already sealed his/her backsectors (as Lyko explained), then s/he's probably doing exactly the same thing to you. Many games devolve into this weird role reversal, where everyone is in everyone else's backsectors, and no one has any safe mining. Some coms will even try mining the center (don't let them). In this situation, the team with the raw whore power will win the miner killing war.



If you think your team has this kind of where power, then go for it. Also make sure that you have a faction/techpath that can compete on a single working miner (ie. not Dreg and not Tac). Otherwise, try to secure your backsectors as Lyko explained. A bonus for Lyko's approach is that you can usually get a base to 7 (or 3) before the enemy does. If the enemy tries pushing into your backyard, you can make them fight to keep the con alive. If they are fighting for the con, they aren't your miners. If you're really lucky, can even sneak a 3rd base into their backsectors, claiming the map and forcing the enemy to bomb while your enh tech is rolling in.

Cronodroid's illustrates this opening

An Aggressive opening



This is one I like to perform with Giga, and sometimes Dreg and Rix. Send the op to 2 or 6, and your teleport to 4 or 5 (respectively). It is important to maintain a backup, so buy a carrier and use it as a homerip (or get enh cons so your tele

builds faster). Obviously the second tele should be a homerip, and push your 2nd op farther into the enemy's backsectors. If the techrocks in 5 or 4 are good, consider building your tech there (good scouting/probing is vital for this). Get your team to strike hard and fast at their miners, because the enemy is probably coming to kill your bases.

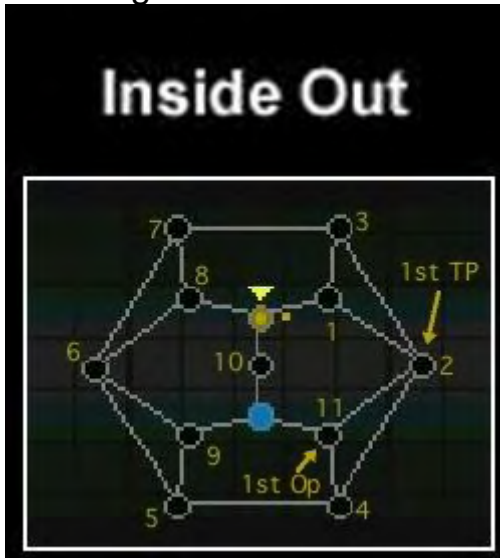
Clay remarks:

Carriers

If your faction can spare the cash (and starts with figs), a well placed carrier can act as a surrogate base, helping you hold the sector until you get a proper base there. Assuming your op went right, you can use the carrier to hold 7, or send it down to 5 (through the right choke) to act as a platform for miner hunters.

Lykourgos adds:

Claiming a side



A favorite tactic is putting the tele in 2 and op in 11. This is one of the few times that I find pushing opening tele permissible. Your tele lets you expand either up or down, and quickly rip refs forward. It's very surprising how constricting the op placement becomes for the enemy. Claiming 11 also cuts off their access to 4.

The Middle

The closing peccadillo is that your garrisons are 1 sector apart, and newbies gravitate to the middle (it's really incredible). If you have the team size, get a stealth vet in there to watch the enemy's newbies give away his home. Just be sure that your individually order each of your newbies away from the middle aleph during the first minute of the game. Make sure that during the midgame, the middle has probes. If you \$#@! up, clear the probes in there and bombrush his home.

Oh yes, and it's everyone's favorite late night @\$%#@# thing to do to rush a sy to the middle. There's no real counter to this if you're playing a 5v5. If you're playing a 10v10, just kill his miners and get your enh tech up. You'll slaughter him.

Opening Moves

The standard opening

The purchases you make early on effect your entire game. The settings and faction effect what you purchase first. However, you can usually use a rule of thumb and purchase a miner, outpost, teleport, and refinery and sometimes enhanced constructor.

I almost always get enhanced constructor, so long as the faction allows me to get it out before the initial outpost launches(with IC, you will need to buy enhanced constructor before you purchase the outpost). Enhanced constructor improves the constructor's the signature, speed and hull, allowing you to push your constructors further and take more of the map faster. On lower money settings, enh con is sometimes hard to fit into the budget. An acceptable trade off is to wait a little bit to finish your refinery and get the enh con first.

Should you go Rix, IC, Belters, or TF (factions that have purchasable items upon start), partial last purchase(right mouse click) so that you can still have money to hand out.

Your outpost should go 2 sectors from home, in a strategically important sector (see below). Your refinery goes behind the outpost to begin building the mining chain. Your teleport builds at home, on a rock that is in front of a green door (and we cannot stress this enough).

Offensive openings and gambits

Carrier use

Factions with starting fighters may want to buy a carrier with their opening money, forgoing an initial refinery or enh con if necessary. Carriers can be devastating when they are placed in the enemy's refinery/mining sectors. Here the carrier can be kept alive by one or two nanite scouts while the rest of the team rips in with fighters and destroys the economy.

Carriers can also be used for miner defense, especially against tac. If you have a carrier in a sector with your miners, your defense will be able to get resupplied quickly and new defenders can rip in. For factions with interceptors as starting ships, carriers can act as home rips while the commander pushes his initial teleport to propel additional outposts forward (see below).

The downside is that carriers cost as much as an outpost, more than a teleport, and approx half of a techbase. While carriers are mobile, they are easier to kill than a built base (esp vs fighters or basic tac) and have energy reserves that limit the number of ships that can ripcord at one time. If a bunch of fighters rip to a

carrier, the carrier may die for lack of nans. Used wisely by a focused team, carriers are very difficult to stop. Used haphazardly by an unfocused team, a carrier can be a waste of money.

Sector rush

DrS popularized this strategy. The idea is to get the entire team to rush the enemy home. Get one or two scouts to scout a path and have the entire team in an offensive craft (int/fig). The key to this working properly is to insure they stay coordinated so they actually manage to kill the enemy's econ and not get sidetracked chasing down enemies. Follow the horde with your outpost, and make sure your team doesn't rush until the outpost is safe. To avoid being completely blind, you may want to pick a few scouts to travel off in different sectors and drop probes.

The gambit here is that if you get bomb rushed and your team has 10 ints to start, chances are that you won't fare well.

Bomb rush

The idea is simple: Get a base next to the enemy home, buy bombers ASAP, and put your entire team on a bomb run. Win by killing their garrison before they get a techbase. This approach can work very well if your bomber is not eyed and/or the enemy hasn't seen your opening op yet. If a bomber (or two) with a 10 nan train rolls into the enemy home unannounced, you just might win the game.

The problem here is that you end up committing a lot of resources to a very risky venture. If it fails, you're left with almost no map control, while the enemy is working on its techbase and/or a 3rd round of ops/teles. You'll have to bomb them back to claim more of the map for mining, but probers will now be looking for you. Given that there are many ways that this can fail, bomb rushing is not a recommended course of action for most situations. Chances are fairly good that the enemy will see the opening base, and probewhores will eye the bomber when they probe that sector. Factions like Belters can get their techbase out very very quickly, so you might successfully bomb the garr and still lose the game. You might roll unannounced into their home with 2 bombers and 10 nans, and still not kill the garr because of good prox drops, smart d, and/or bad luck.

Tech rush

In almost all cases, commanders should not even consider buying a techbase until AFTER their first round of constructors plants. Even then, many commanders go for a 2nd round of small constructors/four miners before buying a techbase. A commander *could* open with buying a techbase and try to out-tech the enemy. **This is almost universally a bad idea.**

The problem is that a techbase will consume most of a team's opening funds, while only securing 1 (maybe 2) sectors to mine. Mining will take forever, because miners will have to backtrack to drop off at home. While you might get

tech up first, you have no easy access to enemy assets. The main reason why you bought the tech base (tech) ends up being useless to you. All the while, the enemy will have expanded all around you and will probably get adv tech up before you do.

There are a few situations where this might actually work. Most of them are stupid (stupid money, stupid stack, stupid map). In theory, if you are IC, and you go tac, and the enemy doesn't have good miner d, and your light ints suffice for d, and it is a big map, then this might work (once). In general, however, don't do this in a real game.

Pushes

This involves pushing one or both of your cons farther than they would go otherwise (usually 3 or more sectors from home). The benefits are obvious (more of the map), but there are some economic and strategic drawbacks to consider. Pushing your op con disrupts your mining chain, and makes you a better bombing target. When deciding whether or not to push, consider the following factors:

- What do you want to accomplish? Pushing your op is great for miner harassment and bomb rushes. If you're not bomb rushing and the enemy isn't going to mine on that side of the map, you have little to gain by pushing. However, that push just made your op easier to bomb and disrupted your mining chain.
- Do you have ehcn con with good defense on the op? If your cons are standard, pushing is risky but doable. If you don't have good d with good starting ships, don't push.
- Did the enemy send his/her con the same way? If so, pushing probably won't work unless you have a **vastly** superior escort (which you probably don't).

No Homerip

In this popular gambit, the initial teleport is sent forward instead of built at home. The tele con could follow the op con and plant in some sector on (or off) the op con's path of travel. The tele con could be sent to some other strategic sector, or to a desirable tech rock. You've seen (and will see) variations on this gambit as we discuss specific factions and maps. No matter when the theme, the basic idea behind this move is always the same: send the tele con forward to claim more of the map and speed future expansion.

This approach can work well if you follow it up with more expansion and get a homerip up soon. An opening carrier can double as a homerip for the first minutes of the game, and factions like TF and Rix can use miners/scouts as homerips until a proper one is built.

Still, this approach is not without drawbacks. If the enemy opens by rushing your

home (with a con, bomber, or miner hunters) and you don't have a homerip, it will be very very bad for you. If your team starts with It ints and you push the teleport forward, the enemy **will** bomb it and will likely succeed. If you have a weaker starting faction, sending your cons in two directions will split your D. If you run into the enemy's opening cons (and they have nominal d), you'll probably lose one (or both) of your cons.

Some faction specific notes from certain commanders

Giga

Shizoku makes a comment about Giga

QUOTE

Giga can research patrollers, which are basically a scout with less scan and speed and a fair amount more power. On most money settings these are really useful ships to have, acting for defense and offense. You will want these almost always, one exception is that if you are rushing expansion, as you can get ints up so quickly, it's not really worth researching the patties.

Ozzy makes the following Giga suggestion

QUOTE

A good Giga strategy I've found is to buy bombers asap and force your team to bomb. (scouts or bomber guys) . Giga has a nice window to end the game if your team will cooperate. But then, get a tech up asap because giga bases WILL die.

Technoflux

Shizoku makes this observation

QUOTE

TF has the ability to use skycap towers, on higher money settings these are worth getting because they act as incredible miner, conn, and early bomb rush defense. Another item that TF has is the ability to mount light booster on their scouts giving them a large speed boost, this should always be either purchased initially, or at the very least, initially partialled.

Anguirel makes the following suggestion for opening with Tf

QUOTE

OP, Ref, Miner, TP, Light Booster in about that order. Send initial TP out for: tech, expansion, or with OP depending on situation. Use your miners for initial homerip, second TP can build at home if you didn't use the first for a tech-base rip. The ref is incredibly important for TF, as their miners are slow as hell but they mine incredibly quickly. If the enemy is Tac, you can consider bombers early, otherwise get your tech up. Start the tech base upgrade at the same time as the Enh ship research. Keep those miners going and you should be able to have Adv Tech done in between 15 and 20 minutes.

Partialling bombers is also useful with Tf. Technoflux's basic bombers are dangerous offensive and defensive ships, even against advanced tac and sup. With the lower cost and longer research time, you can partial bombers and not suffer from sticker shock.

IC

As Weed discussed in the IC article, some commanders like to buy their techbase immediately after their first round of opening constructors. Others like to focus on expanding first. Some commanders like to buy enh con if they can, while others eschew it. There is a consensus that if you buy enh con, do it first (before buying your first op and tele). IC small cons have a 2 minute preparatory time, so buying enh cons first insures that your first cons will be enhanced.

Dreg/Rix

Several commanders suggested buying enhanced constructors (even if you have to do without a ref), and many also recommended enhanced miners early. This may or may not be compatible with the strategy you have in mind (or the funds available), but it is a suggestion you should nevertheless consider.

Belters

Anguirel makes the following suggestion about Belters

QUOTE

Initial cons, buy your third (1.5 minutes in or so) miner, then invest in bombers. Belter Bombers are incredibly powerful for offense and defense, and also very inexpensive. There's literally no better use for ~\$6k of your early funds. If you get the chance to push an OP, you can bomb early and hard before they get tech. If you both build in the same spot you can bomb it out. If they bomb rush you, you can use the bomber to defend far more effectively than regular fighters (and then counter bomb). Heck, you can even use a bomber for miner D in a pinch. After one or two OPs, I'd suggest TP+Tech bases for expanding, especially if they go Tac or Sup.

CronoDroid makes this Belters recommendation

QUOTE

On 1.25 starting money, you can afford everything and both Enh Miner and Con, no reason not to get Enh Miner but you may withhold Enh Con for tech or a carrier. However as Belters are quite cheap Enh Con will help expanding immensely.

GT

CronoDroid writes:

QUOTE

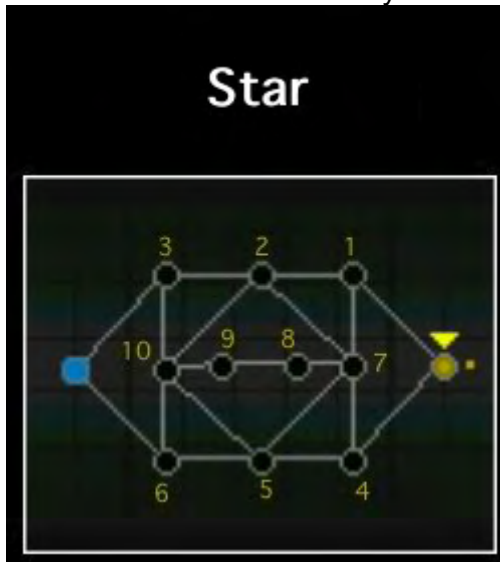
You only have to buy a miner, op and tele, even on 1.0 there is enough for Enh Miner or if you wait for the payday a one cashbox that's a carrier. GT Carriers are incredibly tough and can be used to harass the enemy miners with a few good

carrier pilots on your team. Enh Miners on the other hand help GT's slow mining and are absolute tanks with 1.0 Hull and 1.1 Shield.

Expanding

Reading the map

Every map has key sectors, aka "choke" sectors. Each map has certain sectors you must control to win. Consider the Star map, which has two "primary" choke sectors and two "secondary" choke sectors.



The primary chokes are sectors 2 and 5. If you control both of these sectors, the enemy has nowhere to go that isn't 1 sector from one of your bases. They can't expand or mine. Their only hope is to bomb or run their cons/miners through a 2 sector gauntlet to the middle track. The two secondary choke sectors are 10 and 7. Aside from home sectors, any sector on the map is adjacent to 10 and 7, meaning that your team has easy access to every sector on the map if you control 10 and 7. Additionally, 10 and 7 provide the only access to the center track, providing you with 2-4 sectors of safe mining.

If you're thinking about Star, you want to control one of the primary choke sectors. Bonus if you get both, but the enemy is also trying to secure a primary choke. Chances are you'll only get one. It will help you a great deal if you can control one (or several) secondary choke sectors as well. On star, the secondary choke closest to your home is the easiest to secure, and will help you secure several sectors on the map for safe mining. If you can secure it with a teleport, you can rip additional constructors forward and send them down the center track to seal it. On the other hand, securing the secondary choke on the enemy's side of the map will give you easy access to anywhere the enemy could possibly be mining. You don't get the same mining security, but you can easily win the economy war by killing enemy miners. This is a good route if your team has the whorepower.

Just be sure that your team probes. The disadvantage to owning a sector like 10 or 7 is that the enemy can bomb you along several different routes, and one of those routes probably involves an aleph very close to your base. Whip your team and get them probing, or its a wasted effort.

The moral of the story is that each map has key sectors. Look for them. The sectors that secure territory and afford easy access to enemy mining are the sectors that you want to control. Once you learn to read maps in this way, you'll begin making smarter decisions in the opening phases of the game.

When to buy tech

Knowing when to transition from the early-game land grab to buying and developing tech is tricky. Doing it too soon will stunt your econ and mid-game. Doing it too late will get you wiped off the map. There are several factors to consider:

- The map and your current expansion -- Have you secured enough He rocks to support advanced tech? Know approximately how much money is in each sector (see supplemental post).
- Miner access -- Can your team disrupt the enemy's mining easily enough? Do you have some good launching points for miner o?
- The enemy commander -- If the enemy com is very aggressive, you need to get tech up early. Otherwise, you can put it off and focus on expansion.
- Faction -- Some IC commanders like to buy their tech base almost immediately after their first round of constructors. The idea is to get a leg up in the techrace. Others will pursue some mix of partialling the techbase and early expansion. Belters can also get tech out early, since they can buy their tech fast and still afford to pump out a 2nd round of constructors. Factions like BIOS and Dreg have to wait, because their techbase is so much more expensive.

Pushing

An effective mid/late game expansion strategy is to put a con into a sector controlled by the enemy. Not only do you get a good shot at taking the sector away from them and/or threatening a techbase, but you also occupy the enemy while your team can do something else (tp2, sbs, etc). The following commanders have some suggestions about good pushes:

Jell writes

QUOTE

- You should have enh. cons
- Send them in probed areas with at least 1 escort.
- All depending on enemy talent, tech, faction, and distance from your building spot, you have to dose the amount of escort (extreme: building in the enemy's home when they are tacsansion and turtling in their home).

- If you're bombing, it's always easier to send the con behind, or to somewhere else, and divide their defense, provided the escort can properly choose to escort the bomber or the con given the D pattern.

Da_Muck writes

QUOTE

The tactic I see used most often is to send it in behind an offensive action of your own, such as rushing their miner or a bomb run. A second factor of it is good scouting/deprobing... IE the first time they see the con is when it comes in behind your miner sweep/bomb run/whatever, forcing them to either defend the target or kill the con. 9 times out of 10, a smart team should worry about stopping your Offensive action first, then counterbombing if possible.

The other major factor is communication, making sure the team knows what you are about to do and stand ready to support it. If your not combining the con push with an offensive action, you need to have 3 good scouts who know how to use their mines effecticely and 2-3 figs/ints to protect the nans.

You also cant play around with it, you need to build the con on the closest rock to the aleph that you can, even if its not in that great a position. The longer the con spends in sector, the more chance the defenders have of massing overwhelming force. Best places to pull this are vs Tele or Ref;s vs an expansion team, or sectors without Rips for a team that can rip. The key is to choose a sector where the enemy CANT respond quickly, near as I can tell.

Grey_Slayer writes

QUOTE

If its a sector they wanna hang on to, you need hvy D or keep em busy with something else in another sector. Having some eyes in the sector where you are pushing is good, then you can see if they are coming to kill it and can send it elsewhere, as opposed to having it walk into a camp.

When commanding expansion I try to not have my OPs walk too long by having well placed teles. For an example on Hihi, I can send a tele high and have it build as close as possible next to the aleph leading to the sector adjacent to enemy home. Later an OP only has to rip in and cross a few k in order to reach the target sector. As an additional bonus, if the enemy sends a con into the tele sector I can have ppl attacking it very quickly in scouts, or with a bomber if I got em.

