StarCraft II Guide

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You may be wondering about the "kzo" initials in front of several of the names. Some of my friends and I wear this tag to show solidarity in the game. It stands for the region where we grew up together.

Foreword by Paul "Ajek" Stales

Legal Acknowledgements

Allow me to make all appropriate and necessary legal acknowledgements of the copyrighted works of others in this guide. First, StarCraft 2 and all other property belonging to it is the work of Blizzard Entertainment. Second, this guide does contain original work from me, but most of this guide is the original work of others. I have done my best to acknowledge the original work of others as thoroughly as possible by including their original sources. Team Liquid's Liquidpedia was the basis for both the format and content of large portions of this guide, and there are links frequently throughout the guide. SC2 Noob School's Trebis also has a lot of material contained in this guide, and he has given explicit permission for me to use his work in this guide. Links to his videos are also available throughout this guide. Finally, there is other textual or video content belonging to HD StarCraft, Husky StarCraft, Day9, and various posters from various forums. I have done the best of my ability to properly credit and link to the original work of all of these persons where appropriate. I also have my friends and editors to thank for their personal contributions. If your work is in this guide and not appropriately credited, I ask that you forgive my oversight. I, or whoever is editing/hosting the guide, will try to update this in the next version.

Why I Wrote This Guide

The original intention of this guide was to help myself improve as a player. As I researched and found various sources, I took notes in a spiral notebook. As my notes grew, I started to type them so that I could send them to friends. Eventually this guide grew larger and larger, and starting thinking about making it public.

I then decided to create a compilation of high-quality information along with the original sources and make it available to the SC2 community. I compiled the best information I found, using the sources listed above. I tried to include textual information, videos, and original sources together. I summarized or expanded on this information where I felt necessary, and I added completely new sections to help players (You can find my original work in part of, or in all of, Sections B, F, and G).

The goals of this guide are to provide the community with a free, high-quality guide, but also a framework that experienced and skilled members of the community can improve as the game evolves. With sections covering everything from basic game play to specific race strategies, I believe this guide has something for everyone. I also included "Ajek's Guide to Improvement", outlining the steps and strategies that helped my friends and I improve at this game.

Special Thanks

I want to thank Team Liquid, Trebis, and everyone else whose free online sources helped me create this guide. I also want to thank my friends for their editing, feedback, and effort in making this guide a high quality product, so a special thanks to Axis, Golath, Ian, Rebirth, and Rook.

In the spirit of contributing to the community as freely as my main sources did, I am now releasing this guide freely and publicly to further benefit the community. I hope that you will benefit from this guide and support the organizations and people that made it possible.

I hope you enjoy this guide, and if possible, contribute to making it even better,

Paul J Stales

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Summary of the Sections

Section A – General Information
Game Settings, Definitions, Game Elements, Hotkeys, Build Orders, Map Notes, Advanced Unit Tricks

Section B – Five Fundamentals
Macro, Economy, Micro, Combat, Information, Summary

Section C – Terran Strategy
Buildings and Units, Combat Styles, Build Orders, Advanced Unit Tricks

Section D – Zerg Strategy
Buildings and Units, Combat Styles, Build Orders, Advanced Unit Tricks

Section E – Protoss Strategy
Buildings and Units, Combat Styles, Build Orders, Advanced Unit Tricks

Section F – Team Strategy
Team Fundamentals, 2v2 Strategy, 3v3 and 4v4 Strategy

Section G – How to Improve
Improvement Advice, Ajek's Improvement Guide

Section H – References and Resources
More references and resources

Navigating This Guide

This guide is rather large, so use the headings to your advantage. Every subsection starts with a letter that says what section it belongs to, so (A-1) is in Section A – General Information, and it is the first sub-section of Section A. Likewise, Section (B-4-1) is in Section B, Sub-Section 4, Sub-Section 1, and it is "Five Fundamentals, Combat, Battles".

If you are reading this guide as a word document, you can use the Table of Contents to search to the section you want, then hold "ctrl" and "right click" the section header. Word will take you to that section.

If you are reading a printed version of this guide, use the Table of Contents and the page numbers in the upper right corner.

Contents

(A) GENERAL INFORMATION

(A.1) Choosing the Game Settings

- **In your operating system options, consider turning mouse acceleration off**. This makes your mouse move across the screen based on the distance you move it instead of the speed at which you move it. This means if you mouse your mouse across your mouse pad 5 inches quickly or slowly, it will be the same distance on the screen. Many professional gamers do this because it increases your accuracy with the mouse.

- **Adjust your battle.net options to help you play more effectively.**
  - Graphics:
    - StarCraft 2 will actually recommend what specifications your system can run.
    - If you chose not to use the recommended settings, then choose whatever settings help you get the most frames per second. For competition and performance, it is more important to have the game run smoothly than look good.
  - Sound: Be sure you can easily hear sound effects in game, as these give important information about what is happening.
  - Voice: Personal preference
  - Gameplay:
    - Make sure you can accurately click things by adjusting your sensitivity.
    - Set the scroll speeds so that you are comfortable.
    - Always show health bars and flyer helper icons.
    - I recommend using display build grid, as you can see the spacing of other buildings and nearby terrain.
    - Show alerts so you can see important information about the game.
    - Turn on the game timer so you are aware of far along in the game you are, and where your opponents might be in terms of units and buildings.
    - Consider disabling the alt-tab and windows keys if you do not want accidental interruptions of your game.

- Another guide from "Robbz" on the TL forums provides similar information, and pictures!
  - http://www.teamliquid.net/forum/viewmessage.php?topic_id=191134
  - Note that he covers more than just basic game settings. His guide also includes "binds", "micro", and "macro". You can find those sections in this guide as well, under "hotkeys" in section A-2, and "five fundamentals, micro and macro", section B.

(A.2) Hotkeys

(A.2.1) Hotkeys (Detailed)

- **To create a hotkey hold "ctrl" and "a number" at the same time**. You can hotkey things by holding "ctrl" and "a number" at the same time while having a selection of units, buildings, or both.

- **Use the keyboard as much as possible** in order to become faster and more efficient at SC2.
  - You can place groups of units into hotkeys. You need to select your army very often so it is best to use easily accessible keys for your army, like numbers (1) and (2).
  - You can also place buildings (and groups of buildings) into hotkeys. There are three kinds of buildings:
    - worker-energy buildings/queens* (3)
    - production buildings (4)
    - upgrade buildings (5)
  - To move through the different types of production buildings, use the "Tab" key
  - A Terran would press: "3ss 4mm tab s 5" and this build select the command center, build two scvs, then tab select production buildings and build two marines, tab to factories and build a tank, then check on upgrades.

* Because Queens have the energy for the Zerg to use, they are equivalent to the Terran Command Center, or Protoss Nexus. The two ways to inject larva with Queens are having all the queens in a single group and injecting with the minimap (click a hatchery, only the queen closest to that hatchery will inject it), or having each queen at a hatchery under a different hotkey, such as 5-8 or 6-9.

- **Hotkeys should eventually become second nature such that you can build units without looking at the production buildings**. This will greatly increase your speed and effectiveness by allowing you to build units while focusing on your army, the battle, the mini-map, etc.

- **The camera has hotkeys that watch particular locations**. The F5 through F8 keys are the camera hotkeys. Save locations like enemy bases, expansion locations, chokepoints, etc.

- **Other important keys** are (A) for attack, (S) for stop, (H) for hold, (P) for patrol, and (SPACE) to focus on the last alert in game. It is important to move your army with (A) instead of (mouse-move) because with (A) they will fight back. (H) is important for when the units need to stand still, perhaps to block a choke point. (SPACE) is important to see the most recent alert, such as unit or building completion, or an attack warning.

- **You can also queue multiple commands by holding shift and ordering multiple actions**. This would allow you to use a worker to build a building, then while holding shift, build another building, and while still holding shift, return to mining minerals. The worker will do all 3 of these actions without any additional input.

- **Here is one possible hotkey setup**: (My personal preference!)
    - 1 – Ground Army
    - 2 – Air Army
    - 3 – Worker-Energy Buildings (command center, nexus, queen)
    - 4 – Production/Army Buildings
    - 5 – Upgrade Buildings

Additional Information:
Liquidpedia: "Hotkeys" - http://wiki.teamliquid.net/starcraft2/Hotkeys
SC2 Noob School: "Shift-Queue" http://www.youtube.com/watch?v=dBQPGa3hiGA

(A.2.2) Hotkeys (Summary)

- Hotkey groups of units and buildings to become faster and more efficient. Get a hotkey setup that works well for you (remember to use 2-3 keys for your army, and that there are three types of buildings).
- Shift-queue commands as much as possible, especially when giving commands to workers. It is important that workers always be shift-queued to return to mining when finishing other tasks.
- Do not forget the other important hotkeys such as the camera keys (F5 through F8) or the attack, hold, patrol, and stop keys (A, S, H, and P).
- One possible setup is (1 ground army), (2 air army), (3 worker-energy buildings), (4 production buildings), (5 upgrade buildings)