Knowing your team and the enemy

The tech path that you choose and how you expand should be affected by who is on your team and who is on the enemy team. For example, if you have several int whores on your team, go exp. If you have several good sfs pilots, go tac. If teams are very large, sup is a good choice (especially if the map isn't tight) as sup's power really reveals itself in large teams. If you have a lot of

new/intermediate players, missile techpaths like sup or tac usually work better than exp.

Conversely, if a well known bomber whore is on the enemy team, assume that you're going to be bombed. Plant your first teleport at home and don't push your outpost. If the enemy commander is more of a build-up-then-push kind of player, then you can postpone your techbase for a few minutes and expand more. If several members of the same squad are on the same team, assume they will be coming for your miners together. Probe and beef up your miner d.

It is always good to have some skilled miner whores on your team.

Credits: Shiz, Clay, Anguirel , Jell, Grimmwolf, NakPPI, Ozzy, Da_Muck, Grey_Slayer, CronoDroid

Iron Coalition

Faction Perks

- Decent ship Hull(.95)
- Strong station hull and shield (1.15)
- Heavy Outposts and Teleports (ungalvable)
- More ammo and fuel
- Available Rescue Probe(\$250each, high scan, low sig)
- Higher PW Damage (1.1)
- Higher Missile Damage(1.1)
- Higher Energy(1.2)
- Miners Rip, and unload at tech bases
- Cheaper Capital Ships

Faction weakness

- High Signature (.85)
- Slow miners(.85) (but 1.0 yield)
- Ripping miners(also an advantage, but if you are not in control at all times, they will be a weakness)
- Slow build times(2min for OP/TP, 4min for tech). Techbase upgrades take 3 minutes.
- Lower Starting Money(-.125)

General Philosophy

This is not a sneaky faction. This is a bruiser faction. The only way to win is to be super aggressive. You cannot allow the opponent time to do anything productive. Tactical is your worst enemy. You must push constructors and take/hold sectors adjacent to opponents miners. Be forceful! IC is the heavyweight boxer of the allegiance world. Don't dodge! Just shove things down people's throats.

Settings

Medium total money. Normal Resources.

Expansion

Expansion is played the most and likely should be. You have two options

1. Push one outpost, hold that outpost, and upgrade Expansion as fast as possible. Once you have hvy ints, get HTTs as soon as possible and smash one in your opponent's face. You will succeed.
2. Push a second outpost, or even third, and be aggressive on miner/constructor offense with basic ints and mini2. This is likely to be more successful. It gives you multiple launch points for your HTTs when you eventually get them.

The weakness of Expansion: large maps. If you're playing IC on beachball, you picked the wrong faction altogether. The strength of IC is the ability to swarm and hit hard. With a large map, you cannot swarm and cannot expand for your life; your miners are just not fast enough to compete with Giga or other expanding-minded factions. The large map also gives the enemy the time to go Tactical (if they have any sense) and kill your miners instead.

Supremacy

DN 4.6 improved IC sup by making the models smaller and using the adv fig gunmounts for all figs. While most people will go IC exp, IC sup is actually pretty good. You cannot be galved off the map, but you sure could galv the other team. You benefit from missile and shield perks. Your miners can rip, so you can buy Enh Miners and expand with multiple Teleports. That said, I don't offer sympathy when you are being gunned down by Rixian Heavy Interceptors or the like. Against factions such as giga, IC sup is ok.

Tactical

The Tacspansion strategy is most often used with IC. When you build your Tac, you immediately have Stealth Fighters. They're not super stealthy, but they can get the job done in the early game. If you plan on committing to Tactical as a primary tech, I wish you luck. You have the worst stealth fighter in the game. If you're not getting the job done, you can try to get Stealth Bombers to end a game. The missile damage bonus in some ways can make up for your unstealthy bomber.

Tacspansion

If the enemy doesn't look as though it's going to bomb rush you or go on an aggressive streak, go tactical and rape their miners. The effect of loosing all miners will cause the enemy to bomb. At this point, you need to have mini2 ints to stop any bombing runs in their tracks. If the enemy is aggressive and hitting you pretty hard, go expansion to hold them off. Get your mini2 ints up to defend, then get a tac going so that you can destroy their economy. Ideally, you want to go tac first to hit their econ as fast as possible, but go exp first if it's the only way you're going to be able to stay in the game.

Anyone can command IC and win. It takes an aggressive commander to win with IC consistently. I cannot stress this enough. You will lose if you do not take charge on the offensive and hit your opponent on the chin. **You need to knock them out.**

Supyard (Supplemental Material)

This is the way IC shipyard works: if you buy a shipyard without having a tech base, you get nothing until you research medium class for 18k. By buying medium class, you obtain all light class ships (corvettes, attack carriers, and freighters) along with medium class ships (frigates and assault ships.) If you choose not to upgrade the shipyard to medium class and purchase a tech base

instead, you immediately get the light class ships when the base builds. You will still need an additional 18k to get the medium-class basekillers. While this seems an overwhelming nerf to the once-dominant IC MF rush, it grants you the following opportunity.

Buy a supremacy center as IC, followed by a shipyard after your initial outpost and TP are built. Continue building (and expand with) teleport receivers across the map, and make sure you run an efficient economy. Use your supremacy and shipyard to expand further if necessary. By purchasing both a shipyard and sup, you gain access to IC enhanced fighters, which (despite the hitbox) are great swarms with their high energy, PW damage, and missile damage bonuses. So what do you do?

You dispatch attack carriers. IC attack carriers also benefit from the faction-wide energy perk, which make them extremely effective small rip receivers. Dispatch one attack carrier to their mining sectors, and support it with enhanced fighters. Your fighters should be all over their miners, forcing the enemy team has to make a very, very costly decision.

They can try to defend their miners against enemy reinforcements constantly ripping in to a skycap-turreted carrier (with IC damage bonuses). At best, their miners will be trapped in base and likely die. If they decide to focus on the carrier instead, they have to overwhelm the turrets, large shields, prox and fresh fighters and scouts are ripping in. Even if they kill the \$3,200 attack carrier (easily replaceable), they lose all of their miners. It's a win-win scenario. It makes IC devastatingly powerful in pick up games, where it's very easy to get your team in fighters and swarming with the promise of easy miner kills and boosting kill bonuses.

Comparatively speaking, missile frigates are far easier to stop, far more expensive, and significantly less devastating than such a drastic blow to a team's economy. Corvette's the only benefit a corvette has over an attack carrier is the pilot's access to better weapons, along with a higher speed and reduced cost.

Credits: Weedman, Shiz, Night (supyard strat)



Overview

Star is a map that is all about the beginning. See those endsectors (7/10)? Do you know what is so appealing about those sectors? They link to FIVE different sectors, and putting an op in 7 (blue) or 10(yellow) will permanently cut off enemy mining. If there enemy wants to mine out of their home, it has to run a miner through 2 sectors (adjacent to the op) and mine 8/7 (Blue team) or 10/9 (yellow team). The enemy's only other recourse is bombing, which isn't a problem if you convince your team to probe. Control the endsector, and you control the map.

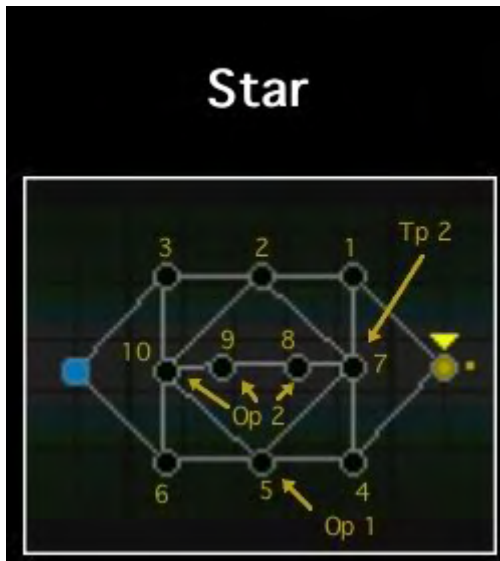
Like IO, there are only two directions on this map. You have a 50/50 chance of running into the enemy constructor. This is a tight map, so the same factions that thrive on IO will thrive on Star.

Crono writes:

A Common opening

Start by building your op in 2 or 5, with your tele at home. This is fine, because your op will exert a zone of control into four sectors, including a safe mining sector just behind your op. You'll get into trouble if the enemy sends a con into 7 (and they probably will). After the op con plants, immediately send your D into 7 to prevent the enemy from building there (scouts watching enemy cons are very helpful). Those He-filled middle sectors will give you advanced tech, so seal off your mining with a tele in 7 and rip in an op to take 8, 9, or

10 (the farther, the better).



This opening is tailored to weak opening factions, because they cannot physically push their op con all of the way to 10 (too much D, too slow a con). The enemy team will do all they can to prevent you pushing into 10, so don't try if you're a weaker/slower faction.

The mining pattern for this opening is as follows (assuming you built in 2):

Home -> 1 -> 2 -> 7 -> 8 -> 9

This involves no backtracking, so no time is wasted. Those five sectors should be more than enough for one Adv Tech and some supplementary tech.

Crono writes:

A more aggressive opening

This is a good opening for IC, Rix or Dreg. Enh Con is vital, so make sure you can pay for it by setting the starting money at 1.25. Send your con, with a lot of D, into 10 while making SURE the enemy doesn't try taking 7. With Rix or Dreg, this is usually no problem. In fact Dreg is so fast, you can probably get away with less D and have more people ready to stop the enemy con. Put your opening tele in 2, 5, 7. If you're IC or Dreg, most of your team will be in ints and won't miss the homerip. If you're Rix, just hop out in an SR whenever

anyone needs a rip (tell your team "Ask me if you need a homerip"). I dislike putting my tele in 2/5 for the simple reason that it doesn't seal off the middle. Putting a tele in 7 will take the middle, and allow you to easily take 2/5 later. 9 and 8 are great places to put your techbase, since you control all points of entry.



If you use this approach, make sure to tell your team to PROBE every adjacent sector to 10. With four plausible bombing routes into 10, there are lots of ways the enemy could sneak up on you. Divert manpower to make sure you can see an enemy bomber before it becomes a threat. Follow up with putting your 2nd op in 2 or 5 (where the enemy's op isn't), and plant your 2nd tele at home.

The mining pattern for this opening is (assuming your 2nd op built in 2)

Home -> 1 -> 2 -> 10 -> 9 -> 8 -> 7

This a pretty aggressive/dangerous mining pattern. Your miners will be at risk in 2, 10 and 7 so make sure you keep an eye on them. If the enemy manages to take both 2 and 5 from you, rush your miners to the middle and keep them there.

A safer (and my preferred) mining pattern would be

Home -> 1 -> 7 -> 8 -> 9 -> 10 -> 2

Your miners will only be at risk in 7, and mining out 8 and 9 should get you Advanced tech.

Dreghtar Empire

Faction Perks

- Highest Ship Speed(1.2)
- High ship turn torque (1.35)
- Great Agility(1.25)
- High Energy(1.15)
- Great missile track(1.25) and damage(1.1)
- Good economy, yield(1.35), payday(.125), starting money(.15)
- 60s research time
- He Mines which pick up pods and generate \$750/minute

Faction weakness

- Everything more expensive (1.25)
- Higher sig(1.05)
- lower hull(.9)
- Poor scan range(.9) -- This mostly affects ships. Dreg bases have a larger range that, when combined with the .9 nerf, makes them comparable to other factions.
- Models aside from the scout are wide and easy to hit
- Low miner capacity(.75) and speed(.65)

General Philosophy

Dreg is best when it is played aggressively. Their fast constructors and light ints give Dreg a distinct early-game advantage, which it should use to expand, deny enemy expansion, and get easy access to enemy miners. Dreg's high price tag make adequate expansion a necessity: your miners can only overcome the cost nerf with enough safe mining space and full He rocks. Dreg commanders who get out-expanded early will be sorry. Dreg miners suffer from the .9 hull nerf, despite being fast and hard to hit. You have to berate your team to defend miners, as Dreg has a harder time on a payday budget than other factions.

Dreg's 60 sec research time (and high pricetags) make partialing tech both unnecessary and dangerous. Don't do it....ever.

Dreg starts out strong and speed/missile perks help Dreg throughout the game, but most of Dreg's nerfs are in areas critical to your endgame (scan, sig and hull). These can really set Dreg back once the enemy gets advanced tech. Dreg is best when it swarms all over the enemy and doesn't let up. If your opponent isn't on the ropes by the time they get advanced tech, they can usually start pushing you back.

Settings

Higher starting money is important to Dreg, because the cost nerf outdoes Dreg's perk to starting cash. With 1.25 starting money, you can afford a miner, outpost, teleport and enhanced constructors. Put the ref off until your first miner load.

Total Helium is a little more tricky. Most people think that higher total money benefits Dreg, but the opposite is actually true. Dreg's yield perk more-than-offsets the cost nerf. The problem is miner capacity. Dreg miners can only carry 69.5 units of He, so settings that put more than 69.5 units of He on a rock don't especially benefit Dreg. Dreg can make up for it by finishing off nearly empty rocks, but that's time that could be spent mining full rocks somewhere else. On the other hand, Dreg's enemies **will** benefit from mining He rocks with more than 69.5 units of He, and can probably empty more rocks faster than Dreg. Thus, while it seems counter-intuitive, higher money and/or scarce resources puts Dreg at a distinct disadvantage.

Conversely, settings that put less He on a single rock benefits Dreg, because it can enjoy its yield perk and not be constrained by lower capacity. At the same time, enemy miners could be hauling in the same amount of He WITHOUT the yield perk. On HiHigher/1.0/Normal, Dreg is at a distinct advantage, as its miners are returning loads that are 35% larger than a standard miner, and expenses are only 25% more. Add in both yield GAs, and your loads are 63% larger! On HiHigher/1.25/Normal, Dreg miner loads are 16% large than that of a standard miner. This isn't enough to offset Dreg's 25% cost nerf, so you'll need to expand more and mine more full rocks to keep up with the enemy's miners.

Of course this is somewhat simplistic, because you also have to consider your enemy's miners (and most factions don't have standard miners), but these are the kinds of issues you should think about when figuring our ideal settings for Dreg.

Techpaths and Strategies

Expansion

Despite having lower hull and larger hitboxes, boosting Dreg Ints are one of the fastest ships in the game. They may not be the best dogfighters, but they can get from one point to another very quickly. Anything one sector away is easy pickin's for a Dreg Int, and their ramming ability makes HTT and bomber defense easier. Dreg Exp's real treat is HTTs, however. The HTT's native speed + rams from scouts and ints make it a very powerful tool. Until you get HTTs, use Dreg Ints' speed and optimal sector control for quick access to enemy miners. Good miner O will slow down the enemy econ and retard their ability to defend.

Supremacy

Many people assume that Dreg Exp is the best techpath for Dreg, but it is Dreg Sup that most benefits from Dreg's perks. Dreg's missile track and damage perks make dumbfires very dangerous missiles (buy/find dumbfire 2!), and XRM runs

become very difficult to stop (keep Shipyard on!). Further enhance these perks with Sup's missile GAs. Dreg's speedy scouts also benefit: a scout loaded with Gatt2 and DF2 can solo miners without too much trouble. Dreg speed also helps bombing and galv runs, where the distance to a base can be closed quickly. Unfortunately, Dreg's Sup may have problems against Exp, so be wary of using this techpath against a strong Exp faction like IC. Adv sup's toys will mitigate this disparity somewhat, but thick hulled factions may still give you trouble.

Tactical

Being a missile-based techpath, Tac also benefits from Dreg's missile perks. Dreg Hunter 2 has a similar damage/track profile to other factions' Hunter 3. Your speedy stealth fighters can quickly get to enemy miners, and stealth bombers can quickly strike against enemy bases with perked AB missiles. This is a very cheesy path, but the hull nerf is still in full effect. Most factions' early tac can't stand up to a rush. This is doubly true for Dreg. This is a good techpath to play against Giga. Giga's opening rush capabilities are limited vs Dreg's light ints, and Giga lt bases will wilt under a barrage of LRM Killer fire (with Dreg's faction bonuses).

Expactical

This is sort of the reverse of most factions' TacSpanion. Using light ints and enhanced cons, you can push your opening constructors farther than with most factions. Use these forward bases as launch points for light interceptor raids on the enemy miners. While you are applying the pressure, build an expansion complex, get interceptors, mini2, He3 Yield 1, and PW damage 1. With good probing, you should be able to defend bases quite easily. Now that your defense is set up, get a Tactical Labratory and stealth fighters. Work the enemy economy over. The nice thing about combining these two techs with Dreg is that you have two viable techs for end game. If your Tac is safe, you can upgrade it and go for stealth bombers. The missile damage perks make short work of smaller forward bases, allowing you to quickly box in your enemy once your stealth bombers are up. If the safety of your Tac is in question, you can still upgrade the Expansion Complex and have fast HTT's or advanced constructors. The combination of Expansion and Tactical allows you to keep constant pressure on the enemy, which is exactly what Dreg is designed for. Of course, you need a good econ with lots of spare He to support 2 techbases during your mid-game.

HiHigher Push

Any faction can do this, but Dreg excels at it. If you get Dreg enhanced cons on HiHigher, you will be fast enough to push your opening op next to their home midhigh/low. Put the opening tele behind it, which will allow you to rip the next op to the other midhigh/low middle sector. Put your first ref in with tele, and make miners mine next to home, drop off at tele/ref sector, mine that sector, mine middle, etc. Your miners will pull in lots of cash. If you can, put techbase with the tele and pursue a techpath as outlined above.

This risk with this method is that you are pushing your op (making it a tasty bombing target) and you are not getting a homerip. If anything goes wrong at all, you're screwed. If they bomb uneyed, not only can't your team get home to defend, but dreg light ints get eaten by ac1.

Helium Mines (Supplemental)

Dreg's end game has several things working against it. The hull and scan nerf has already been mentioned. Slow mining speeds and lower capacity will increase the time it takes to pay for a useful secondary tech (and time is essential when you want to press your advantage). Yield perks help with scraping He rocks, but the raw cost to get (for example) sbs up is still over \$60,000. Like Giga spec mines, Dreg He mines can be used to supplement Dreg's end-game income and pay for additional tech.

In general, everything said about Giga spec mines also apply to Dreg He mines. However, the risks are accentuated. Dreg has to wait more than 25 minutes to recoup the \$19500 cost of buying its first He mine. Dreg He mines are a little more resilient than Giga (not vulnerable to small arms fire), but they are also harder to defend (not a ripcord receiver). You can build more He mines than Giga spec mines on your average map, and in doing so you also consume He rocks that WERE generating Helium.

If you have the enemy on the ropes and can't mine your way to game-ending tech, He mines can provide you with a solution. Build them in safe places though, because losing them hurts you twice. If the enemy has a realistic chance of killing an He mine (ie. no safe sectors, sbs, tp2 galv runs), then money spent on Helium mines is better spent elsewhere. Buying He mines at before your main tech is advanced is a non-starter. For what it does for your team, you might as well just buy 20k in cashboxes and drop it in the enemy's home.

Credits: Shiz, Clay, Mcwarren, Lyko, Crono



Overview

This is a deceptively small map that has a lot in common with Star. In fact, let's take a second and compare Polished Diamond to star.