(A.3) Terms and Definitions

- Common game terms:
    - **AA**: Anti-air units.
    - **AOE**: Area of effect refers to spells or abilities that do damage in an area and can hit multiple units, such as the ghost's EMP
    - **APM**: Actions per minute, a reference to a player's speed
    - **Ball**: A unit formation where units are clumped together
    - **Base Trade**: When the two players are attacking each other's bases and not defending
    - **Cheese**: An unconventional rush that gives the player a temporary advantage in the very beginning of the game and can win early, but often causes a loss if stopped
    - **Choke**: A choke point is where a wider area leads into a smaller one that only a few units can go through at a time, like a bridge or ramp
    - **Contain**: Units or defensive structures placed outside an enemy's base to keep them inside, allowing the containing player to expand and gain map control
    - **DPS**: Damage per second refers to the rate of damage a unit causes
    - **Expo**: Expansion, the first is to the closest mineral area and called a natural, and the others are the 3rd, 4th, etc. because it counts the main base as an expo as well

- o **FE**: Fast expansion, designed to gain an early economic advantage
- o **Fog of War**: Any area on the map that is "grayed out" because you do not have vision of this area
- o **Food**: The supply/control/psi of the armies, how many units you can get
- o **Gas Steal**: Building your own gas structure in the enemy's base to deny them from getting gas early
- o **Gold**: Refers to the golden colored minerals, which are "high-yield" because they are worth per worker trip (blue is only worth 5)
- o **Harass**: Actions taken to quickly enter and leave a player's base, designed frustrate and cause economic damage by killing workers
- o **Kiting**: Using a unit's speed or range advantage to alternate moving away and attacking
- o **Late-Game**: The phase of the game where players are using tier-3 units and there are few expansions left
- o **Macro**: The creation of units, buildings, upgrades, and expansions – the non-combat side of SC
- o **Main**: The main base that you start the game with
- o **Map Control**: How much of the map you can see and are able to freely move around
- o **Mechanics**: Micro (combat and unit control) and Macro (building and economy)
- o **Micro**: The controlling of units in combat – the non-building side of SC
- o **Mid-Game**: The phase of the game when players have tier-2 units and a decent-sized army
- o **Natural**: The expansion closest to the main base (where you start)
- o **Proxy**: Placing a structure in a location far away from the player's base, for unit-producing structures this reduces the distance the unit needs to travel
- o **Push**: Slowly moving forward by forcing the enemy to retreat, as you are "pushing" the enemy back
- o **Rush**: Quickly getting a small force of units to put early pressure on the enemy
- o **Scouting**: Using units to reveal the map and see what is going on
- o **Static Defense**: Any immobile structure capable of attacking the enemy, such as turrets or cannons
- o **Supply Blocked**: Being at the current maximum supply/food available, meaning you cannot produce anymore units until you have more supply structures
- o **Tier**: Tier or tech levels, referring to how much tech is required to get those units
  - ▪ **Terran**: T1 is barracks, T2 is factory, T3 is starport
  - ▪ **Zerg**: T1 is spawning pool, T2 is lair, T3 is hive
  - ▪ **Protoss**: T1 is gateway, T2 is stargate/robot-facility, T3 is templar/fleet-beacon
- o **Timing Attack**: To attack when your army has an advantage or the enemy has a disadvantage
- o **Turtling**: Playing defensively and not attacking
- o **Wall**: Wall-in, wall-off, walling is using structures to create choke points, further narrow existing chokes, or totally seal off a choke to reduce the enemy's ability to enter an area

Additional Information:

Liquidpedia: Definitions - http://wiki.teamliquid.net/starcraft2/Definitions

(A.4) Game Elements

(A.4.1) Game Elements (Detailed)

- **Choke points are narrow areas in the map, such as bridges or ramps**. Only a few units can pass through at a time, so they slow movement and prevent the forces in the back from fighting. A good strategy is force enemy army into a choke point so all your units can attack while only a few of theirs can fight back. Choke points can also be made with buildings or Protoss force fields. Note that the Zerg rely on surrounding the enemy to be effective, so Zerg especially want to avoid chokes as much as possible.

- **Contains are when a player uses their army and static defenses to "keep/contain" the enemy inside their base**. This can delay an enemy from expanding, while making it safe for you to expand. Contains can be done with any kind of units and static defenses, but some effective ones are siege tanks and bunkers, cannons and force fields on exits, or crawlers on creep.

- **Forcing** (or threat) i**s when you make a decision that forces the enemy to respond because they will fear being countered by you or losing to you**. Each race has a "force" for every race. Some forces are in ZvT where a zerg gets mutalisks forces marines, or in TvP the Terran goes marauders, forcing immortals. These forces can mess up the opponent's strategy and can lead to counters for the enemy's forced reaction (Such as ZvT, where a Zerg forces marines with mutalisks, and goes banelings to kill the marines).

- **A gas steal is building your own gas building on top of the enemy's geyser**. This can mess up an enemy's build order, cause them to keep army units away from their entrance, and/or delay their tech. This is not effective if they are getting a fast expansion or rushing, because they will not need gas quickly.

- **Harassment is using a small squad of units (preferably fast ones) to distract and frustrate the enemy**. These harassment squads try to kill workers or force the enemy to spend money on army units, both of which mess up the enemy's economy. You can also target supply or production structures. A player who is behind can catch-up. Some harassment methods are hellion drops, mutalisk squads, or Protoss DTs. Other harassment techniques are to place buildings in an enemy's natural expansion before they expand or using units to stand in the location where the enemy wants to place a building.

- **Kiting is using the speed and/or range advantages of ranged units to cause damage to enemy units without them being able to counterattack as much**. The main thing to remember is never miss a

chance to fire! Use kiting to retreat and avoid damage, or pursue while attacking. Kiting is done by moving a short distance, hitting S (or H), then moving again once the firing animation starts. Some good kiting units are the Terran marauder and reaper, Zerg mutalisk and roach, and Protoss stalker and colossus.

- **Scouting is revealing the map to gain information about what is occurring there**. Send a worker or cheap unit to an enemy's ramp or army, as these are the most important things to know about. You need to know what units, buildings, and expansions the enemy has available. This requires good knowledge of the enemy units and tech tree, so that if you see an immortal (Protoss unit), you can conclude the enemy has a robotics bay, and probably observers and colossus. Initial scouting should occur around 10-15 supply, and scouting needs to be consistent through the rest of the game. Later in the game, scouting techniques include Terran scanner sweeps, Zerg changelings, and Protoss hallucinations.

- **Terrain features affect the game, so be aware of what they are and what they do**. Ramps distinguish high ground from low ground. Units on low ground cannot shoot onto high ground without vision from a unit on high ground, or an air unit. Choke points restrict enemy movement, and leave the units in the back unable to fight right away. Trees and smoke block vision so you cannot see past them, so beware of hidden units and buildings.

- **A timing window occurs when your army is significantly stronger or the opponent is temporarily weaker, or about to become stronger**. These situations are the best times to attack! Some examples are your army just finished an upgrade or a powerful unit like the colossus is complete, or the enemy is spending money on tech or expansions instead of army units. A timing window also occurs anytime you defend against a significant enemy attack because they must recover.

- **Walling is using buildings to narrow (or completely seal) off a choke point to make an area easier to defend**. Terran can wall with depots and raise/lower them like a door, Protoss can leave a small space and use force fields to seal, and Zerg can use crawlers or roaches to restrict movement. Walling is personal preference, but note that Terran have very long-range units that can safely damage walls from far away, Zerg is ineffective if inside a choke point, and Protoss have powerful units that do high damage. For these reasons people tend to rarely wall against Terran, usually wall against Zerg, and partial wall against Protoss – but again, this is a matter of personal preference.

- **Unit positioning concerns position of units relative to other units**. Terrain is important! Use choke points, ramp, and high ground effectively. There are four main types of positioning:
    - Concave is like the letter C, with the "inside" of the C facing the enemy. It is a good idea to concave around an enemy in a choke point. It looks like this (C ENEMY)
    - Convex is a reverse concave, so that the "point" of the C facing the enemy. This is generally not a good unit formation. It looks like this (ENEMY C)

- o Spread (keeping units separated to avoid splash damage or clumping them together). This works well for long-range high-damage units, or units that cause splash damage (like siege tanks, colossus, brood lords, etc)
- o Ball (where smaller units tend to group up into a ball), keep weaker units inside and stronger units outside.