It may be a little harder to compare the maps, since they are oriented differently, but notice the following similarities

- Both maps have two "aggressive" choke sectors, labeled 3 and 6 on both maps. Take both sectors, and the enemy has to bomb to get out. Taking only one can be a mixed blessing, however, because
- Both maps have two very highly connected "primary" choke sectors (7 and 9 on Pol. Diamond, 7 and 10 on star). Control both of these, and you have a base that's one jump away from every sector on the map (save home sectors). Control the choke on your side of the map (7 on both maps), and

- you can bypass and backdoor enemy pushes into 3 and 6 (both maps). Control the opposite choke, and you can harass enemy mining all game.
- Both maps have a middle, the mining of which is usually the key to advanced tech (8 and 10 on Pol Diamond, 8 and 9 on Star). The middle sectors are definitely less well-protected on Polished Diamond than Star, but the team that can successfully mine those sectors will win the econ war.
 - Both maps have two additional choke sectors (2 and 5 on both maps), the control of which can either sink your enemy or give them access to your back yard. These chokes are stronger on Polished Diamond than Star, since they offer access to the middle sectors and are almost as well connected as the primary chokes.

All of these similarities mean that strategies and techpaths that are successful on Star will be adaptable to Polished Diamond. The key difference between the maps is that Polished Diamond has higher connectivity than Star, so very little safe mining is secured by owning a choke on Polished Diamond. Your miners will likely spend much of their time mining near a hostile aleph. Assume that you're going to lose one or two of your four miners to rushes, and actively coordinate the d on your remaining miners. Likewise, coordinate your whores and rustle the rest of the team to rush the enemy's miners. If either team has four miners for any appreciable amount of time, their opponent isn't doing something right.

Techpaths and Factions

Because of the high connectivity, exp does really well on this map. Send ints boosting a sector and whack enemy miners. Sup can also do well, but the fighters have to work harder to swarm and stop enemy rushes. Once sup gets galvs, they can usually blast the map right open, but a good exp team (ie. one that miner hunts in groups) will pummel sup.

The higher connectivity also makes this a bombing map. If you have a base in 2, 5, 7 or 9, that base will likely be near a hostile (or easily accessible) aleph. You **need** to get people probing. Call reliable folks out. Lack of probing is a great way to undo a beautiful opening and give the enemy a chance to mine. Don't let it happen to you.

This is a good map for IC and Rix, where the connectivity multiplies the coverage you get from a single base or ripscout. It is also a good map for Dreg, whose fast cons can quickly seize control of the enemy's side of the map. If you go GT or TF, plan to do some bombing, because you'll probably lose the early-game land-grab. Belters can do ok on this map, but plan to bomb if the enemy get aggressive with bases.

Openings

Conservative

Plant your 1st tele at home, and your op at 2 or 5. Secure your near choke with an op/tele and plant your tech on a good rock in 8 or 10 if possible, 1 or 4 if not. Assuming your op is in 2 and your tech is in 8, mining would go 1->2->7->8, with your miners most certainly at risk in 7 and 8. If you have a focused miner d with good campers/proxers, keep your miners together. Disperse them otherwise to help lessen the impact of a rush.

Play conservatively if you know you'll can win on adv tech, and don't want to risk overextending your team on early con pushes or enemy bomb runs on pushed bases. The drawback here is that if the enemy opens aggressively, you could find the enemy's opening op in 7. Great! Now you have to no secure mining space while the enemy has plenty, and any new cons that you build will be vulnerable to enemy ships launching from that op and boosting to 1 or 4 or 2 or 5 or....

You can mitigate this risk by forgoing a home teleport and securing 7 right away. If you have opening figs, put your teleport in 7. If you have lt ints, put your op in 7, build your teleport in 2 or 5, and crank out a 2nd op asap to be built with your tele.

Pushes

This map lends itself well to early pushes into enemy territory, where you can stall out the enemy's early mining efforts. The very best place to push is 9, since it gives you ready access to every likely sector where the enemy will be mining. This works well for a team with lt ints, since they can quickly boost a sector and harass miners. Figs work ok too, but they will be a little slower forming up. Get more figs together and focus on one or two good rushes that knock out most of the enemy's miners.

The downside of pushing to 9 is the enemy will likely have access to 4 alephs leading into 9, and your base will probably be near one of them. Get probes out asap, or your forward base will have a short lifespan.

Pushes into 3 or 6 can also be effective, but they are somewhat overrated. Push to 6 and your enemy will run miners to 2, mining out 2 and 8. If they own their choke, they will probably be able to backdoor your op (either bombing it or planting a base behind it). The consequences of such an aggressive opening may be worse than not pushing at all.

Clay's Favorite Opening

The is Clay_Pigeon's favorite opening on any map ever. It works really well with Rix, but you can also work it with other factions. This opening works much better when your opening cons do not coincide with enemy cons. Get scouts ahead and

reroute cons if necessary.

Put your initial op in 7 to secure your own back yard, building your teleport in 2 or 5. As soon as your first op builds, start your 2nd op. Rip your 2nd op to your first teleport, and build it in 9. Less than 10 minutes into the game, you now control the entire map and have 3 safe mining sectors.

The enemy has no safe mining. Dispatch ints/fighters to the enemy's ref sector and get scouts to probe, because the enemy will try to bomb the op in 9.

Exp is a good techpath to go with this opening, and if you can build the exp with your teleport, all the better! Once you get ints up, enemy miners should not be allowed to suck down any He.

Credits: Clay_Pigeon, past ACS staff and grads

Rixian Unity

Faction Perks

- 12 second Research Time
- High PW Damage
- High horizontal turn rate
- High PW Range
- Rip scouts
- Combat pods
- Ops that are excellent for miner and HTT D due to door placement.
- Starting fig with 3 gatts (this is not a minor detail!)

Faction weakness

- High X axis, low Y axis will turn off pilots who do not have a working roll button
- Lack of missiles may turn off certain newer pilots
- Weaker Hull(.9)

General Philosophy

Rix is a very aggressive faction- good ints, great SBs, great miner offense. It can also be a very finicky faction: your team has to be able to use their rip scouts and opening figs correctly, or you will be burning money in \$500 chunks with no return. High money (especially high starting money) favors Rix. Your opening op should almost always be enhanced before it launches, because the hull nerf makes unenhanced miners and cons the weakest in the game. You should try to control the map early (this is, of course, true with every faction), and make sure that your team has access to the enemy's miners.

One thing to always remember: never, ever partial tech with Rix. There is no reason (12s research time!), and there is always a danger associated with partialing. If you partial, you could lose the techbase before the tech completes. You're going to look awfully dumb with 20k in your exp if it dies.

Unlike some other factions, all Rix tech paths are good. That isn't to say they are all equally good no matter what the situation, but none of them stink in general.

Expansion

Rix exp is like IC and TF exp: you have fantastic ints and not-so-good HTTs. Expand. Control the map. Do not buy bombers unless you absolutely have to. Get your team onto the enemy's miners; this will have the effect of keeping the enemy team off of your miners. Mine safely and quickly. Get heavy ints as soon as possible, and then decide how to finish the game. Your HTTs are the only ones in the game that can double as bombers (rendering the TP-spam defense

against exp useless), but they are unrammable and have no other redeeming features. Consider branching out into another tech path. After all, you are playing with a lot of money on the map, and you do control most of the map, right?

Supremacy

Rix sup is an exp with ints that rip and galv. Expand with teles instead of ops, but otherwise proceed as you did with exp: expand, mine, tech, win. The advantage over exp is slightly easier miner killing, slightly longer range (on gatts as opposed to minis), and cheaper expansion. Your pilots will also love the toys that sup provides for rix's delightful heavy scouts. The disadvantage is a tradeoff in hull, acceleration, and boosting endurance. Make sure you have a trail of refineries going ahead of your miners.

It should be noted that Rix Enh figs take less energy when ripping to a rip scout than basic figs do.

Tactical

Rix Tac magnifies the weaknesses and the strengths of Rix. On the one hand, killing miners should be obscenely easy for Rix Tac, and a good team should have no trouble defending your assets until rix's incredible SBs are researched.

On the other hand, a less good team may very well drop the ball on you, losing rip scouts left and right, failing to kill miners [without hunters], and failing to probe for bombers. Getting probes out as Rix Tac is essential; killing a bomb run is trivial if you are camping, and nigh impossible if you are not.

Garrison

Your bombers have a short firing range and can run out of energy; they are better against ops and teles (faster kill time) but worse against tech bases. Their turrets are excellent, however, and your scouts make fair-to-good nans (they are hard to hit and have good agility for cross-nanning). You can also buy Counter2 without the typical disadvantage of giving it to the enemy (useless to them since you don't have missiles!) Your heavy bombers are typically good.

Your heavy scouts and gunships are both incredible. The heavy scouts should be obtained when going sup, especially against tac. The gunships are enhanced by tac, especially against exp. (AC3 and CD3, respectively).

Shipyard

The anomaly to mention here is that Rix Destroyers are arguably the best whoring ship in the game. Remember as always that SY's best use is breaking an exp (or tac) camp in smallish games. You shouldn't need to use SY with Rix unless they are turtled in one sector.

Tacspanion

This is quite possibly the most devastating, non-flavour-of-the-month, tactic in the

game. Play it similarly to IC Tacspan: get Tac first to whore miners, and then get ints for defense. If the enemy is pushing hard, get the expansion first to defend. Unless you are getting seriously outwhored, you almost always want to upgrade the tac for advanced tech. This strategy is so devastating because rix sbs benefit from expansion's range, damage, and sig GAs. In fact, with the GAs a single sbs can kill almost any base. With sig cloak 3, and the 2ed tier expansion GA's, a decent SB pilot can kill a tech base without getting eyed. (Shizy's favourite strat)

Credits: Lyko, Shiz

Bombing

Bombing is an important part of Allegiance. If you don't whore the enemy into resigning, then most techpaths require buying bombers to destroy techbases. Unfortunately, many novice commanders see bombers as a panacea, and buy bombers at the most inopportune times. This week, we should focus on good and bad times to buy bombers, best uses against the enemy, and how to get your team on a bomb run.

Pros and Cons of buying bombers

Bombers are good defensive craft, as well as offensive craft. They can mount hunters, and they stand a decent chance of stopping an enemy run (if nanned). If you stop an enemy run with a bomber, then you're in a good position to counterbomb. If you are a weak faction, like Giga, getting bombers early may help you in this regard.

Bombing is also effective in the territorial war that typifies most early games. You can push back enemy expansion and keep them off of your miners by bombing. This is especially true against catchup-factions like Bios and Giga. Use your bombers to go right for the jugular.

Lastly, bombing (with counter 2) is a great way to stop early tac. If you have easy access to the enemy's tac lab, then buy counter 2, dock the miners, and send the whole team off on the bomb run.

Bombers do have their drawbacks, however. Bombers cost as much as a techbase, and roughly half of a techbase upgrade. Your miners have to work unfettered to make up the cost, and they won't unless the bomb run threatens a major base. Since your team is bombing, your miner killing ability will be limited. Unless you start steamrolling through bases and force enemy pilots to defend, the enemy will likely mine freely while you do not. As a result, the enemy will get advanced tech before you do.

It is especially disastrous if your bomb run fails, because then you have 5-10 pods floating home for 1-2 minutes. That's plenty of time for enemy pilots to dock, find your miners, launch, and wreck your econ.

So, buying bombers is obviously a bit of a gambit. When should you do it?

When to buy bombers

Shizoku writes:

QUOTE

So with bombing being so risky, when is the right time to purchase bombers?
Rule of thumb, if something is able to be easily bombed and prevents you from

getting advanced tech up quickly.

Example: if an enemy outpost builds in the same sector as mine early game, I usually need this sector for money, it puts a large tax on my economy if I have to reroute my miners.

Another scenario I would buy bombers in is, if their tech base is a really easy hit from a sector I own or will own. Against Tactical is another scenario, get counter2 up quick and do whatever is necessary to remove their tac. It is important against tac not to waste time on outposts and teleports, killing the actual tech base before they get defensive tech up is crucial.

If bombing takes away from your team hurting the enemies econ, or hurts your econ, it is not worth it. This game is about economy not light bases.

Despite the gambit, bombers are a near necessity for some factions. Bios needs bombers to occupy the enemy. TF bombers are both powerful and inexpensive. While not a necessity, Belters bombers are very inexpensive. Because of the strong econ and slow research time, Belters can absorb the cost without stunting their econ. The same may hold true for GT bombers, except that GT needs a palisade to get advanced tech. At 8k, GT bombers cost almost as much as a palisade (aka. cheap garrison). Avoid buying bombers with Dreg if you can. With its cost nerf, Dreg needs that cash for advanced tech. Dreg bombers are handy (speed and scouts), but only use them against a faction like Giga.

Forming a run

The minute you buy bombers, you should know what you want destroyed. As the tech researches, motivate your team to get ready for the run. 2 minutes is not too long. Select whom you want to bomb and turret, and whom you want on or off of the run. Get the people on the run to rip home and get scouts. Send specific scouts ahead to hunt for probes. Designate 2 or 3 scouts to push, so that the bomber doesn't cruise at 60mps while its nans bounce off of each other.

Motivate your team by telling them what you want to accomplish, and what the base's destruction will do for the team. Maybe you'll get mining room. Maybe you want to push a base in the same direction. Maybe it is a threat to your garr or tech. Maybe you just want to pull enemy miner o off of your miners. Whatever it is, explain to the team why the run is important.

Keep your team (and yourself) focused on the real goal of the bomb run, and change gears when that goal has been accomplished. Many commanders experience early success in bombing, and try to keep bombing "just because". While your team is occupied destroying less important targets (or dying to camps), the enemy mines freely and easily gets advanced tech. Your miners, on the other hand, are dying undefended to 1 or 2 miner whores. You end up stranded at enhanced tech with no miners and 6k in the bank. Bombing won't

work any more, and the enemy starts walking all over you with advanced tech.

Shizoku says it best

QUOTE

Sometimes you only actually need one target bombed, it is important to have that bombing team go do other things afterwards, like probing, killing/defending miners. A common problem is that bomber teams will waste a huge amount of time doing things like killing refs, or camping allephs, when really there's a lot of stuff to do. Be select in what you want killed. If you do need a lot bombed, and if you have a good bombing team, it is wise to keep them together, especially if the turrets still have their kb.

Helping your bomb run

There are a number of items you can buy that will help your bomb run. They are (in no particular order)

- Antibase Missile Upgrades - The impact is obvious. 4 AB2s are worth approximately 5 AB1s. This lets a standard bomber kill a techbase without having to reload.
- Missile dmg GAs - The 10% buff is a little less than half of what you'd get from buying better antibase missiles. However, the GA is cheaper, can't be stolen, and is still formidable when stacked with pilot KBs.
- Hull GAs - The 10% increase helps your nans and bombers live longer
- Small Shield Upgrades - Many commanders overlook this in favor of medium shield 2. Because many weapons have reduced efficiency against shields, equipping your nans with improved shields will make it much harder for the enemy to take out your scouts.
- Medium Shield Upgrades - This will help a solo or ninja bomber live longer, but for large runs, small shield upgrades are probably a better investment.
- Turret Upgrades - Of obvious help to taking down enemy defenders, especially against mk ii and iii tech.
- PW range and damage - if you bought bombers as exp, this will help your turrets. However, you might want to consider leaving the turrets at home and flooding the target sector with ints before bombing (int bombing)
- Carrier - Can help on lengthy runs, since it will allow late nans to rip in, and podded nans to return to base and rip back in.
- Teleports - A network of teleports around a large map will let a bomber team jump around a map and keep the enemy offguard. If an eyed bomber can make the enemy camp and rip to an uneyed sector, the chance of the run succeeding will increase.
- Heavy Bombers - This is expensive, and not recommended unless you already have advanced tech (except bios), but the increased armor, speed and missile capacity will help mid/late game runs.

Defending against a bomb run

There are a few things you can do to help your team defend against a bomb run. Probing is essential, so constantly inform your team of which sectors need probing. If no one takes care of it, assign someone. Every few minutes, check your probes in f3. If the enemy has deprobated, tell the team right away and delegate someone to investigate. One thing usually proceeds a serious enemy bomb run: calm. If the enemy gets quiet, check for deprobated sectors and dispatch scouts (and perhaps begin calling for a camp).

If you are sup, get the ship hull GAs, but don't buy small shields unless the enemy is Belters. SS2 helps small enemy nans more than it helps your fighters. Get enhanced fighters right away, and go for gat, dumbfire and missile damage upgrades. For tac, max out your hunters first, though snipers also help. Cloak, energy and range GAs are also very helpful for tac defense.

If you are exp, mini 2 ints with damage GAs will make for a strong defense. If you have scout whores, prox 2 is also helpful. Station shield/hull upgrades are of great help, but they are expensive (4k total for 1st tier). Buy them to help stop galv runs and sbs. For stopping a bomb run, however, you'd probably benefit more by investing that 4k into hvy ints. (hint: you get a **little** more kick from station shields than station hull, so buy shields first).

Caltropping enemy-controlled alephs is help if the aleph is near your base. The mines will slow the enemy down, and give your team a chance to form up. Otherwise, just probe up so that your pilots can camp.

Even if you buy all of the right tech and have sectors probed, sometimes the enemy just ganks you. Shiz has some helpful advice for commanding in a furball...

QUOTE

Assuming they sneak up and manage to get into the sector without any difficulty. What do you do? Your team will naturally go head on with the bomber one by one and die just like that. Organize your team using "Stay together" and "Form on my wing" voice chats. If you have Sup or Exp MKII tech, with a group of 7 or 8 people, you can almost always catch the enemy nannites off guard and kill the bomber if you all attack the bomber at the same time. To do that, if you have time, type it out, if not use the "Attack Bombers" voice chat when you are within 1500m.

If you have lesser tech, it is a wise idea to tell the team "Attack Nanites." This will clear up any confusion, and you wont have many people attacking the bomber instead of killing the nans.

To avoid enemy rolling bombing runs, it is critical that you don't get podded. Often times you will be the only one able to go pick up all the pods, so if it looks

like the bomber defense isn't going to work out, boost away and pick up pods, telling the team to camp the next aleph.

Psychological Aspects of Bombing

Bombing can be a great psychological ploy, but be careful not to overplay your hand. The enemy will become discouraged if you kill base after base. Unless you are also killing miners, however, you can rest assured that your success will be short lived. Once the enemy starts stopping bomb runs with their tech, they will become emboldened and shift to miner o.

Speaking of miner o, if your miners are under constant attack, consider launching a bomb run on something the enemy really really needs. If you don't get eyed, great! If you get eyed, remember that your bomb run doesn't actually have to occur to be successful. Parking a credible bomb run beside the aleph will force the enemy to camp and give your miners room to breathe. Just communicate that to your pilots, so that they understand the goal of the bomb run. Let your pilots know that ripping out is better than suicide, so long as they are occupying the enemy.

Do not forget the power of bomb runs on your team's psychology too. If you're bombing to occupy the enemy, make sure your team doesn't get distracted and neglect other important duties (like miner o). If the enemy is camping, it is a great time for your miner hunters to work. Communicate with the team, and if necessary, call them out individually and pull them off of the run.