Additional Information:
Liquidpedia: "Gameplay Elements" - http://wiki.teamliquid.net/starcraft2/Strategy#Gameplay_Elements
SC2 Noob School: "Fleeing the Weak" - http://www.youtube.com/watch?v=eNnsSprNHbs

(A.4.2) Game Elements (Summary)

- Choke points are narrow areas of the map that and should generally be avoided. Walling makes an artificial choke point to help defend an area. Remember that units on low ground cannot shoot units on high ground if they cannot see them. Beware of smoke and trees as they block vision.
- Containing or harassing the enemy will frustrate and distract them. If the enemy is being harassed or contained, you are safe to expand or continue building your base. Gas steals can also frustrate the enemy but only if they were not relying on gas (because they were rushing or fast expanding).
- Scout the map constantly and be aware of what the enemy is doing. Be aware of what they know about your base, buildings, and army. You can "force" an opponent to do something by purposely showing or attacking them with a specific type of unit, leading them to counter it. You can attempt to counter this forced reaction for an advantage.
- The best time to attack is during a timing window – when your army is at an advantage because of a specific upgrade or powerful unit, or when the enemy is at a disadvantage because they are building an expansion, teching, or just lost a battle.
- Remember to position your units correctly, for whatever situation may occur. Common positions are concaves, balls, or spread formations. You can also kite enemies if you have a speed/range advantage over them.

(A.5) Build Orders

- **A build order is a particular series of steps at the beginning of the game to achieve a specific goal**. Some build orders have a goal of getting an early army to kill the opponent quickly (rushes), others want to get specific units or skills (blink stalkers to avoid Terran defenses). Each build order has a specific purpose, so understand the idea of each one and use them correctly.

- **There are five general types of build orders**

  - o **Rush** – This fast rush focuses on the most basic t1 units available to provide fast aggression. The goal is to cause damage or end the game early. These rushes are even more effective if there are greater risks, such as building near or even in the enemy base. These riskier strategies are referred to as "cheese" because they are cheesy/cheap/unsubtle.

- o **Economic** – These builds tend to play safer and focus on securing a fast expansion. Typically safer builds get later expansions, but they all try to get an economic advantage over the opponent.

- o **Balanced** – This build tends to be versatile and balanced. They aim to expand around the normal time, get a decent size army, and get some tech structures and upgrades. This build does not focus on any one thing, but allow you to transition into almost anything.

- o **Tech** – These builds aim at quickly getting T2/T3 units available. They may sacrifice economy or safety to get these units into the game faster, and the usually have strategies based around these units.

- o **Tech Rush** – These risky builds sacrifice economy and sometimes safety to get specific units into play. The units will be able to do significant damage to the enemy, who often does not expect to see these units so soon.

- **When using a certain type of build, be sure that the actions you take make sense with that type of build**. There are five types of builds: Rush, Economic, Balance, Tech, Tech Rush. Do not try to expand early with a tech rush build, or try to attack someone with an economic build.

Additional Information:

Liquidpedia: "How to Read Build Orders" - http://wiki.teamliquid.net/starcraft2/How_to_read_Build_Orders
SC2 Noob School: "Build Orders Part 1" - http://www.youtube.com/watch?v=VMZWeejm5cg,
SC2 Noob School: "Build Orders Part 2" - http://www.youtube.com/watch?v=PaeXSKiuVoY

(A.6) Map Notes

- These are the current league maps for 1v1, 2v2, 3v3, and 4v4 (as of March 10, 2011).

Additional Information:

Liquidpedia: "Maps" – http://wiki.teamliquid.net/starcraft2/Maps
Liquidpedia: "Ladder Maps" – http://wiki.teamliquid.net/starcraft2/Maps#Battle.net_Ladder_Map_Pool
ShackNews: "New Maps" - http://www.shacknews.com/article/67645/starcraft-2-adds-and-removes

(A.6.1) 1v1 Map Rotation

- **Backwater Gulch** - http://wiki.teamliquid.net/starcraft2/Backwater_Gulch
  - o **2 Paths**: 2 Side Paths on the NE and SW
  - o **2 Towers:** Middle area has two towers, each one overlooking a side path
  - o **Expansions (per base)**:
    - Natural expo connected to main, on middle ground
    - One adjacent expo (overlooked by middle ground) / two center gold expos
  - o **Notable Features**: Adjacent expos are have high ground areas so beware of high-to-low ground attacks

- **Delta Quadrant** - http://wiki.teamliquid.net/starcraft2/Delta_Quadrant
  - o **Multiple Paths**: Center area is a square consisting of 4 side paths (sides of the square), and 2 center paths (central axes of the square)
  - o **1 Tower:** Middle area has one tower overlooking the crossroads of the central paths
  - o **Expansions**:
    - ▪ Natural expo is in front of the main base
    - ▪ Backdoor expo is blocked by rocks / Adjacent gold expo nearby is blocked by rock
  - o **Notable Features**: Backdoor expos are vulnerable to drops, especially since the map has a large border allowing units to fly undetected