Bombing Strategies

There are tons of ways that you can pull off a successful run, and there are lots of gimmicks you can use to increase the chance of your run succeeding. Below are some ideas to play with, though this list is not definitive

Stealth Soloing

This works best with Bios, but any faction with an average sig can do it. You need a competent/patient bomber pilot, 2 scouts, and a small enemy base that isn't too far from an aleph (2-3k will do). Have the bomber go low sig, while 1 scout depubes and another pushes. When the enemy appears distracted, spring the trap, and send the bomber in with scouts pushing. If the enemy is off balance, the run will probably work, and the enemy commander will have a fit. Repeat this for as long as it works.

XRM

The "lock range" for XRM AB is 3.3k, but you can fire at 4000m when going 60mps. Anything within 4k of an entry point (friendly aleph, base, teleport, tp2) is fair game. You need several bombers to kill a base (even an outpost or tele). It takes three vanilla XRM2s to equal one AB1. Do the math and figure out how many heavy bombers you need, then use more (because 1 or 2 bombers will die

before getting any missiles off).

Counterbombing

We've already discussed the bomber's use as a defensive craft. If you spot a bomb run, consider using a nanned bomber to help with the defense, and bomb back when the run dies. Be careful though. For this to work, you need to occupy (at least) five pilots who won't be defending in figs or ints. Make sure you have enough pilots in small craft to defend. Your team has to be fast to nan, so don't try this if you have a team that doesn't want to nan. An unnanned, turreted bomber on D is as good as 3 pods and \$500 wasted.

Con/Carrier with bomber

We already discussed the benefits of sending a carrier with the bomb run. It also helps if you send in a constructor. Not only will you distract some of the d, but you may also get a free base in the target sector. If you can send in the con from a different aleph than your bomber, so much the better! Ideally, we send a carrier/constructor in first to occupy the d. As the carrier/con takes heat, the bomb run enters, slays the distracted defenders, nans the decoy, and goes on to kill the base. However, in-game circumstances may not be ideal. Don't be afraid to order a drone to "take one for the team". Carriers are great mine sweepers, and constructors can travel far enough before dying to disrupt the enemy camp.

Int Bombing

The idea is simple and brutal. Swarm the target sector with ints, who slay defenders and camp bases. When the base is camped, send the bomber in. As easy as this sounds, there are actually several ways to screw it up. Make sure that your campers stay camped, and make sure that the bomber has a couple of nans to push and repair it. Too many times, teams have tried this WITHOUT pushing/nanning the bomber. The result is usually the bomber dying to defenders who boosted in from next door.

Fighter/Bombers

Shiz writes about figbombers

QUOTE

A proper large game figbbr run can dominate just about any base that is close to an alleph. Figbbrs can also mount cruise boost, which is basically light booster 3, if you are going this tactic as a commander, it is fully worth it.(Reqs for cruise: lb1, boost 2(sy on)).

They are limited to a fairly short range otherwise the enemy team can defend quickly, so I would only use them in tp2's and if a base is less than 2.5ish. The more the better, and like any bombing run, if it's eyed before it goes through the alleph it will not work.

I've seen figbbrs used in conjunction with regular bombers, and it can be quite

effective, the enemy team has troubles knowing which target to kill first, often times one or the other will be neglected and the base will die.

I agree that xrm/p hvy bbrs are a lot better/easier to use though, and would shy away from getting figbbrs if I didn't have absolute confidence in my team.

Ozzy adds:

QUOTE

Fig BBRs are for swarming the enemy with targets. Ideally you want to do a FIGBBR run like a Galv run or a TP2 run.

Another thing is gunners. Don't bring them. One more FIGBBR means one more possible target/missile to fire.

Multiple runs

The problem with multiple runs is that they thin out the nans supporting every bomber. Avoid trying to do two equally supported runs unless your team is large (>20), or the enemy is turtled. Instead, divide your bomb runs into primary and secondary. The primary run goes after the real target, while the secondary run distracts or tries to pick up a opportunistic base kill.

Don't be locked into thinking that "primary" and "secondary" corresponds to large and small. Your secondary bomb run could be camping with 8 nans outside of the enemy's tech sector, while your primary 4-man run picks off a troublesome outpost and kills miners.

Credits: Shiz, Clay, Lindy_Hop, Psychosis, Ozzy

BIOS

Faction Perks

- Has a strong ship turn rate (1.2) and strong turn torque (1.3)
- Quick Build times(60s for all utility craft)
- Low mass ships
- Has a (1.25) modifier for shield repair, which is good for low sig approaches.
- Has a (1.25) repair modifier for station hull/shield repair
- Free Enh Carriers(SY Flag pending)
- Low signature(1.15)
- Excellent Sensors(1.15)
- Ripping pods(20s) makes a home Rip necessary
- Heavy Cloak mountable on almost all ships
- Fighters can carry prox as well as minepacks
- Minepack 1 comes with a Supremacy
- Cheaper Tech(.5)
- Adv. Tech bases come standard

Faction weakness

- Weak ship shield (.9)
- 10min. research times, which now can be partialled by the commander with the new FAZ release.
- Expensive tech bases(15k)
- Weaker hull(.9)
- Heavy cloak which comes standard in most ships slows down accel and creates a sluggish feel
- Weak Station Hull(.9) and Shield(.9)

General Philosophy

Before DN 000450, Bios was weak. It is a little stronger now, but in my opinion this is how you play to win:

- You HAVE to buy **Bombers**.
- You HAVE to buy **Adv Scouts**.
- You HAVE to buy **Enh Miners**.
- You HAVE to get a **Tech** base out the door as soon as you are able. Bios has the slowest research time of all.
- Partialling **Heavy Cloak 2** is almost a no brainer, and is useful to every Bios techpath.

When the game starts, you don't know what is going to happen, but I do. The other team will probably build bases near your miners and you will have to blow

them up. This does two things. When you bomb, you force the other team to think defensively. They will commit to defend. Most of them will stay off your miners. The second thing it does is gives you a shot at controlling the map. Ideally, you will have a bomber in their OP sector for a good 10 seconds before they even know it was coming. If you can achieve surprise, you will kill that OP. You will continue to move bombers around until you at least have ENH FIG, INT, or SF.

At this point you can more effectively hunt miners and shut down the enemy. I am not saying it is impossible to do so before you have these ships, but it sure is more difficult.

Settings

Lower total money is to your advantage

Techpaths

All BIOS Adv Tech is super deadly, but until you get there, you are going to need to be extra vigilant with base and miner defense (even moreso than other factions). BIOS has great scan range so there is no excuse for uneyed enemy bombers.

Supremacy

About half the time Bios is played, a Supremacy is purchased. Frankly this is a smart move and will work against all factions very effectively (except IC if you only plan to galv). You can't end the game with galvs. You might make the other team resign but not IC. TP2 is easily attainable with Bios: Begin partialling TP1 at game start and TP2 should be available by the 25 minute mark. As Supremacy you have a decent shot of expanding better using only teleports, but this has a penalty, your miners will need to walk more, buy another refinery or two.

Expansion

I imagine Expansion comes next in frequency of use. As a second tech, expansion's GAs are valuable (esp sigups for tac). As a primary tech, Adv Expansion can be a game ender. Most factions have a rough time when Bios HTTs are rolling in the hands of veterans (especially Dreg). However this is rare to see. Bios HTTs are the best for sheer surprise factor. The more time you give yourself undetected, the better off you will be.

Tactical

Tactical comes last. Bios Tactical is the supreme when you have the good toys. It is also almost the weakest when you do not. Bios Tactical followed with Supremacy and AB2 will lay the beatdown on all factions (esp with missile damage GAs). If the enemy lets you get that far, you deserve to win.

Garrison

I have seen a lot of Bios Gunship games lately, and this is probably a wise move

when you go Tac. At the very least, combining the power of Hunter 2/3 with Gunships lets you defend very well. If you buy Gunships and purchase a Supremacy or Expansion, you have probably crippled yourself. Bios Fighters and Interceptors are superior in response time and can be more offensive than Gunships. The one and only exception I will make to breaking this rule is if you actually have a grip on your team and your intention is to "rush" bombers. If you get 3 fully turretted Gunships and a turretted bomber with a few nans, you will devastate any early game ship that crosses your path (I kid you not). I do not care what faction is defending.

Multi-tech

The 15k price tag makes techbase spam an unlikely proposition for BIOS. However, if you manage to get advanced tech and still have working miners, you may find your team's coffers rapidly swelling. A great way to spend your extra cash is buying a secondary techbase. A secondary techbase gets you access to valuable GAs and new ships that you may need to end the game. Many commanders will buy a tac, where sig cloak 3 sbs can be bought in 20 minutes. Don't neglect other options though, because good tac rock may not be available. If you are already tac, a sup will get your sbs better ab missiles and missile damage GAs, though an exp will improve your signature. If you are sup, expansion's weapon GAs may give you the brute force you need to finish off the enemy, and htts are only 20 minutes off. If are you exp and going head-to-head with a bruiser faction, sup's hull gas may give your ints the extra endurance they need to withstand enemy whoring while your htts work.

Summary

Bios really is the faction that needs to bide its time. Control your miners. Do not overextend yourself with too many outposts. Run a little interference with some bomber runs. In 20-30 minutes you should have tech that can compete with your opponent, player skills aside. Now it is your job to get your players to use that game ending tech in the manner appropriate.

Credits: Weedman, Clay (multitech), Cronodroid

Belters

Faction Perks

- Strongest Hulls(1.05)
- High speed(1.15)
- Miners have great yield(1.25)
- Bases are cheaper(-20%)
- DF mountable on Ints
- Scouts, SF's, Sbs, carry booster. Bombers carry Lt Boost.
- Can use all tech despite not having the techbase
- Maintains the enhanced level ship of the tech even when the base is lost
- Cheap Ships

Faction weakness

- 4min research time
- Higher cost for tech(1.25)
- High mass(not always a bad thing, offset by (1.05) turn rate (1.1) turn torque to help with the mass)
- Poor miner capacity(.8), slow mining speed(.6), smaller paydays(-.25)
- Lack of small Shields
- Higher Base Sig

General Philosophy

Belters are a very adaptive faction. They do very few things exceptionally, but their versatility and ability to easily switch gears mid game makes them one of the most resilient factions in the game. Their greatest weakness is their high tech costs. Your team has to **pickup tech** or you're going to be out of money pretty damn quick.

Supremacy

Sup is the most commonly used techpath for Belters. Belter bombers are bulldozers, with high hull, mass, easy ramming and fig nans. Properly supported, Belter bombers generally roll over any enhanced tech that stands in their way. With a **Garrison** upgrade for heavy bombers and AC/AB3, these bombers can effectively take on heavy ints. Their high hull and speed also makes Belters great galvers.

Belter carriers are very effective early to mid game (especially for miner hunting). Their high hull makes them hard to kill, and any fighter can nan it back to health.

Tactical

Tac is the second most commonly used techpath. Belters are not the stealthiest of factions, but have some advantages when it comes to stealth. Their small

ships do not mount shields, but have higher hull. Their stealth fighters and bombers can take more punishment without the signature hit of shields. Their sbs can also mount boosters, making them dangerous on small bases and damaged techbases. If the other team goes sup, your sbs may get AB2 for free. They will get spotted sooner than other factions, but the hull bonus and boosters makes for longer EYE-to-DIE times. Lastly, Belters can keep stealth fighters and all stealth tech, even if their tac is lost. This provides a huge advantage, since it means the other team has no reprieve on miner defense, even if the tac dies. It also means that your team can stop eye/stop bomb runs with hunters 3, even without the techbase.

Expansion

Exp is the least used techpath with Belters. Their ints are slow and maneuver like tanks. Fortunately they are also built like them. They make excellent bomber/HTT stoppers, due to their high mass, high hull, and ability to mount dumbfires. Belters can HTT effectively because their hvy ints mount nan and ram the HTT to very high speeds. Done right, Belter HTT runs are like trying to stop a steam train with some paper straws. That said going Belt exp is likely to get you lynched by the whores on your team, so know your team.

Common Tactics

The trick with Belters is to always give the other team a base to target. If they are going after one of your ops, teles, or techbases, they aren't on your miners (or defending theirs). Belters bases are expendable (esp in late game). The more you build, the longer they have to keep bombing/HTTing to get to your two most vital assets: your Garrison and your miners. There is a saying that Belters should only lose if there are no more tech rocks left on the map.

Belters lend themselves well to dual-tech or omni-tech strategies, due to their low base costs and retention of enhanced ships. Even if you only buy the ships and the GAs, chances are good your team can pick up everything else you need from the field (either tech drops or enemy ships). The money saved from finding/stealing tech can be put towards new ship types and bases, allowing you to have the right tool for every job.

A common strategy is go Tactical to get sfs, and then buy a Supremacy or Expansion. Once sfs are researched, the enemy's miners should have trouble for the rest of the game. While one or two SF veterans dominate the enemy economy and tie up their team, you're free to mine and research hvy ints for everyone else.

Belter base doors



Changing Gears

Introduction

This section is meant to help you deal with the situations that arise when you or your opponent has suffered a serious setback such as:

1. Dealing with a blow to your tech base, or what to do if you have just killed the enemy's tech base.
2. What to do when you are out-matched by superior tech, or if you have better tech than the enemy.
3. Dealing with a loss of your economy, or what to do if you have killed your opponent's economy.

There are a lot of reasons why you need to be able to do these three things effectively. Mastering them will help you turn a lot of games around, and not to lose key advantages when you have them. Yes, you usually start thinking about other strategies when you're losing. That doesn't mean you shouldn't think about them when you are winning too. It's all too easy to let a winning team whittle themselves into a loss, or to find yourself having killed a poorly placed tech base only to see one rebuild that is impossible to kill.

The most important component to changing gears is **communication**. You have the **bold text** for a reason, use it. Keep your team **informed**, **focused**, and **under control**. At any point in time in the game there are just a few tasks that need to be done, your job is to make sure the team knows:

- **What to do now** (and you need to make sure they are doing it)
- **What they should be doing soon** (so they can wrap things up and get back to base)
- And hopefully never what they should have just done (but be nice if it comes to this).

Keep your team informed. Where are you mining? Where are your cons going? Where are they mining? Where are their cons going? What jobs need to be done? Your team needs to know the right answers to all of these questions in order to recover from a loss, or to take advantage of a situation.

You will also need to micro-inform your team, sometimes using private messages, to do the following:

- assign con/miner defense (including getting those who have strayed back onto the con/miner)
- get probing done
- tell somebody which rock the miner is on (or was on)

- give estimates to incoming enemy ships
- tell somebody to camp an aleph
- etc.

So now you know that there are a lot of things you should be telling your team. Here are six common situations that arise in a game, certainly with some overlap, and some general ways that you can recover from them or take advantage of them.

Loss of a techbase

You just lost your techbase (suck!)

If you have lost your main tech base (and you aren't Belters) you probably need to rebuild it. Sometimes you might want to change tech paths because you realize that a replacement won't help your team defend better, but in most situations you can find another rock to use. You need to control a path to that sector ASAP.

Get your team to focus on **probing** and **defending miners**. Don't let them stupidly bomb. This is where most commanders will make a mistake: they will let half of their team bomb because the team doesn't have any other tech and isn't sure what to do. **YOU MUST** help them figure out what to do, and huge bomb runs usually are not the right answer. You will likely need these people to defend against enemy attacks. Although there is something to be said for keeping the enemy on defense, since you have just lost your techbase it's unlikely you will be able to keep the enemy occupied by sitting a bomber outside one of their alephs. If you do this, they will likely rush and kill your bombing team, leaving you short on probing, miner defense, and defense on your new tech con (if it needs it).

Find your new rock and secure it. Expand if you have to. Build more miners if you have to. You will need **dedicated miner defense**, so get confirmation from players that they will sit on your miners. When your new tech base is ready, make sure you have the appropriate level of defense on it for how far it has it go. If you need to push it, a major team effort will be needed. Keep the team informed of **when** the base is coming, and definitely keep **the path** to your new tech rock **secured**.

Now that you know what to do, remember that **probes save bases**. You should always be looking at empty and enemy sectors for probes, especially when your tech base is next door. Remember that proper base placement is important. This isn't just for tech bases, of course, because a poorly placed op/tp in front of a tech base can start a chain reaction. The enemy easily bombs your poorly placed base (or maybe even bypasses it), half of your team dies defending the poorly placed base, and the enemy's run continues to destroy your tech. Don't let this happen! Use **caltrops/towers** if you have to take a tech rock that isn't so good, and **always** make sure that nearby sectors are probed (yes, repeated because

it's that important).

Also see the section below on dealing with superior enemy technology.

You killed their main tech base (woot!)

This is where you can lose your team to whoring, overconfidence, and stupidity. Your team gets drunk with joy and wastes 10 minutes of time. Before you know it, the enemy has rebuilt their exp, and you're back where you started. You just read the section on what to do when your techbase dies, so imagine how to stop the enemy from doing all of those things. There are two questions you first ask yourself: 1) Where is their next rock? 2) Will they change tech paths? Typically the same path will be chosen, especially if it was advanced. Here are the key things you should consider doing, and the general reasons for doing them.

- **Probe their home**, make sure you see that con coming, especially if they might choose a different tech path.
- **Probe empty/enemy sectors**, don't let yourself fall pray to a bomb run. You were advised against bombing in the previous section, but sometimes it works. Don't let it happen to you, don't let your team forget the basics.
- Kill their miners, make them payday that new tech base (sometimes 1 miner load can make the difference between having a new tech in 5 minutes versus 15 minutes).
- Expand and either take their tech rock, take the same sector, or block the path to it.
- Kill their small bases. If they were expansion, their ops will die more easily. If they were supremacy, their teleports will be easier to kill. You probably don't need massive runs for each of these (depending on your tech versus theirs), so plan appropriately. However, pay careful attention that you don't distract your team from killing the enemy's garrison, as in the next tip.
- Kill their garrison, **end the game**. If you can do this, **forget everything else**, get your whole team on the same page and finish it. Bring a constructor in with the run just in case (if you can, but don't let it delay the run unnecessarily). This is an "all eggs in one basket" strategy so keep that in mind. Often, however, it is the right way to go when you suddenly out-tech the enemy and you have a base next to their home.

The Tech Race

Your enemy has superior tech (suck!)

When your enemy seems to have much better tech than you, it's not always time to panic. Go back to the basics: **good probing** and **miner defense**. Hopefully you are close to adv tech, maybe you need to expand a bit to get that extra helium. **Tell your team** that you need a sector for money and don't let them stray. Assault mining can be the right path, but obviously be careful. Above all else, don't let the enemy surprise you: **get your team probing**.

It is possible to beat a team with better tech through **better teamwork**. If the other team wants to whore you while you can take out all their miners, that's great. If they want to bomb your small base(s) while you take out their tech base(s), that's also a great trade. Look at all your options, see what might be possible for your team to do. Uneyed runs can make all the difference. Make sure your team is killing probes, and don't let your guaranteed-to-succeed-if-uneyed run fail because of some random probe that's been sitting next to your base for 5 minutes (yes this happens all the time).

Like everything else, keep your team focused and on the same page.

You have superior tech (woot!)

This is the time to shine, right? Wrong!! It's probably the time to nan. Get to know those wonderful voice chats to get people in the right ship: "Defend Bomber" (db), "Defend Transport" (dt), "Need Scouts" (nu), "All Aboard" (wg), etc. It is also vital that they "Stay Together" (ls), "Formate!" (lo), and if you need to "Regroup" (le). Watch the balance of nans and attackers, keeping in mind what the enemy might use to defend. Being **uneyed** is the key to attacking, so make sure your team is **paying attention to eyes**. Don't let your team do stupid things with eyed runs.

This is when you kill miners, bomb/htt/galv bases, push constructors (all that fun stuff). Top priorities are the enemy's tech base and their mining. If the enemy is Belters, go after their Garrison to prevent another tech base. Keep them from getting advanced tech by whatever means possible (tip: kill that GT palisade before they upgrade the base to slow them down).

Now that your team is getting on the offense with the wonderful tech you've bought them, here are all the things you might be forgetting to do:

- Keep those miners safe and working hard. Nobody likes a freeloading miner sitting in base getting wasted. Once your team is rallied up and moving, make sure those miners are doing what they need to.
- Be on the lookout for enemy runs, remember **better teamwork wins games**. If you suddenly don't see anybody from the other team, that means they are doing something uneyed. Be suspicious! Make sure sectors are probed.
- Expand! maybe with another tech base. This is the best time to do it, especially if it means getting your team all the technology the other team researched (e.g., you went expansion but they went sup and bought you tons of sup tech, get your team a sup and enjoy it).

Economy

Your economy is dead (suck!)

Always rebuild. This section is simple. Even if they have super advanced stealth fighters or heavy scouts with ac3, just **get better miner defense**. You can't win a game on paydays alone, so don't try (unless you're turtling as BIOS with gunships, tech researching and the stack). There is always going to be some accessible helium somewhere, even if you are boxed into your home. Build that miner, and remember that He regenerates a little faster on empty rocks! Drain every rock you can, and then redrain then! Camp alephs or get caltrops if you need to, and get probes on the other side.

If all of your miners are dead, this means your team should now be doing just 3 things:

1. Probing, always probing.
2. Killing enemy miners.
3. Attacking bases (if possible).

Once you have another miner up you have to **call people back to defend**, and don't relent until people are sitting on your miner. Keep screaming and yelling until the job is done. Sometimes this is necessary. Boot morons flying around doing nothing, if you need to (of course be judicious here). You CAN recover from a dead economy and getting out-teched (which will probably also happen). Rebuild, re-expand, and get your team up and running again!

Your enemy's economy is dead (woot!)

This is a great time for your team if you achieve this, especially if your economy is churning out cash. You still need people probing (**especially their home so you spot new miners**), and you still need to be running a solid economy and expanding appropriately. Buy your team game ending tech and close the deal. That's the bottom line.

What else is there for your team to be doing? Get a few people on miner defense, and maybe some con defense (or a lot if you are pushing). If the enemy is attacking you'll need some defense for that, but don't get caught in an aleph-camping war while they get their econ back up. Have a scout or SF sit in their home and wait for a new miner. This can prove to be invaluable in large games where you can afford the player. Watch where that new miner goes and have your team waiting in ambush for it. Other than that, **press on** and **take over**.

General Tips

- **Always** let your team know **exactly** what **needs to be done**, and how to do it.
 - Keep your team constantly informed of what you are going to be doing with miners and constructors. Besides actually doing the right thing with miners/cons, telling your team what you are doing is the second most important task a commander has. **Do not rely** on your

- team to be paying attention to command wing, and for con/miner defense to just appear out of nowhere when it's needed.
- Don't let your team lose focus, watch for those situations where your team is in 5 different sectors, half podded, and nothing is getting accomplished. Refocus them on the most pertinent tasks. **USE PRIVATE MESSAGES IF YOU HAVE TO.** This isn't prom night: **don't take "no" for an answer.**
 - Watch for people sitting in base doing nothing. Maybe send a pm to get them on a task and motivated.
 - **Never** let **more than enough** people do the **same job**. **Call people back via pm's.** Little tweaks like this will open up players for other important tasks.
 - You don't need 6 ints with mini2 to kill that undefended con/miner, call 4 back.
 - You don't need half your team camping an aleph for the un-turreted bomber with nans, let them know you only need a few.
 - If you are pushing a con, don't let your whole team stray away on miner offense, or vice versa. Weigh your priorities, let your team know what is more important.
 - **Never** let **too few people** do a **necessary job**.
 - Ask for probing, get confirmation.
 - Don't let constructor defense stray. PM individuals and have them go back to the con. If they say they don't have a nan, tell them to \$#@! off and just be there so they will be chased (yes this will save a con).
 - If you are bombing, ask for nans. If you are htt'ing, ask for nans. Help your team out with your **bold chat**.
 - **Don't** let your whole team get podded, **always** make sure somebody (likely you) is **going to pick up pods** whenever more than 3 are together.

Ga'Tarran

Faction Perks

- Strong hull(1.0) and shield(1.1)
- Strong station shield and hull (1.1)
- Cheap tech cost(.8)
- Scouts able to mount Gat and Nan at the same time
- Palisade costs 10k and allows team to build tech cons without Garrison
- Special tech provided by the Research and Palisade
- Miners offload at all bases
- Harbinger of Doom is ultimate turtle-busting weapon
- Bases have built-in HTT defense (hard to dock)

Faction weakness

- Lack of refineries hurts GT on large maps
- Poor mining: .8 He speed, .95 yield
- Missile track nerfed(.9)
- Slower ripcord(.9)
- Most GT ships have large hitboxes
- Palisade required for base upgrade. While base is upgrading, protect your Palisade!

General Philosophy

GT has a ton of perks, and not a lot of nerfs. All techpaths work very well, though GT excels at some more than others. With shield/hull and hull buffs, GT ships can go toe-to-toe with most other factions. Despite starting fighters, you can play GT as a bruiser faction and dominate your opponent the whole game. You can also bide you time and wait for some exotic tech to finish, before cheesing your opponent to a defeat. GT can be played either way.

GT's Palisade allows a commander to stay in the game, even when things look bad. You need a Palisade to upgrade your techbase, and it allows you to build tech constructors without a Garrison. The 10k cost is made up by GT's 80% cost perk, and it is a requirement for most special tech. The Palisade makes GT a very resilient faction, and a determined team can turn a game around when things look bleak.

Settings

GT miners are lackluster, but the .8 cost perk makes GT's economy insane. GT can thrive with Med/Med/Normal, but higher money settings on a tight map will let GT get adv tech very fast. On 1.25 Starting, you can purchase both Enh Miner and Enh Con with your opening cons.

Tech Paths

Expansion

GT Exp is tough and easy to command. Despite the larger hitboxes, GT ints have thick hull and good gunmounts. HTTS are thick, and easy to ram. Base shield/hull GAs will frustrate enemy galvers and bombers. HE Yield/Speed GAs will enhance GT's strong economy, allowing GT to afford special tech like Armor Plated HTTs and Mini-Disrupter. Armor Plated HTTs have 4 times the mass of a regular HTT, and 20% more armor. Mini-Disrupter is essentially a mini-gun weapon with a Disrupter's damage profile. This is useful against Giga specmines and capships.

Play GT exp aggressively: push cons, int bomb and whore. GT has 1.0 signature, so you can sneak sig-upgraded HTTs without taking extraordinary measures. Always order an int with your HTT, since the int can easily boost-ram the HTT to its target.

Supremacy

Despite the missile/ripcord nerfs, GT sup has a lot going for it. The shield and hull perk, combined with excellent gunmounts, make GT figs tough in the field. GT's econ will let you buy GAs to mostly negate the missile/ripcord nerfs, while the Hull GA will make fighters even tougher. Buying Booster 2 as GT sup should always be one of the *first* things you do. With GT's cost perk, you can afford to buy most of the trimmings that other factions have to skip (don't do this if the other team is sup). Commonly used fighter special tech includes the Pulse Laser and MRM Zeus. The Pulse Laser is an energy weapon that does the same damage as Gat 3 (but with minigun profile), freeing your fighters from ammo constraints. MRM Zeus combines the maneuverability of Seeker 2 with the damage of Dumbfire 1.

With hull GAs, GT heavy bombers are absolute beasts. TP2/XRM runs will be difficult to stop, and easy to pay for. With a Research, Heavy Bombers and PT bombers (see below) can mount LRM AB. Though it has half the range of XRM (2.6k at 60 mps), each LRM AB is worth half of an AB1 and is useful for soloing/overwhelming targets that are within 3k on an accessible aleph.

Tactical

GT Tactical suffers from a missile nerf, but is otherwise a viable tech path. Play it like standard tac, but you'll need great probing (since Hunters won't work as well). GT tac also works very well as a secondary tech path. With your Palisade in place, the cost for stealth bombers is a pittance when compared to other factions.

GT's special tech for Tac is a mixed bag. The most popular combination is the Gauss Rifle and Solar Inverter. The Solar Inverter acts like a "reverse cloak," boosting ship sig while increasing energy regen. Gauss Rifle is a long range

weapon with high sig and high AOE damage. There is also a Light Cloak, which trades signature reduction for improved energy drain. It has a 50% sig reduction (vs Sig 1's 60%), while sporting a energy drain rate that is a little better than sig 3. It's good for sbs who need to cross a large map. While these toys have some benefits, commanders rarely buy any of this stuff. Light cloak is almost never bought, and the gauss rifle/solar inverter combination isn't as effective against pp-toting ints. Vs another tac, however, gauss rifles can destroy enemy ships in one shot (useful for sbs defence).

Mustang Rush

Do not overestimate the Mustang's power. While a fully tricked out Mustang is formidable, it is also highly unlikely you'll have the cash to pay for the adv sup (AC 3), adv tac (Hunter 3), Research, and Garrison upgrades you need to fully realize the Mustang's potential. The thing about the Mustang is that it makes a great escort ship (when enemy ships are going after something else), but it folds to pressure in an open field (especially to advanced tech).

To rush Mustangs, buy a Palisade instead of your second op, and use it to expand while continuing to mine. At the same time, upgrade your Garrison when you have the money. Instead of a techbase, purchase a Research Station and use it to mine. Remember to keep mining and your Mustangs should be cooked within 15 minutes.

Mustang rushes may work against a catchup faction, so long as you are very aggressive with your constructors, retarding enemy expansion and setting up launching points for easy miner whorage. Whoring enemy miners is key, because if you don't, you'll wish you went a traditional techpath once you start seeing enemy adv figs or hvy ints.

Mustang/Tac

Buy a Tac like you normally would and destroy their econ while getting your Pali out. Now instead of upgrading the Tac, buy a Research and upgrade the Garrison, and then buy Stangs. With Hunter2 and med shield 2/3, they will suffice for defending against miner hunters and bomb runs. Get Adv Tac and finish with Hunter3 Stangs and SBS.

This approach works best if the enemy is trying to sweep your Tac under and fight back. It also works well if their econ is toast and they are trying to make a comeback on 1 miner. This is an expensive route, so don't try this if your miners are in trouble, or if you don't need to. If you're not under pressure, put that Mustang cash into Advanced Tac and get SBS out instead.

You can also adapt this strategy to Guardians instead of Mustangs. On the plus side, you get a great defensive ship and you don't have to buy a Research station. Unfortunately, Guardians cost 2k each.

PT Bombers

PT Bombers used to be mean whoring ships, capable of lobbing LRM ABs while cruising at 120mps with medium shields (and turret). They are still all of that, but they now cost \$250 each.

PT bomber research is immediately available when you purchase a Palisade, though most of its equipment upgrades also require a Research station. They can mount Lightning and Thunderer Rockets (better on heavy armor than Lightnings). A skilled pilot can shred almost any opposing ship with 2 rocket salvos, and Rocket Targeting research makes the missiles even more powerful.

PT bombers can mount 3 kinds of anti-base weapons. The MRT AB missile can be launched at around 2k (going at 100mps) and is worth 3/4ths of an AB1. The Kinetic Torpedo is an unguided projectile weapon with a similar range as the MRT torpedo, but does the same damage as an AB1. The LRM AB missile was discussed earlier, and can be launched at 3.1k once the bomber is cruising.

You can definitely use PT bombers to beat back an aggressive enemy, or to bust a turtling team wide open. Don't try to use PT bombers as your sole techpath. The ship costs money to use, and the rockets are difficult for most pilots to score a kill. Despite their versatile anti-base weaponry, they have problems finishing a base against a camping team. Start with a traditional techpath, and get PT bombers later.

Faction Specific Tech

- **Guardian** - A slow mobile manned turret(mounts Skycaps). Great for defense. Each ship costs 2k. Requires Research.
- **Mustang** - Similar to a gunship, but with one turret (AC) and a front mounted Mini AC turret. Able to equip Hunters, Zeus, and Seeker missiles. Can load LB and ion booster. Requires Research, Palisade, and Starbase.
- **PT Bomber** - Similar to a Fighter/bomber, but it fires specialized AB weapons instead (MRT AB, LRM AB and Kinetic Torpedo). Mounted rockets are hard to beat, especially with rocket targeting system. Requires Research, Palisade. Now costs \$250.
- **MRR Lightning** - A multi rocket gun, able to do large amounts of damage, but is highly lag dependent. mk 1 comes for free, while mk 2 requires Research and Palisade.
- **LRR Thunder** - Similar to the Lightnings, but designed for capital ships and bombers. Requires Research and Palisade.
- **Rocket Targeting System** - Provides reticle for PT Bomber to help aim rockets. Requires Research and Palisade.
- **Rescue Drone** - A drone that is able to pick up pods, must be manually moved. Requires Research.

- **EW Pulse Laser** - An energy weapon whose damage output is similar to Gat 3, but with a minigun damage profile (ie. weak vs util and heavy+ armor). Frees pilots of ammo constraints, but requires that they manage their energy. Has excellent accuracy. Requires Research, Adv Supremacy, Gat2.
- **MRM Zeus** - Fighter-mountable missile with damage of Dumbfire1 and tracking of Seeker2. Requires Research, Adv Supremacy, Dumbfire2
- **LRM Anti-Base** - A long range ab missile, worth roughly 50% of an ab1. Requires Research, Adv Supremacy, AB2.
- **EW Gauss Gun** - A powerful long range weapon that shoots in short bursts, only used by SF's and SB's. Requires Research, Adv Tactical, and Sniper 1.
- **Lt Sig Cloak** - An endurance cloak, ideal for cruising through sectors without taking up much energy. Not as effective as regular cloak, but lasts much longer. Requires Research, Tactical.
- **Solar Inverter** - Works as opposite as a cloak does, raising your sig and energy recharge rate. Helpful for stealth fighters with gauss gun. Requires Research, Tactical.
- **HTT Armor Plating** - Increases the armor and mass of the HTT. Requires Research, Adv Expansion, Troop Transport, Heavy Troop Transport.
- **PW Mini-Disruptor** - A minigun weapon with disrupter damage. Mounts on hvy ints. Ideal for anti-capship and light bases. Requires Research, Adv Expansion, Minigun2.
- **Ion Booster** - A booster with very slow accel, and limited top speed. It has the longest lifespan out of any booster. Requires Research, Expansion.
- **Harbinger of Doom** - A large capital ship able to load the Doomsday resonator. When fired at an aleph, everything in the 2 sectors adjoined by the aleph is destroyed (including rocks and bases). Requires Research, Heavy Class SY, and Aleph Res 1.
- **Assault Carrier Drone** - This two-pronged development upgrades both attack carriers and carrier drones to more powerful "assault" versions. The attack carrier upgrade requires Research and Heavy Class Shipyard. Access to the assault drone additionally requires Enhanced Carriers.
- **EW SkyRipper LE** - Comparable damage to regular Skyrippers, only less energy drain. Requires Research.
- **PE Striker** - Mounted on Destroyers, this is a shorter range, burst fire Lancer that uses both energy and ammo. Requires Research, DryDock
- **AS Hvy Nanite Mount** - A powerful Nan mountable on the turrets of an attack carrier. Requires Research, Drydock, Nanite 2. **Currently not mountable on any ship. Do not buy**

Summary

GT is a great faction to command, because they are strong, cheap, and have lots of viable techpaths. To really run your enemy over, however, you need to watch your miners. Miners need actual bases to unload, so don't overextend your expansion. Lack of refineries will make your mining sectors empty, so your miner

AI won't automatically know that it is supposed to mine there. Constantly check f6 for docked miners, and send them back to work (especially at the beginning). With good miner management, you'll always have cash (and tech) when you need it.

Despite all of the special tech, don't be distracted by the pretty lights. For most games, traditional GT techpaths work just fine.

Credits: Shiz, Crono, Clay

Team Psychology

Dealing with your team

Forward Thinking

When thinking ahead you need to consider four things: your team, the enemy team, the settings, and the map.

The composition of your team should impact your techpath choice.. A large team filled with relatively cooperative players is usually a good sup team. A team with Weedman, Culmination, Virulence etc. is a great team to go expansion. Go tactical if you have a team with sf whores like Black Viper and SOB_Larry. Looking at your team at the beginning of the game (or even before the game starts), take note of your players and their strengths. Matching your techpath with your team's skillset will help you avoid a lot of nasty scenarios.

Your team's composition should also affect base placement. If you have quick reacting team, it is ok to have your bases closer to enemy alephs.

You would be well-advised to looking at that kind of players on the other team. You can often guess how aggressive the enemy will be, what kind of tech path they will go, and how much defense you will need on your miners/cons. For example, if the other team has determined miner whores (or several good players from the same squad), assign several players to miner d and/or mine next to ops/tele's/techbases/carriers all game.

Looking at the settings dictates how much money you can spend on non-essentials. The lower the cash, the less tech you should be purchasing. Tell your team what kind of tech they should be picking up, and have them notify you when they get something. Low money also requires you plan your economy and be strategic with your refineries (so one refinery can cover multiple sectors).

You should know the map you are commanding, and if the enemy commander insists on a map you don't know, launch with "Reveal Map" on and draw, just so that you know the map's layout. Good commanders see a map, identify the choke points, and plan how they will take control of the map. Excellent commanders will predict the enemy's expansion.

Effective Communication

Most commanders will rank effective communication as one of the most important things they can do AND one of their chief weaknesses. While it seems so easy in your head, something seems to break down between buying tech, watching the map, and barking orders at a group of 10 other pilots who actually do what you tell them (or not) because they like you (or not).

A good analogy is that commanding a pick-up game is like driving a tank: your team's reaction time and maneuverability are slow. It is essential that you voice what's needed long before it's actually needed. If you buy a piece of tech that you'll use for offense (galvs, hvy ints, sbs, bombers etc), talk to the team while that tech is researching. Let them know what you want done with it, how many people you want in one place, and what everyone else should be doing. The same goes for constructors (especially opening cons). Anything you can let them know ahead of time will help. Saxy explains further:

QUOTE

What you need to do is this give frequent periodic updates: "Con launching in 2 minutes" ... "Con launching in 30 seconds, head back to nan" ... "con heading _____ get nans and defense on it" ... followed immediately by ~dc (Defend Constructor) and ~nn (Need nans on constructor).

Look for confirmation of players that are actually getting ready to help the con, if you see nothing happening start PM'ing players who aren't doing anything important. These are the \$#@!ers you threaten to boot before berating your team. Start with those in base, then do a quick search of the map and find any stragglers. If you still can't find the players you need, start calling people back from other tasks (e.g., cancel a bomb run or dock your miner and have the miner D switch jobs).