- **Metalopolis** - http://wiki.teamliquid.net/starcraft2/Metalopolis
  - o **6 Paths**: Center area is a square consisting of 4 side paths (sides of the square), and 2 center paths (elevated high ground center areas)
  - o **2 Towers:** Middle area has two towers that overlook two of the side paths and the center paths
  - o **Expansions**:
    - ▪ Natural expo on low ground near the main
    - ▪ Adjacent normal expo on high ground near the sides of the map / gold expos in the center of the map
  - o **Notable Features**: Smoke in the back of the main base hides a small area, so be aware of the potential for drops

- **Scrap Station** - http://wiki.teamliquid.net/starcraft2/Scrap_Station
  - o **2 Paths**: One long "U" shaped path (45 seconds to travel), and one shorter "U" shaped path (20 seconds)
  - o **1 Tower:** SW has one tower overlooking the turning curve of the larger U path
  - o **Expansions**:
    - ▪ Natural expo with a second entrance blocks off by rocks (near high ground)
    - ▪ Normal expos are an island expo by both main bases / expo blocked by destructible rocks / one gold expo at 7 o'clock position
  - o **Notable Features**: Terran can wall-off main ramp with 4 depots and one barracks, or 1 depot and two barracks

- **Slag Pits** - http://wiki.teamliquid.net/starcraft2/Slag_Pits
  - o **Multiple Paths**: Center area is a square consisting of 4 side paths (sides of the square), and 2 center paths (central axes of the square)
  - o **1 Tower:** Center area has one tower watching the entire low ground center area
  - o **Expansions**:
    - ▪ Natural expo is on low ground located near the main base
    - ▪ Gold expos are on low ground near the edges

- o **Notable Features**: Trees block vision and allow for units to be positioned

- **Shattered Temple** - http://wiki.teamliquid.net/starcraft2/The_Shattered_Temple
    - o **1 Wide Path**: Large circular center area
    - o **1 Tower:** Center area has one tower only covering part of the center area
    - o **Expansions**:
        - ▪ Natural expos are on low ground and located near the main base
        - ▪ Normal expo is on high ground but blocked by destructible rocks / gold expos near the center of the map also blocked by a rock
    - o **Notable Features**: The expos are connected into a wide, hard to block off expansion area

- **Typhon Peaks** - http://wiki.teamliquid.net/starcraft2/Typhon_Peaks
    - o **7 Paths**: Four horizontal paths, Three vertical paths, two which are blocked by rocks
    - o **2 Towers:** Center area has two towers that cover half of the center area each
    - o **Expansions**:
        - ▪ Natural expos are on low ground and located near the main base
        - ▪ Normal expos are on low ground fairly close to the main base / Normal expos adjacent to the main base / there are no golds
    - o **Notable Features**: This map combines features from scrap station (rocks to shorten attack distance), Shakuras Plateau (center path watched by towers), and Xel'Naga Caverns (nearby low ground expos)

- **Xel'Naga Caverns** - http://wiki.teamliquid.net/starcraft2/Xel%27Naga_Caverns
    - o **4 Paths**: Two center paths and two side paths
    - o **2 Towers:** Center area has two towers, each covers part of the side and central path that it is near
    - o **Expansions**:
        - ▪ Natural expo has two paths coming from the center path and a backdoor flank that has vision-blocking trees (this can be walled off)
        - ▪ One low-ground expo / One adjacent expo on high ground / gold expos in the middle
        - ▪ For the 3rd expo Protoss can take the low-ground or the gold and leave their army in the middle, Terran can take the gold and use a planetary fortress, and Zerg tend to get the adjacent base because the gold and low-ground are vulnerable to the T,P long range units
    - o **Notable Features**: Proxy attacks are common in the backdoor flank because of the vision-blocking trees, so be sure to scout this area

(A.6.2) 2v2 Map Rotation

- **Gutterhulk** - http://wiki.teamliquid.net/starcraft2/Gutterhulk
    - o **2 Paths**: Two center paths and backdoor paths to every main base

- o **2 Towers:** Center has two towers, each watching a center path
- o **Team Setup**: Allies have their own bases
- o **Expansions**:
  - Natural expo are on low ground between the two allies
  - Normal expos available by backdoor to bases / low ground golds between the backdoor expos of opposing teams
- o **Notable Features**: With two center paths leading into a backdoor and a main entrance, there are multiple paths to attack the enemy, so controlling the towers is key