If you still can't find your team, its time for roll call. If you have over-committed your team to something else (like when a comm says "everybody attack miners" and for some reason everybody speeds off to go kill) then you might just have to wait. A group of pods is also a perfect candidate pool for a new job, and if you can't get confirmation from the pod(s) be ready to boot soon.

Just like the tank, the team can't switch directions very quickly. You will not have good results if you give orders this way

- go kill their miners
- *(20s later)* I want that op bombed
- *(15s later)* probe this sector
- *(25s later)* defend!

The team will quickly become confused as it starts to go do one thing, see your orders, head back to base to do what you've asked, and see the next order on their way out. If you're lucky, you'll only have a few minutes of paralysis as most of your team will wait to see what actually gets done, picking up the tasks that others didn't handle. If you're not lucky, they'll ignore you and fly around the map.

McWarren has some suggestions

QUOTE

I've had the most success commanding when my team is obviously outmanned (stacked against) by clearly stating what your priorities are and keep reminding the team. For instance, in a recent game where we were belters and we already had an advanced tac up I started the following priorities: "Priority #1 is to defend your tac, priority #2 is to kill their economy, priority #3 is to defend your miners." Throughout the game I kept reaffirming the priorities by asking the team, what's the #1 priority? What's the #2 priority? What's the #3 priority? Seeing 15 pilots sound off in unison was impressive and we beat a massive stack that game. Clearly outlining the overall strategy at the start of a game is also a great way to focus your team's efforts. That is the point in the game they are most likely to be listening before the the mayhem of con defense and hunting miners begins.

Shizuku has another approach

QUOTE

Let your team know what you want done [in general], then pick individuals out to do select tasks.

Spidey chimes in with another, more direct idea

QUOTE

I may differ from everyone else here cuz instead of doing the nice holding hand thing I repeatedly colorfully bitch at my team until things get done. And when they \$#@! up I tell them so.

Oddly enough it seems to work *shrug*

Speaking of bitching....

On yelling

Lykorgous writes:

QUOTE

So, it turns out that commanding involves things other than f3 and f5. The following post is going to be a bit hypocritical; commanding is frustrating and stressing and you won't behave well. We all need to work on this, including me.

Always politely request things, especially sectors to probe. If the thing you requested doesn't get done, politely request it again. And again. Do it yourself if you absolutely have to, but remember that while you are learning you should be in base, looking at f3 and f5, 95% of the time or more.

Don't spam caps.

Do issue commands (of the sort that you can hit insert to accept) to newbies. Most of them love it. You can get them to do useful things, too, like picking up cash or tech, or eyeing alephs, or staying out of the middle.

Make sure your team knows your plan, both short-term and long-term. (You do have a plan, right?) If they know what's happening, they'll be more likely to do what needs to be done.

Here's the hard thing. Sometime soon, as you command over the next few months, you will command absolutely perfectly. Your econ will be glorious, you will control the entire map, you will have heavy ints and SBs, and you will lose. Horribly. Because your team \$#@!ed up. Listen to me carefully, because this is important; after this game, do not blame your team. Say gg. Say "thank you team". Then leave the lobby and do some good shouting or something in real life.

And when your team does well, be sure to thank them.

This is absolutely essential, because about half of commanding is getting people to fly for you; and they will not fly for you if you scream and shout and blame them. That's not fun. You need to be fun to fly for.

Organization

The team will work best when it works as one. Whether it's bombing, htting, killing miners or galving, a team that does one thing together will be more effective than one that is disorganized. When you give general orders such as "Everyone galv Tjeerd now!", you may notice the entire team isn't actually doing it. Pick off select members of the team who aren't, and ask them(on team chat so everyone can see) what they are doing. If it is important, like probing the sector whose aleph is 1k away from your tech base, fine. If the person is mindlessly doing nothing, focus him/her on what s/he should be doing. If the person still doesn't respond, boot. Your team will take note after the boot, they will see you are serious, and they will likely do what you ask.

Often times you are too busy to spend large amounts of time organizing a run. Appoint members of your team to do this. More than likely, this will happen on its own. All you need to say is do it automatically "Everyone listen to Ozzy, he's your boss now!"

Saxy has a great tip for staying organized:

QUOTE

DONT GIVE MORONS MONEY. Or in other words, don't give out more bombers/gunships/capships than are really necessary. If you have a 15-person team, you really can't afford more than 1 full bomb run with gunners and lots of nans. For instance, if [censored!] is on your team, he will constantly spam you for bombers and then drag away half your team to do something retarded. WATCH OUT FOR THESE SITUATIONS AND DONT GIVE THE RETARDS MONEY. Tell them "no", if they spam this is a great opportunity to get rid of the dead weight. As a pleasant secondary effect of this, most vets know who the annoying players are and will cheer when you boot them thus boosting morale. As an even better side effect of this, the booted player will hopefully join the other

side and start doing idiotic things for the other team (this is when you sit back and laugh).

Miner hunting party

A great organizational technique is to dedicate a handful of competent vets to miner hunting. Put someone in charge, and keep them together. If they can camp out in the enemy's opening ref sector, all the better. Miners typically aren't well defended in the early stages of the game (team too busy doing other things). You can usually catch them undefended in the enemy's ref sector, and at least stall their econ for a good 5 minutes.

Motivation

Motivation primarily comes in one of two forms: carrot or stick. You can inform your team of the glorious rewards that wait them once they accomplish a goal, or you can frighten them with nightmarish visions of the living hell that awaits them if they fail. Many commanders have their own style when it comes to motivation, but a few principles can be drawn from the collective wisdom of many commanders:

- Partial tech and promise to complete it when a job is done
- If the above isn't practical because your miners are dying, let your team know. Tell your team that they can't get _____ tech unless they defend miners.
- Base survival relies on adequate probing (and perhaps) camping. Inform the team why you need the base, and you need to be more specific than "we need more yellow dots on the map!"
- Cons need adequate d. If a con's death = resign, let your team know. If the con's planting will result in miner access, tech access or some other offensive/defensive benefit, tell your team.
- If team apathy will result in booting, let your team know and then follow through

To experienced players, many of these things may appear to be stupidly obvious. The reality is that many players don't immediately understand the inherent value of things, and need to be told.

Posting a resign to wake the team up is also effective. Is your opening op going with hardly any defense (despite your nagging)? Post resign, and inform the team that they need to be on the ball, or else they will need to find a new commander. Mcwarren explains:

QUOTE

The point is, take drastic measures if the team isn't listening. Propose a resign. Threaten to suicide a miner or con. Tell them you are buying a backup garrison if you don't see 4 nans on the bomber immediately. Just get them moving in a positive direction. More often than not, once you've broken your team's will and they listen to your every whim you will win even against overwhelming odds.

Morale/Rallying

Think of Allegiance as one of those Sims games, where your people have a happy meter. Your team's morale hinges on what you say to them. A fair number of commanders advise that yelling, swearing and using caps is the best way of communicating to a less-than-talented team. While nastiness does have its place, berating your team can have a very negative effect on your chances of winning (especially if they are losing because of stack, not because of effort). Try complementing players that do what you ask. If possible, reward these players with tech. Example: "Prober X has probed for me all game, so I'm going to get him probe3" People take note that pleasing you yields rewards, and they will try to please you more.

I have seen a lot of games that could have easily been won if the commander would not have badmouthed his team. If something goes wrong, the best method is to tell them how it sucked, and then tell them how they can fix it. Example: "Okay, we just lost our tac, that really sucked. Don't worry though, just defend this miner and we will put up another in Eleesh. Make sure that sector is probed so we don't send it blind." As long as your team knows what to do to win, they will concentrate on that, rather than on how much the game is sucking. Try to sound confident and positive. This will carry on throughout your team.

Booting

Booting is one of the more controversial topics within Allegiance, but effective booting can aid your team. These are good reasons for booting:

- They disobey your order (orders given in the heat of battle don't count)
- Sabotaging your game
- Lowering the team morale
- Unforgivable stupidity
- Annoying/distracting the team

Obviously, skilled veteran players have more tolerance than confident "voob" players, but you should try to be somewhat consistent. In most scenarios it is best to warn first, then boot. Of course follow the RoC on booting new players. The best policy on booting that I've ever heard comes from the man known for being the worst booter: Virulence. If someone tries to do what you tell them, then don't boot them, even if they mess it up.

Don't be afraid to boot the loudmouths either. One person can completely demoralize a team by whining and bitching. If it starts happening, tell that person to STFU and boot if they don't snap into line.

Teamspeak

Teamspeak is a great communication tool, but it will be unlikely that your whole team will be on teamspeak. Use it to communicate with the pilots who are on, but don't forget to type things out for the benefit of the rest of the team. If you're

trying synchronized bomb/htt/galv/stick-of-death runs, put people on Teamspeak in charge of those runs, and use Teamspeak to keep them synchronized.

Psychological Warfare

Teamwork

Sometimes the best way to demoralize the enemy is to work together. The enemy gets a little bummed when a something important dies, but Adaven explains how to intensify the psychological blow:

QUOTE

Killing miners or blowing bases is demoralizing, but much more so when you have a lot of people doing it. I'm talking 15 ints rushing the same miner in one group. 10+ nan bomb runs. These are the things that make the enemy say "Don't defend, its dead" and start to seriously doubt their team's own ability to work together. "Why bother playing? They've got their entire team nanning the bomber and we can't even get 2 on our htt..."

Taunting

Don't misunderstand this section's title. There is strategic taunting, and there is being a self-aggrandizing asshat. Spam all chat every time you/your team does something right, and you'll quickly earn the ire of a host of seasoned vets who will relish the opportunity to make you suffer.

On the other hand, little semi-innocent comments here and there can go a long way towards frustrating and demoralizing the enemy. Examples:

- "Did you have much invested in that tac?"
- "Was that a full miner?"

Also take advantage of opportunities to use voice-chats like "Need Miners!" or "Need Base!" Again, the goal is not to infuriate the enemy, but to gently remind/convince them of the utter futility of the position.

Keeping the enemy occupied

If you're a strong starting faction playing against a catchup faction, you don't want to mess around. You don't want to spend 20 minutes buying the perfect tech before going on offense. You want all of your players to pilot their interceptors to a single sector and sweep the enemy under while they are weak.

The story is different if roles are reversed, or if both teams' factions are equally strong to start. In those situations, you don't actually have to kill something to be successful. A single scout can indefinitely stall undefended enemy miners without killing any of them. A small bomb run can indefinitely occupy most of the opposing team by ripping out at the last moment and bombing something else. These offensive feints will distract the enemy and make it hard for the enemy

commander to get his/her team to do anything useful. You frustrate the enemy commander, AND you keep enemy pilots in their own sectors and out of yours.

The more you have the enemy defending their stuff, the less they will have the chance to attack yours. This is why defense-oriented strategies rarely work, and many intermediate commanders make this mistake. They have great openings, only to be distracted by consolidating their position and getting advanced tech. If you aren't attacking the enemy, then the only thing they have to think about is how to attack you. Even when you're bidding your time as BIOS, you want to have some offensive irons in the fire.

If you can manage to kill something, kudos! If you can't, the next best thing is to make the enemy obsess over the possibility that you could, so they dedicate most of their time to defense (freeing you to be more aggressive).

This is something that sup is very good at, since figs can ripcord all over the map. Factoid recently made a very keen observation in a recent post:

QUOTE

Supremacy plays to its strengths by trying to hit everywhere at once, and aborting the runs that will likely fail. With riptime perks and the shortest riptimes to begin with, they can always be in the field in small groups, looking for fights. Confident that they are equipped to deal with any threat, and can easily run if outclassed. Also should something important need to be defended, they can rapidly respond to that threat, and then go back to whatever they were doing.

Forcing the other team to resign

Many teams resign too early, despite having a good opportunity at staging a comeback. Having seen comebacks emerge from no where, I'd be hesitant to resign at the first sign of trouble. Resign if you have basic tech and the enemy won't finish it. Resign if you're down, and you can't get your team to focus on important things (like defending miners). If your team can defend 1 miner though, you can stage a comeback (esp if the other team is just whoring). Unlike chess, it is a "faux pas" to resign as the enemy is about to win the game.

The most effective method of forcing an enemy team to resign is to kill their economy early. Strong opening factions like IC and Rix are really good at this, and the loss of several utility craft will dishearten most teams.

Technoflux

Faction Perks

- Excellent ship turn rate(1.1) and ship turn torque(1.15)
- Great ship hull(1) and station hull (1.1)
- Great shield regen (1.5)
- Ships weigh less, improving accel
- Scouts have 2 guns (3 for hvys) and mount lt boost.
- Good Sensors(1.1)
- Great PW(1.0) and EW(1.2) range (1.2 range for PE weapons)
- Quick Ripcord(1.3)
- Great econ: yield(1), mining speed(2), cheaper tech(.75)
- Perfect accuracy weapons(not always a perk)
- Adv ships from every techpath are extremely powerful (extra gun mounts and/or great hitboxes)
- Available beacons(\$100 each)
- No mines. TF uses plasgens and SC towers (not always a perk)

Faction weakness

- Slow speed(.9)
- 6min research time
- Small capacity miners(.55) as well as small paydays(-.15), starting money(-.2)
- Scouts and Figs have large hitboxes
- Lack of mines adds difficulty to camping alephs
- Weapons are all use energy. Bomber turrets must be disciplined.

General Philosophy

TF is a comeback faction. You need to survive the early game so that you can dominate the late game. To help you survive, TF scouts have excellent offensive capabilities against most factions, but they have poor defensive capabilities. The way to succeed with TF is having your team on miner/con offense straight from the start, while at the same time maintaining the security of your bases (ie. probing for bomb runs).

TF mining takes some planning that will be addressed below. The miner's slow traveling speed and half capacity make mining empty sectors a pain, but miners will voraciously consume all of the He in a sector with a ref or op. Good econ planning, combined with partialling, will ensure you have adv tech very quickly (even with 6 minute research). TF advanced tech is almost universally supreme, and other factions will have a hard time competing.

TF's peculiarities are worth noting. Like Rix, TF doesn't use missiles, so you can

upgrade countermeasures without worrying about them being stolen. The lack of mines makes stopping bomb runs more difficult, since the bomber will come in full speed. You can make up for this somewhat by advising your team to drop plasgens a little further from the aleph than usual. This ensures that the enemy nans will spend more time in the plasgen's "sphere of doom."

You can also augment your defense with SC towers. Other factions have AC towers at start and need to research SCs in tac. SC towers are very powerful, but expensive to early TF (most of a miner load). They can help stop a bomb run, and provide great defense should the enemy go tac. As a rule of thumb use single skycaps vs tac, but go for 2 skycaps vs anything else. Probing/camping alephs is still important vs tac, since a smart sf pilot can elude SC towers. SC towers become less effective as the enemy ups their tech, so rely on them less in mid/late game.

Economy

TF miners require a lot of management and good planning. With good planning, you'll never want for cash. With poor planning, you'll be waiting 10 minutes between miner loads. TF miners travel very slowly, have half the miner capacity of a typical miner, and suck the rock much faster than any other miner. As a result, TF miners will take forever to drain an empty sector, but can empty a sector with a well-placed ref/op in a couple of minutes.

You need to plan your expansion so that your miners do not have to walk much. On large maps, you'll find yourself constantly buying refineries. Avoid mining empty sectors (or maybe do one pass but prevent your miners from backtracking to finish the sector). Always keep an eye for where miners have to go next, because if they are mining by a ref/op, they'll be going there in a minute or two.

With reduced miner capacity, you will be getting money often but in smaller quantities. Given TF longer than usual research time, use that right mouse button to keep the research going. Partialling is the key to successful TF. Bear in mind that you want to get adv tech up soon, but you have 6 minute research. Invest in advancing your techbase along with your enhanced tech, so that you can start your adv ships soon after your enh tech goes online.

Money settings

TF does well on all money settings, from low to insane. Just be wary of factions that disproportionately benefit from extreme settings (like Rix or Bios). You need to be aware of the money settings and plan your expansion accordingly. On scarce, with 2 he rocks per sector, TF is extremely powerful. Just place refs in between the rocks, and manage those miners. You will have a lot of cash in no time.

Opening

TF miners have a small rip capability. This means that you can push your

opening teleport without suffering too many ill effects. Use the opening teleport to speed expansion, or plant it next to your favorite tech rock to speed planting your techbase. This is important, since TF gets basic ships as soon as their tech builds. Without those ships, TF is very vulnerable to bombers. Even after your tech is up, you want to make sure that border sectors are probed. Ask/Assign a prober.

In general, TF bbrs are a good buy. They are less expensive than other factions' bombers, and they remain dangerous throughout the game. Their energy-based AB makes a nanned bomber a great ship for stopping bomb runs. Their turrets have no spread and long range, so skilled turret gunners can whack defending ships before they can do any damage. Any faction's bombers will make your team stupid, so you do need to watch your team and remind them of proper priorities. A voob bomber can distract his/her team for 15 minutes while your constructors and miners die. Don't let this happen, and crack the whip (boot) if necessary.

Lastly, get that It boost for your scouts. It is cheap and vastly improves your scouts' abilities. If you don't want to waste the money because your team might find it, at least partial it (\$188 per 10% or 36 seconds of research) and keep it rolling. If your team does find it, you're only out a few hundred. You can live with that.

Techpaths

Supremacy

Many people view sup as the natural tech path for TF. TF sup is very powerful, and its development is similar to that of other factions: get adv figs/galvs. While you galv the enemy back, up the garr for hvy scouts, tp2 and hvy bombers. Buy XRP AB (TF's XRM) and do TP2 drops while whoring your enemy with superior ships. Other factions will be hard-pressed to stop you. Buy heavy plasgen 1 and 2 for your scouts and fighters. They help compensate for the lack of mines/missiles, and will shred anything that comes into range. If you decide to do conventional bomb runs, get ac2/3 and ab2/3.

Speaking of bombers, TF has great ninja bombers. Not relying on missiles, they have a relatively low sig and can be pushed by boosting nans. If you have a good ninja bomber pilot with a couple of nans, you can occupy/distract the enemy with offensive feints and/or knocking over easy bases while the rest of your team does more important things. Just make sure the rest of your team doesn't get distracted.

Garrison

Most Garrison tech complements Sup, so it is fitting to discuss it here. If you are sup/exp and you upgrade your Garrison, get adv scouts. TF advanced scouts mount 2 nans. This does not mean that "1 adv scout nan = 2 basic scout nans,"

because of energy drain. It *does* mean that the enemy will be less likely to overwhelm the bomber/htt with damage (at least in the short term), so you can bomb/htt in situations where other factions couldn't. With 3 gats, TF heavy scouts are really mini-fighters with great speed and scan range. With a turret or without, send your heavy scouts to finish off the enemy's economy and/or camp alephs against sbs.

If you are bombing, get heavy bombers. Aside from the obvious hull benefits, hvy bombers have more energy, reducing the strain of PE turrets firing while the pilot uses the bomber's main gun. Hvy scouts still mount 2 nans, but pack more plasgens. An Ac3 hvy bomber with hvy scout nan train will even make adv exp teams nervous. If you are sup, you'll also need hvy bombers to do xrp tp2 runs.

Garr tech most obviously benefits from Sup, but feel free to try out various combos of tech + gar and see how they play out. Rushing gar though is something you should never do unless there is a very specific money situation and you really know what you are doing. More often than not, rushing gar or tac as TF vs a competent comm will lose the game instantly.

Expansion

TF exp is a great whore techpath, but a little lacking in the end game department. With no dispersion, TF hvy ints have awesome guns and slim hitboxes. They are not super fast, but they will still outrun figs from other factions. Hvy ints also have a lead indicator which can help (or deceive) inexperienced pilots. Exp's endgame is a little lacking because TF htts kind of suck. They are slow and not all that stealthy. If you buy htts, don't forget the anti-shield cannon. If you forget about it, your team will have useless htts for 6 minutes (and yet some pilots will still want to buy them). Because of the HTT's weaknesses up the garr and buy adv scouts for dual nans. Also buy plasgen3 (aka "pwnage generator") to help your nans beat down whomever tries to kill them.

You can also play TF's endgame like IC's endgame: get advanced cons and smash them in the enemy's face, then htt. TF adv cons are sufficiently fast, and their model makes them hard to ram. Your ops will be galvable, but you can manage this problem. Make sure your heavy ints shred opposing fighters as the con lines up the plant, and then camps while an htt or bomber closes the deal.

Tactical (with Sup or Exp)

Unless you really know what you are doing, don't go for tac as your first tech. If you get to adv tech, you're golden, since TF adv sfs mount 3 guns. With ew range gas, you sit outside of turret range and fire 3 sniper 2s at enemy nans. When you buy your sbs, also buy Ion Blaster Cannon 2, which greatly improves your stealth bombing capabilities. The real problem with Tac isn't the advanced tech; it is getting there.

You start with light stealth fighters, which aren't good at anything. It takes 6

minutes to get regular sfs for decent miner o, so the enemy can mine during that time. The real problem, however, is defense. Without hunters, you have to rely on plasgen 1 and (if you're lucky) sniper 1 to stop bomb runs. This usually doesn't work. Using a nanned bomber for defense may help, but if the enemy is committed to a bomb rush, you'll be hard pressed to kill the bomber before it kills your bases.

Once you get advanced sfs, those worries are over, but because you are so vulnerable, most commanders feel safer using Tac as a secondary techpath. Get advanced (or even enhanced) sup or exp, and then buy your tac. While the tac cooks, you still have good ships for miner o and bomber d. Like Rix, TF tac benefits more from exp than sup. TF sbs use a PW-based AB weapon, so Exp's Range, Damage and Sig GAs really help. Like Rix, TF sfs can drop probes, mines (if they find them) and plasgens. With Exp's plasgen 3, a team of sfs pilots can obliterate an enemy bomb run without ever being seen. If you went sup, remember that TF's sfs can drop TP probes, and are probably a better choice than scouts.

Summary

TF is a controversial faction, because its advanced ships are almost uniformly superior to those of other factions. Expect complaints from the other team if you chose TF (and especially if you win). It is sufficiently weak in the beginning that a focused opponent can win the game in the first 10 minutes, so don't let that happen. Get people probing, and buy bombers for d if you smell a bomb rush. Plan your economy and partial tech. Before you know it, you'll have advanced tech and can grind the enemy down.

Multitech

Introduction

Many commanders consider multi-tech an essential part of any end-game strategy. In reality, most advanced techs are sufficiently powerful to end a game. Despite this, going multitech is a great way to buff your primary techpath, or to try a different end-game when your team can't win with its primary tech. Most combinations work best once the team has some kind of advanced tech, but some work well as opening strategies (most commonly Tacspanion). Even in these cases, though, one absolutely must get functional enhanced tech before buying a 2nd techbase.

As we near the end of this ACS session, you will find that these articles don't hand things to you outright. We will break down some basic techpath combinations below, but you will find that there are many more combinations left to explore, especially when one considers the particulars of each faction. You are encouraged to do some analysis on your own, and develop effective multitech strategies that are characteristic of your command style.

Tacspanion (Tac + Exp)

This classic and widely used multitech strategy is also one that works well without advanced tech. Use SFs to destroy miners and cons, while Ints defend against enemy bombing runs and miner killers. For this techpath to work, you need a well-disciplined team that can use both SFs and Ints effectively. The nice thing about SFs is that you don't need tons of whores, but you do need enough competent pilots that can hop in an int and stop an enemy bomb run. The real danger here is that you get mini 2 ints with damage gas, and then lose your exp to a bomb run because your team tried defending with Hunter 1.

Familiarity with your players will tell you if getting a tac (or exp) is worthwhile, but judging discipline is a little harder. A great way to gauge your team's discipline is to watch how they behave in the opening minutes of the game. Is there a sufficient mix of scouts and ints/figs? Did the scouts spread out? Is the map mostly scouted in the 1st 5 minutes? Did your constructors/miners have sufficient d?

Method

In classic Tacspan, you buy a Tac and Exp in rapid succession, getting a sufficient level of enhanced tech in each. The order in which you buy the Tac and Exp depends on the enemy team. The sooner you get your Tac out, the more benefit you gain from it (you benefit less if you kill the enemy's miners AFTER they have advanced ships). If the enemy is very aggressive, however, you will need to get the exp first.

Buying two ehv techs at game's start puts a large strain on your econ, so you can't pump a lot of money into stuff you don't need. For most factions, it is hard to buy three rounds of ops and teles, and then try to pay for two techbases + tech. Bombers will probably have to be skipped. You may want to skip enhanced cons. Until you have sufficient enhanced tech from both bases, you're really working on a tight budget. Don't splurge.

Once you get SFs and mini 2 ints, you can either get SBs or HTTs. How do you decide? If the enemy is still very aggressive and partialling adv tech on 1 miner, you may want to get Hvy Ints + HTTs and smash them in the face. SBs are great for killing minor base spam, but requires a lot of teamwork for larger bases. HTTs also require teamwork, but it doesn't vary based on type of base. Teamwork with HTTs is also a little easier, since everyone has to stick together (and there is a clear person in charge of the run). HTTs are great for liberating tech bases, but you'll have a harder time if you have to capture 2 or 3 outposts before getting a crack at that techbase (by then, everything will be camped). Make your decisions based on your team, and the kind of bases that must die before you can kill the techbase.

Tips with Tacspan

- When most people think of Tacspan, they think of getting the two bases right away. You really don't have to though. Many commanders are perfectly happy to get advanced exp, and then buy a tac for the SBs. This is a common route for Rix, since Rix HTTs are a little harder to use, but Rix SBS are awesome
- You can probably skimp on the Tac GAs (at least at first), but be sure to buy yield, damage 1, and sig 1. High sig factions really benefit from sig 1.
- Ideally, your SFS should have Cloak 2, Utl 2 and Hunter 2. Unfortunately, that costs 15k (more than your exp). If you have the money, buy them. Tell your team to pick them up if they find it. If you're in a pinch, try to get 2 out of 3. My (Clay's) personal recommendation is Utl 2 and Cloak 2, since Hunter 1 can hit miners and does the same damage as Hunter 2. Other pilots have other preferences. When in doubt, ask your team. Buy them the tech that will play to their strengths.
- If you're Rix or TF, the PW GAs are vital for your SBS. Buy them.

Sup + Exp

This is the whore's choice. The most common combination is to get Adv Exp, and then buy a Sup for GAs and equipment. Interceptors with Sup GAs (Hull, Agility) and Booster 2/3 become very hard to stop. If your team isn't sophisticated enough to HTT, you can also buy bomber equipment and send in a bomber with Hvy Ints to camp/whore.

This is a good response to a Sup + Tac strategy. You can steal the enemy sup tech, making upgrading your ints painless, and then send in your ints with an

AB2/AC2 bomber (also stolen) and blow the Tac before it makes trouble. Obviously, PPs help when trying to stop Tac. Remember that if the enemy goes straight tac, don't mess around. Don't try to get fancy. Go right for the jugular while your miners still live.

Method

Most people get the Sup after Advanced Exp. This is a good choice for Exp v Exp games, where you need that extra edge. Get Adv Exp + HTTs and Sup for extra zazz. Then go and grind your enemy into the ground with your tougher/faster ships.

Some circumstances may warrant buying an Exp to help advanced Sup. This is common for Belters, where techbases are cheap and damage, yield, and accel GAs really help Belter ships and mining. Factions with really strong fighters (Rix, TF) can also benefit from the Sup + Exp approach. This is good for whoring your enemy into submission, but you'll definitely find yourself lacking in the game-ending tech department (ie: tp2, hvy bombers, etc) unless there is still enough Helium on the map.

Tips with Sup + Exp

- If you have ints, skip enhanced fighters. You can also skip all of the Sup GAs except hull and (maybe) agility
- If you are Rix, Stinger 2 will help your HTTs kill bases (esp with dmg GAs). For capturing, it is basically a wash.
- This item is intentionally left blank. What nuggets of advice to you have? Yes, we will steal what you post.

Sup + Tac

For many factions, Sup and Tac complement each other nicely. The most obvious route is to get Adv Tac and SBS, then buy a Sup for AB2 and hull/missile GAs. If the enemy has basic ints (with PP) and are trying to run your Tac over, gat 2/df 2 enh figs will help with the defense (esp if you are Dreg). If nothing else, the figs will distract the ints (by virtue of being visible) while your sfs take down whatever badness is coming your way.

It is also very common for commanders to get Adv Sup + Galvs, and then begin to develop Tac while their team galvs the enemy off of the map. This approach is appealing since Sup's "equivalent" to SBS, tp 2 xrm runs, is only slightly less expensive than just buying SBS (60,000 for cloak 3 sbs vs 57,500 for tp 2 hvy scouts and xrm 2 hvy bombers). If your team has trouble working together, SBS may be easier to use than tp 2 (5 people on an sbs run vs most of the team on a tp 2 run).

Method

The general outline is above. Work it out.

Tips with Sup + Tac

- This isn't the best choice for Rix or TF. Since their SBS don't use missiles, they benefit from Exp GAs, not Sup. If you want to mix Rix/TF tac with something, mix it with exp.
- What else do you think?

Questions we didn't answer (and so you have to)

Except where it was necessary, we largely left out how faction differences impact multitech (esp with special-tech factions like Phoenix and GT). We also left out how Garrison and SY figure into the multitech mix. Some commanders get HTTs, and then buy faster/tougher advanced scouts to help with the runs. When should you do this, and is it worth it? Rix and TF Heavy Scouts are like mini-figs, so some commanders get basic sup and heavy scouts before advancing their sup. How does this pan out? Because of Virulence, IC supyard is fairly popular with pilots. Can other factions employ a similar strategy? Are there any multitech combinations (that we haven't mentioned) that really play to a faction's strengths? What are they and why?

Start thinking, because ACS ends in 2 weeks, and you need to develop these things for yourself.

Credits: Crono, Clay

Finish Him!

This is a happy topic. Having expanded completely, mined freely, and teched up, you are now in the dominant position; your opponent is on his knees, begging to die honorably. In other words, if you \$#@! up, it will be posted on the forums in 5 minutes, and that chatty voob that you hate will be commenting.

Don't \$#@! this up!

General Comments

Even when in a dominant position, don't be so quick to charge the obvious target with guns blazing. Distractions are always good. Whenever you try to accomplish anything in this game, the more pre-occupied the enemy is, the better your chances of the success. If the enemy team is responding to a loud/unrealistic threat elsewhere, they will not be defending the **real** target.

If one method doesn't work, try another. Be patient; it takes time to crack turtles. You can optimize things by planning ahead. Not sure your HTT runs will work? Buy a tac with your extra cash and start researching sbs.

Make sure your team knows your targeting priority. Nothing is worse than the enemy finding out you have sbs because someone knocked over a refinery. Focus your team on more important targets, and let them know where the team stands on each mission. Encourage folks on the same run to communicate with each other, and with folks on other runs. It may even help to designate a lead for each run, so that they can synchronize. If you are pushing a con, let everyone know and demand sufficient d. If you're busy, designate someone to baby-sit/plant the con. If its a sacrifice, let everyone know, so that they focus on the real target.

Ending Strategies that Rely on Adv Sup

Regular Bombing

A *perfectly* executed bomb run, with heavy bombers, heavy scouts, ab3/ac3, can sometimes defeat advanced tech. A good bomb run is particularly strong against tac (with counter3). The bomber cannot be eyed on its run in, and the enemy base must be reasonably close to the entry aleph. Alternatively, you can sometimes get lucky just by having 20 nans and Weedman driving.

Most of the time, forbid your team the use of bombers against advanced tech and get a better finisher. Bombers are expensive, soak up a lot of team-time, and are not as effective as most other options. The way to use bombers is as part of an integrated strategy, where you have several offensive irons in the fire (other bomb runs, htts, etc).

Bios bombers are good, since they cloak. TF bombers are always dangerous, but their power definitely wanes vs adv tech (where badass turrets matter less). Dreg bombers are good for finishing the game due to high missile damage and speed, and Belters bombers are good because of easy ramming and heavy int nans. Treat Nix bombing like you would capships.

TP2

XRM TP2 drops can be devastatingly effective, but buying all of the tech you need can be expensive. You need a Starbase to get access to tp1 and Adv Sup for tp2. Advanced scouts (or better) will make it easier for pilots to slip into enemy sectors undetected. Missile Damage and ripcord GAs are clearly beneficial. You obviously need bombers, but heavy bombers will live much longer. You also need heavy bombers to mount those XRM AB missiles you bought (if available). In the end, it is only slightly less expensive to get great tp2 tech than it is to buy a tac and get good sbs. So long as you have helium available, both can be viable options to you.

TP2 drops work best if they are uneyed, and a visible decoy drop is made somewhere else. Make damned sure you're only giving the TP2s to vets, and that your team has plenty of warning. Things get harder if SY is off (you don't have XRM ab). You'll probably need decoys since you'll have to drop on a probed rock near the target base. If you can't get an uneyed XRM drop, consider having 2 scouts drop in the open on opposite ends of the sector, in the open. This way, your bombers can rip in and immediately attack the base. It works well against sup, tac, and a distracted exp team. If you are tp2ing a focused exp team with competent pilots, it is more of a risk (since ints can usually cover the distance before the bombers rip in). Dropping eyed behind a rock may be useful.

A good TP2 drop requires a lot of bombers, but how many bombers do you need? Short answer: put all but a handful of people in bombers. Long answer: Work out the math. Bust out ICE and look at the numbers. Look at the profiles for AB1/2/3, and XRM1/2. Take GAs into account. Also account for the fact that about 25-50% of your bombers will die before being able to fire anything. Most techbases die to 5-7 AB1s. Get a guessimate on how many you need, and ask for a few more than that.

Remember that if worst comes to worst, you can always TP2 in SBS from 10k out.

TP2ing doesn't depend too heavily on faction, but a few variables do come into play. TF has a shorter riptime, and Dreg has a missile damage buff (2 Dreg XRM2s with GAs = 1 AB1). Bios scouts have an easy time making it in for the drop, and BIOS bombers can cloak to buy some time while they line up on the techbase.

TP2 is very effective against Tac, neutral against Sup and weaker against Exp.

Fig/bombers

These are not very strong, but they can be used effectively against bases within 3k of an aleph. Treat it like a galv run, making sure you get cruise boosters and ss3. If you can do a distraction, that will really help.

Again, faction doesn't figure in too prominently, except that BIOS cloaking figbombers are cheese. TF figbombers can dogfight with their cannon (don't get carried away), and Dreg figbombers are fast.

Have you noticed that I've mentioned BIOS and Dreg in every single paragraph so far?

Galving

Galving is not an end-game strategy, however it is a useful mid/late game strategy that can pave the way to an end-game for Sup. Galving allows a Sup team to deny map control to the enemy and to free up new sectors for mining. By denying forward bases and destroying offload points for miners, galvs help a Sup team to stall their opponent's end-game efforts, making time for their own end-game. A galving sup team may even be able to cause the enemy to resign. Do not make the mistake of assuming that Sup's end game ends with galvs. Your end game is just beginning once you bought galvs. There are still many things that the enemy can do to mitigate your advantage and win the game.

Ending Strategies that Rely on Adv Exp

HTTs

HTTs can certainly finish the game, and can sometimes snatch a sure win from the enemy. Unfortunately, they are difficult to use correctly, difficult to coordinate, and easier for the enemy to spot. You should, by now, know about the loud and quiet methods of HTTing. The loud method is unlikely to work without int bombing. The quiet method requires at least one skilled pilot, some nans, an int or two and a lot of patience (distractions are great). HTTing can be very frustrating for the comm, and it is sometimes worth it to grab SBs instead.

Bios HTTs are nigh-unstoppable. Dreg HTTs are very good. Rix HTTs are cheap and double as bombers, but aren't that good since they can't be rammed. Giga HTTs are kind of good (very rammable and high speed). Belter HTTs are also good, with high speed, easy ramming, and heavy int nans. GT HTTs are also very easy to ram.

TF HTTs stink. Nix HTTs can't be nanned, and their turret doesn't make up for that. IC HTTs are good as part of a push-and-whore strategy, but their high sig limits their "quiet" HTTing.

Int bombing

This goes well with con pushing. Get your whole damned team on the run, and make sure that there are plenty of nans (the worst is when the entire team owns a sector with ints, and the unnanned bomber dies to ships boosting in from an adjacent sector). Either make sure your ints have cleared the aleph well ahead of your bomber, or have the entire run go in simultaneously. You don't want your ints to make enemy proxers drop just as the bomber gets rammed through the aleph.

Don't expect to be able to camp against heavy ints or adv figs. Do expect to be able to camp against adv. tac. In fact, int bombing is a great thing to do against tac.

Res works well here.

Int bombing depends more on the faction's ints than on the bomber. You know who has good ints. You can use gunships or adv. figs in place of ints, but you generally don't need to. Sup has better ways of finishing a game, and gunships are really only super powerful against basic tech.

Con pushing

Get advanced cons. Make sure your whole team is with the effort. If possible, push a large con. Large cons are significantly tougher and cannot be rammed out of place. Make sure there are nans on the con. Do an HTT or bomber run with the con (either physically or at the same time). If you send a bomber with the con, make sure it defends the con until it is safe. Try to deprobe ahead, and have a base-killing run ready to launch the instant the base goes up.

TF cons are hard to ram. GT cons are tough. Dreg cons are fragile, but super fast (120 mps). Like int bombing, however, this largely depends on your pilots and your ints than your con.

Ending Strategies that Rely on Adv Tac

Stealth Bombing

This is usually the most effective way to finish the game. It works well against sup and tac, but not as well against exp. You need to convince your team to not try solo bull@#(! against tech bases (it doesn't work). Encourage teamwork. Ask someone to clear a path for sbs. Try to get your team extra tech/GAs that help them. All factions but TF and Rix can use missile damage and ab2/3. TF and Rix use pw damage and range. Ship sig always helps. Heavy Cloak is immensely helpful and frequently underused.

Try to blow their main techbase first, before you give away the existence of your sbs. If the enemy knows that sbs are inbound, they'll camp alephs. Sometimes your team simply will not be able to finish with SBs, and no amount of screaming

or begging will help. In these cases, usually a more brute-force solution is in order.