- **High Orbit** - http://wiki.teamliquid.net/starcraft2/High_Orbit
  - o **2 Paths**: One center path and one backdoor path to shared enemy main base
  - o **2 Towers:** Center has two towers each watching a portion of the center path
  - o **Team Setup**: Allies share a starting base
  - o **Expansions**:
    - Double natural expansion further away but provides expansion for both players
    - Normal expo is separated by rocks at the backdoor of the main base / gold with rocks blocking construction as the closest expo
  - o **Notable Features**: The natural expansion is actually further away than the individual normal or gold, but being together means protecting each other together more effectively

- **Khaydarin Depths** - http://wiki.teamliquid.net/starcraft2/Khaydarin_Depths
  - o **5 Paths**: Three center paths, and two backdoor side paths blocked by rocks at the edges of the map
  - o **2 Towers:** Center has two towers, each watching an outside center path and part of the middle central path
  - o **Team Setup**: Allies have their own bases
  - o **Expansions**:
    - Natural expo are on low ground between the two allies, a gold expo is between the allied bases
    - Expos are on the edges of the map / golds are in the center
  - o **Notable Features**: With three center paths available and two more blocked by rocks, tower vision and map control is important

- **Monlyth Ridge** - http://wiki.teamliquid.net/starcraft2/Monlyth_Ridge
  - o **3 Paths**: One low ground center path, two high ground side paths
  - o **2 Towers:** Each high ground area has one tower that overlooks the low ground center path
  - o **Team Setup**: Allies have their own bases
  - o **Expansions**:
    - Natural expo are on low ground between the two allies

- Normal expos on low ground in the remaining corners, golds blocked by rocks on the high ground
    - o **Notable Features**: The natural expo area is very open and vulnerable if players expand early

- **Omega Sector** - http://wiki.teamliquid.net/starcraft2/Omega_Sector
    - o **3 Paths**: One center path and two side paths
    - o **3 Towers:** Shared naturals on high ground have one tower / Center has one tower overlooking part of center path
    - o **Team Setup**: Allies have their own bases
    - o **Expansions**:
        - Natural expos are on shared high ground, one for each ally
        - Normal expos on the edges between the opposing teams / golds are in the center
    - o **Notable Features**: Your ally is a little far away, so keep that in mind when building production structures

- **Red Stone Gulch** - http://wiki.teamliquid.net/starcraft2/Red_Stone_Gulch
    - o **4 Paths**: Two center paths through low ground center area, two side paths in N and S
    - o **4 Towers:** Center area is overlooked by two towers one each team's side / Sides have one top each
    - o **Team Setup**: Allies have their own bases and share a natural area
    - o **Expansions**:
        - Natural expos are on shared low ground, one for each ally
        - Additional normal expos are near the base with the backdoor entrance / golds are located in the center low ground area
    - o **Notable Features**: One of the teammates has a backdoor entrance protected by rocks

- **Scorched Haven** - http://wiki.teamliquid.net/starcraft2/Scorched_Haven
    - o **5 Paths**: Three center paths and two side paths, all leading into shared choke points between the allied bases
    - o **2 Towers:** High ground areas on the N and S sides have one tower that does covers the side and the outer center path
    - o **Team Setup**: Allies have their own bases and share a choke point
    - o **Expansions**:
        - Natural expos are on shared low ground protected by a shared choke point, one for each ally
        - Normal expo in the remaining corner on the side shared by a team / Normal expo on the high ground edges / Golds in the low ground center area
    - o **Notable Features**: The gold bases are difficult to hold, it takes an advantage over the enemy to secure these

- **Ruins of Tarsonis** - http://wiki.teamliquid.net/starcraft2/The_Ruins_of_Tarsonis
    - **3 Paths**: One center path leading to shared choke points, and two side paths connecting backdoor entrances
    - **2 Towers:** Sides have high ground expos with towers overlooking the backdoor side paths
    - **Team Setup**: Allies share a base
    - **Expansions**:
        - Natural expos are on shared middle ground, one for each ally
        - Normal expos near the backdoor entrances one per ally / golds are on the high ground areas between the opposing teams
    - **Notable Features**: Each shared base has two backdoor entrances leading to additional expos, while they lead into the center of the map

- **Tempest** - http://wiki.teamliquid.net/starcraft2/Tempest
    - **2 Paths (per quarter)**: The map forms an "X", and each X has two split paths leading to the shared choke point between the allied bases
    - **Towers:** Center has one tower overlooking the middle of the "X" crossroads
    - **Team Setup**: Allies have their own bases and share a choke point
    - **Expansions**:
        - Natural expos are on lower ground one for each ally, sharing a choke point near the middle of the crossroads
        - Each of the four parts of the "X" has two main bases and two natural expos, and there are the only expos available
    - **Notable Features**: The open cliffs also for reapers, colossus, and blink stalkers to move easily