Rix SBs are the best. Bios and Dreg are also good. Belters have a high sig, but can absorb lots of damage and boost. IC SBs are abnormally craptastic due to high sig. Nix SBs do not get the 1 missile bonus, but do get the missile damage nerf.

Other Ending Strategies

Capships

Please recall that capships suck in games larger than 8v8. Every single adv tech has a way to decimate capships. They are obscenely expensive. In theory, exp has the harder time against capships, but if they get emp2 and mini3, you're still screwed. Nan have half efficiency on capship hull.

That said, either put two frigs through with a @#(!load of ints, and you'll at least clear a hole for some sbs. Alternatively, if you can sneak in an assault ship and surprise the enemy with a battleship appearing 6k from their exp. If the enemy fails to probe, the cruiser fairy may well be your best friend.

Whoring

This strategy is rude, and it is risky. They may payday sbs while you dick around, enlarging your epeen. A mutation of the strategy is to whore while you spend 45 minutes scraping He rocks to pay for battleships. This is also rude and risky. I suggest that you not indulge yourself in this. Buy your team finishing tech and finish the damn game. You prove nothing by prolonging a game by an hour, just so you can get your jollys.

Summary

You'll have noticed by now that Bios and Dreg have excellent finishing tech. Belters require more teamwork, but they get the job done. Rix deserves note for its incredible SBs.

TF's finishing tech is actually not so good, but they make up for it with their excellent whoring tech. Same with IC. Nix hurts from lack of nans, but they make up for it with their special tech. Nix capships are very hard to bring down.

Credits: Lyko, McWarren

Base Placement and Miner Defense

Last week, we discussed using bases to claim the map for mining and afford access to enemy miners. We'll narrow our focus this week. Let's focus on base placement within a sector, relating base placement to sector control, defense, and miner d. Optimal base placement is a tricky matter and frequently depends on the phase of game, importance of base, and relative tech paths. Sometimes you want the base close to an enemy aleph (and perhaps behind). Other times you want some more room. Experience as a pilot will help you discern a great base placement from a poor one. Still, there are a few general rules that will help you until your experience can take over.

Base Placement

Outposts and teleports

Shizoku writes

QUOTE

At the beginning of the game, it is wise to put your outpost between 3 and 4k from the enemy aleph. This allows your team plenty of time to get home and defend. If you can, plant the base so the red door is facing the aleph, most bases are different, just try to notice which direction each one plants on, it can help a lot in some cases. For tactical, placing outposts and teleports 4 to 5k away from the aleph can help, the stealth fighter has a slow reaction time, and it needs a bit longer to defend.

If you went supremacy and have ripcord 2 advanced fighters, you can basically plant your tele's as close to the aleph as you like, your team will be able to react within 5 or 6 seconds to defend the base. The advantage of having the base closer to the aleph is that they can camp the aleph that much quicker. Closer to the aleph also allows your team to get into the opposing sector quickly and attack constructors and miners.

Grimmwolf enumerates some different teleport placements, based on purpose:

- For IC, treat your teleport as a refinery. Plant it in the middle of He rocks.
- Teleports built solely for forward-ripping constructors should be hidden behind the aleph to the con's destination (unless you want the teleport to double as a base teleport).
- Teleports for bases should line up with the base's green door. If you are sup, however, place the teleport between the base and the hostile aleph. People ripping in will be able to attack the bomb run faster, and the bomber pilot will feel like s/he has to kill the teleport first.
- Offensive teleports should go near (and behind) the enemy aleph. This will give you easy access to the enemy sector, and any enemy bombers will have to do a 180 degree turn to attack the base. Teleports are also easy

to replace if they die. If you wish to be really aggressive, a similar strategy can work for outposts and techs. Be careful though, because outposts and techs are more expensive. Only do this if the enemy has had little success bombing you.

The important thing to remember is that Outposts and Teleports are best used for sector control. Pilots should be able to launch from a base and quickly get to an enemy-controlled aleph. Enemy bomb runs should have to contend with an outpost/teleport before moving on to targets in the next sector (like a techbase). You don't want to make things too easy for enemy bombers, but you definitely want to force them to take out the small/cheap base before moving on.

Phase discusses this aspect of the game:

QUOTE

Base placement is critical. Outposts & Teleports are sector control platforms. Make sure you use them as such. Choose a good rock in the center of the sector. Many weak commanders approach base placement convinced they are going to be attacked and want as much distance from the evil aleph as possible... 7-8k. Should the enemy push a constructor in the distance is too far to respond effectively. Think offensively and think "sector control." Place the base around 4k from a hostile aleph. This gives you enough room to defend and react effectively. So what if you lose an outpost... the benefits more than outweigh the risk. Benefits... your base is closer to enemy controlled space... meaning your players have less distance to cover to attack the enemy or at the very least threaten them. Easier access to enemy miners means dead miners. There is also a psychological advantage to consider. Should your base have access to two enemy sectors your players will be in both frequently... keeps the enemy defensive minded till they decide your outpost or tp needs to go. Then you must defend. Insure you give your team the tools they need to be defensive and offensive at the same time. Don't be too defensive with your op/tele placement. If your base is too far out of the way, a smart bomber pilot may skip the outpost altogether and make a run for the next sector.

Refineries

Put refineries in the middle of He rocks.

Techbases

Shiz discusses techbase placement

QUOTE

For tech bases, placing 4 to 5k away from enemy sectors is wise, simply because there is a lot more at stake with techs. If you do need to place a tech close to an aleph, it is absolutely critical that that sector is permanently probed, keep a third eye always on that sector.

Grimmwolf adds

QUOTE

Tech bases, hide them, build them close to your home sectors, but not necessarily in your home. IC should NEVER build it at home, it is a miner drop-off. Protect them by ops or teles in neighboring sectors, mine and drone dangerous alephs. Shipyard: Build it forward, so the caps don't have to travel long, or have buy ripcord able ships.

Red/Green door placement

For optimal defense, it is helpful for your bases' red doors to face hostile alephs, while green doors face friendly teleports/alephs. This need sometimes conflicts with the layout of the rocks/alephs in a sector, but it is yet-another-factor you should consider when placing a base. Bases always build the same way, so it is helpful to learn how different bases from different factions are oriented. A spreadsheet showing the orientations for all nine DN factions can be found here: <http://tinyurl.com/2uh6dw>. While it is not realistic to expect one to memorize this list outright, it is important to begin paying attention to how different bases are oriented. HTT pilots love a base whose green door faces an easily-accessible aleph. Don't make life easy for them.

The spreadsheet does not include garrisons since every team automatically starts with one. Garrison placement/orientation is out of their hands. **THAT** particular setting is controlled by map writers, who will sometimes change the orientation/placement of a team's starting garrison.

Miner Defense

Most of the concepts related to miner defense were thoroughly covered in the week one economy article. Now that you've had time to digest and internalize that information, we thought it would be a good time to revisit this subject.

Good base placement is obviously an aid to miner defense. Place an outpost near the travel lanes between alephs, and miner hunters traveling through the sector will likely be eyed by your base. You will have an easier time defending miners in sectors behind your outpost, because you can detect and intercept raiders before they reach your miners.

There are a number of additional strategies that you can employ to keep your miners alive for longer. Shizoku runs down the list:

QUOTE

- Enh miners [discussed in econ article]
- Miner defense -- when you get out of base to defend your miner, don't launch expecting to be able to pod the enemy before he kills it. Launch in a nan and heal your miner, you will find that the rest of the team is more than willing to shoot people attacking your miner, but will rarely save them

by doing so. The nan is the only sure fire way of saving the miner, all else you are taking a risk on pilot skill.

- Offense on the enemies miners/bases -- the enemy will have troubles attacking your miners if theirs are under attack. Sometimes you just need to send 1 or 2 people off to go harass the enemies miners and you will all of a sudden have time to mine. Same with bombing sometimes, (key word sometimes), when the enemy has to defend bases, they can't easily attack your miners. Unless there's one @\$%#@# sf hunting around.
- Mine close to op/techbases/teles/carriers -- having to travel a sector to d a miner is tough
- Send the miner to the defense -- Don't send the miner away from the d, even if it's sending it to base, your miner will have such a much higher chance of living if the nan can actually stay with the miner. Most of the time what happens is the miner is heading towards the nan and the nan towards the miner, the nan is trying to get to the miner as fast as possible, so it will of course, overboost past it. If you keep the miner going towards the base, the nan will have to make up ground and catch the miner, all this time the enemy is shooting the miner, and will likely kill it. If you had sent the miner to the nan, it would have turned around so the nan's overboost would not have mattered as much.

My best suggestion to you is not to sit in base spamming Defend miners!, Just get out of base and do it yourself.

Miner D vs Tac

Of course, many miner strategies get thrown out the window when dealing with tac. Five experienced stealth pilots will have little trouble taking down all but the most heavily defended miners. You'll learn a number of useful strategies for fighting a tactical team through this session, but let's take a second and focus on miner d against a tac team.

Anguriel outlines an effective miner d strategy:

QUOTE

Ang's guide to defending Miners against Tac:

- 1) Know where your miners are going. Send a few scouts there ahead of time. Those scouts should be armed with Gatts and usually Seekers, though once you get used to them, DF will work even better.
- 2) Scouts do a quick fly through the sector. If they get eye and can't find the source, expect a Stealth to be already in sector.
- 3) Scouts camp alephs leading in to the sector. And they sit. And they kill every single SF that comes in.

If the SF gets in sector, he's usually already won. If you're defending on the

miner and not the aleph, he's going to get in. In short, you don't defend the miners individually, you defend the sector the miners will be in. SFs are easy to pop if you know where they are. The hard part is finding them, but you know they need to come in eventually at an aleph. So that's where you get them.

Once you get this down, you can usually defend with 3 Scouts. A Caltrop+Tower+a few probes on an aleph can reduce that pretty easily if the Comm isn't a fool and actually buys Caltrops and Towers as an anti-Tac measure (I've been known to skip this because I no longer care about my miners - I have enough money to get what I want, any extra is bonus, not required -- alternately I'll be out of money before we know they've gone Tac and you'll need extra D up until a Load comes in to enable the Caltrop purchase).

A group of SFs entering at once will slip past -- at that point, you retreat the miners immediately and the scouts come together to defend the "herd" until they dock. Then you pick a new sector and do it again.

--

So that's the Pilot/Cadet side.

On the Commander side, you need to assign some scouts to defend alephs, and getting Caltrop/Tower/Probe setups running will help enormously. And the stuff I said before. And keep the miners moving so they can't plan where you'll go next easily - inefficient but living and mining miners are better than efficient and dead miners.

For TF, you can just use the sweeper/prober scout and one other already in sector and rely on the rip-to capability for defense. For Rix, a SR Scout sitting there to bring in extra defense can allow more of your ships to head on offense. For IC, you can make-do with a scout sitting between all your miners (possibly 2 scouts when rocks are widely spread) that can run and nan the one under attack while you rip them out.

Additional tips for miner d

Cronodroid reminds commanders doing large runs:

QUOTE

While bombing or doing large team activities, especially against a team with even ONE miner whose (guys like aarm, Frag, Culm, IB), docking all but one miner and leaving at least one nan with it will safeguard it against the enemy Miner O. Having four miners out means easy pickings as the nan will be too slow to defend when the @#(! hits the fan, or get taken out him or herself. This one miner method is best used against Sup or Exp while you're bombing/etc.

Tac, leaving miners out while on these missions is questionable. One SF can take all of them out in a few minutes. I prefer to dock all of them when bombing/etc against Tac. Resend them out when you're done bombing*. Or don't

bomb at all and kill his miners. I tend to agree with Gui on that point, as from personal experience it's hard to kill enemy miner O in time with an SF. Plus SFs are weak as @#(!.

*Note: Docking miners is impossible, in the strictest sense, unless you can convince the miner ai that there is no good He to mine. It is easiest to do with GT or IC, where the lack of refineries makes it harder for the ai to find a "secured" route to fresh he. When you're dealing with other factions, I generally consider the phase "docking miners" to be a shorthand for "keep the miners at home and out of trouble."

Shizoku recommends some misdirection

QUOTE

Put one miner forward, along with your op perhaps, and have the other 2 or 3 mining your backsectors. As long as you keep the forward miner alive, the enemy team will be concentrating on the one miner, meanwhile the 3 others mine happily as can be.

Assault mining

This technique has become popular in pickup games, where relative skill levels and team cohesion are little lower than in squad games. The idea behind this technique is to mine your forward sectors first, while the enemy is distracted and miner-killing tech isn't up yet. As the game progresses and enemy tech/access increases, work your miners backwards towards home. This is a bit of a gambit, as observed the following commanders

Cronodroid writes:

QUOTE

Assault mining, I know its covered in another thread, but pushing your miners with your op con, mining out the most dangerous sector first and then mining the ref sector after will tend to confuse the enemy miner O who rush the ref sector first. That'll also give you time to get your D together back at the op.

Works best on maps with limited directions of travel, like Beachball...

Shiz responds:

QUOTE

I find that the way aarm pushes his miners forward early stalls his econ in one of the most critical times. If he actually played against more good teams, doing this would really hurt him.

How miners work

A great commander understands the mechanics of how money is distributed and collected in the game. By understanding mining, you can make better decisions about sufficient expansion, timing tech purchases, and balancing defense with offense. This brief article should illuminate some of the finer points of Allegiance economics to you.

Overview of the game start

When the game starts, the total money setting determines how many units of He3 are initially placed on the map. That quantity of He3 is divided evenly amongst all of the Helium rocks on the map. Each unit of Helium is worth a certain amount of money. By knowing how much helium is on the map and how many He rocks are present, you can know the maximum amount of cash that 1 sector can provide. This will help you estimate how much of the map you must secure to get advanced tech.

The example to consider

Many of these settings are core and map dependent, so let's look at an example: a Community Core HiHigher game with High total money and Normal resources. The rest of this article is written with this example in mind. Change the settings or the map, and the numbers change. The math behind the example is given in parenthesis, so you can adapt this to any map/settings combination.

Initial Helium distribution

Most cores (including CC) default to distributing 3000 units of Helium on the map. With a High (1.25) setting, that value increases to 3750 units (3000×1.25). The settings will put a total of 48 Helium rocks on the map, resulting in each rock having 78.125 units of He3 on it ($3750/48$). This means that home sectors will provide a maximum of 156.25 units (2 He rocks), while regular sectors will provide 312.5 units (4 He rocks). Each unit of He3 is worth 80 credits, though this value is impacted by both the faction's yield and any purchased yield GAs. Most factions have a yield of 1.0, so their miners could provide a maximum of \$12500 ($156.25 \times \80) by mining out their home (for normal sectors, it is \$25000 or $312.5 \times \$80$). Expansion's He Yield 1 GA will improve the yield to 1.1 or \$88/unit for these factions, but some factions naturally have a higher yield. Belters start with a yield of 1.25, meaning each He3 unit is worth \$100 ($\80×1.25). Belter miners could provide a maximum of \$15625 just by mining out their home.

Of course, I say maximum, because this assumes that every miner strips every single unit of He from a sector. From our economy article, we all know that this doesn't always happen on its own. To get a better picture of what your miners **really** bring in, you need to understand mining capacities.

Mining in game

On DN (and most cores), miners can suck down 90 units of He before needing to unload. This is a base number, and faction multipliers apply. For factions with a capacity multiplier of 1.0 or better (Bios, Giga, GT, Phoenix and Rix), your miners will be able to completely drain each sector on this map before moving on. TF miners will also be able to drain a sector; this is a special case and a product of miner AI. TF's .55 capacity will cause the AI to drain a rock in 2 trips instead of 1.

The story is different for a faction like Dreg (also Belters and IC). Dreg's capacity modifier is 0.75, meaning that miners can only hold 67.5 units of He3. In our above example, each He3 rock has 78.125 units of He. This means that Dreg miners will leave behind 10.625 units of He on each rock. Left to their own devices, Dreg miners will leave 42.5 units of He3 untapped and move on to the next sector. Given Dreg's faction modifiers (1.35 yield), this adds up to \$4590 of He3! Without management, Dreg miners pull in \$29160 per normal sector (instead of the maximum of \$33750). Multiply this by the three or four sectors, and you are missing out an enough cash to buy a 2nd techbase.

NakPPI has a recommendation for getting the most from each sector. He writes:

QUOTE

If you want a slightly more advanced micro-management tip - learn how much your miners can hold. You want a nearly full load every time, if possible, but you also don't really want to leave He3 in a sector if you can avoid it. Say you have Normal resources (4 He3 rocks) and a total He3 count of, oh, 400 (100 per rock). Your miners collect, say, 80 units per trip. Don't let all four go back to the rock they were working before. Send 3 to the next sector. Specifically order the fourth to mine out each rock and hit the ref. He brings in almost a full load (thanks to He3 regen). Your other three are bringing in full loads in the next sector. You'll need to play with your miners a bunch now that they aren't quite together to keep them mining efficiently and fairly close together for defense purposes, but it is possible to do. Once you learn how, you'll be a much better commander and you'll rake in money faster than your opponent.

Make money faster, keep miners alive. Do it for the puppies.

The bottom line

Suppose you are Rix, playing on the settings outlined above (with starting money at 1.25). You've decided to go exp, avoid bombers, and do some basic expansion. You open with a miner, outpost, enh cons, home rip and ref. You keep expanding with a 2nd op, get enh miners (pumping out 2 more miners), and buy your expansion. You buy interceptors, mini 2, and yield/dmg upgrades. You then advance your expansion, get the 2nd yield/dmg ups, buy heavy ints and htts. You then buy adv cons and another op for a good push-and-whore. You don't save \$5000 by finding mini 2, but you also don't lose cash to dead miners/cons (an assumption in your favor).

Your final bill will be \$134500. With starting money at 1.0, you'll begin with \$20000, meaning you need to come up with \$114500. Yield GAs and paydays will help (estimate \$20000 in paydays and extra yield over 20 minutes). This still leaves you with \$94500 of He3 to mine. The good news is that your miners will suck every rock dry in one pass, so you'll get the most from each sector without too much fuss. Even with that bonus, you'll have to mine out your home and three additional sectors just to cover most of these costs. Even then, you're still several thousand short and need to empty 1 or 2 rocks in a 4th sector. Since your miners can't die, let's assume that most of these are safe mining sectors. Can you secure three safe mining sectors on a map like HiHigher?

While intermediate commanders understand the strategic importance of expansion, many neglect its economic dimension and never secure sectors for mining. Adequate expansion for safe mining is absolutely vital, because money is really scarce in Allegiance. You need to secure as much of it as you can to win. Knowing that the enemy commander is trying to do exactly what you are doing, do you think you can pull this off? Next week, we'll discuss openings and early expansion, and you'll get some ideas for how to make this happen.

A ninja command tip

All researched GAs take effect the instant they finish. If your "HE Yield 1" GA about to finish, try to keep your miners from offloading. Send them to random waypoints in a sector. Once the GA completes, the value of each He unit will instantly increase. Your miners will now unload at the higher per-unit rate, and you'll get more benefit from the GA. Of course, if your miners are in danger, ignore this tip and make them offload ASAP.

Automate This

PKK developed a little calculator that not only shows you how Helium is distributed on the map, but also how each faction's miners will fare. Try it out: <http://www.german-borg.de/stuff/he3.php>

Credits: Clay, Jell, Spunkmeyer, BlackViper, NakPPI