(A.6.3) 3v3 Map Rotation

- **Arakan Citadel** - http://wiki.teamliquid.net/starcraft2/Arakan_Citadel
    - **5 Paths**: The map has three center paths and two side paths blocked by rocks, all 5 paths lead into the shared enemy base which has two choke points
    - **Towers:** Shared base has three towers (one in center, two on sides) / center has four towers (two near center, two on sides) for a total of 10 towers
    - **Team Setup**: Allies share one base and two choke points
    - **Expansions**:
        - Natural expos are on high ground with two expos
        - Each half of the map has two normal expos near the ally bases / the center area of the map has two normal expos / the very edges of the map has two normal expos blocks by rocks / the "inner side" paths have one gold each
    - **Notable Features**: The map is split into NW and SE halves. If a zerg takes one of the expos in the shared natural, the creep ill extend into the other expo. The center area has two normal expos that are on high ground that overlooks one of the choke points of the enemy team, making this good for proxies, drops, and high-to-low ground advantages

- **Bio Lab** - http://wiki.teamliquid.net/starcraft2/The_Bio_Lab
  - **3 Paths (per half)**: One large center path, the sides are circular and provide two paths to the side entrance
  - **4 Towers:** Center shared natural expo area each have has one tower overlooking center path / 2 Sides shared expo area have one tower overlooking the paths leading into it
  - **Team Setup**: Allies have their own bases and share a large expansion area
  - **Expansions**:
    - Natural expos are in a large shared natural expo area, with one expo for each ally
    - Two normal areas are on a shared high ground side area / gold expos are in the center of the side circular path
  - **Notable Features**: Each base has a narrow choke point for walling-off if desired. The natural expansion area is defended easily because of the tower, high ground, and closeness of teammates.

- **Colony 426** - http://wiki.teamliquid.net/starcraft2/Colony_426
  - **5 Paths**: The map has one center paths and four side paths (two of the side paths are blocked by rocks)
  - **0 Towers:** There are no towers, instead the center player can see the center path and one of the side paths (2 paths)
  - **Team Setup**: Allies have their own bases, one ally is in the center
  - **Expansions**:
    - Natural expos are close to each main's ramp, one per player
    - There are two golds on the low-ground sides
  - **Notable Features**: Expansions are relatively open compared to most maps

- **Dig Site** - http://wiki.teamliquid.net/starcraft2/Dig_Site
  - **4 Paths**: There are two center paths and two side paths, all of which lead to two shared choke points, which lead to a single shared area that connects the bases
  - **2 Towers:** Center has two high ground platforms with one tower each
  - **Team Setup**: Allies have their own bases, a shared area between their bases, and two shared choke points
  - **Expansions**:
    - One natural expo is in the shared area, the other two are adjacent to the side bases
    - Gold expansions on the side islands / gold expansions on the side paths blocked by rocks / gold expansion on the high ground center areas
  - **Notable Features**: The bases at 2 o'clock and 8 o'clock have two ramps and a small area between the bases. A proxy pylon can be placed here to quickly reinforce an assault on either base, since the pylon reaches both bases.

- **Frontier** - http://wiki.teamliquid.net/starcraft2/Frontier
    - o **6 Paths (per half)**: The map forms an "X" in the middle, and each quarter of the "X" splits twice for a total of four paths, each one ramps of the enemy bases, in addition to two side paths available if the rocks are broken
    - o **2 Towers:** Side paths each have a tower that overlooks half of the shared middle of the "X" crossroads
    - o **Team Setup**: Allies have their own bases and a shared back area connected by their second ramps
    - o **Expansions**:
        - ▪ Natural expos are nearby the ramp exits of each ally, one per ally
        - ▪ Each high ground area has a normal expo / the side of the high ground area with a ramp has a normal expo / the side of the high ground area with rocks has a gold expo
    - o **Notable Features**: Each base has two ramps, making wall-offs very difficult

- **Typhon** - http://wiki.teamliquid.net/starcraft2/Typhon
    - o **4 Paths**: The SW portion of the map has three straight pathways that lead to the shared enemy base, the center and NE area has one pathway blocked by rocks that lead to the various expos near the shared enemy bases
    - o **2 Towers:** Center shared expo areas have one tower each, overlooking the SW center most main path
    - o **Team Setup**: Allies share one base and two large choke points
    - o **Expansions**:
        - ▪ Natural expos are in a shared area near the center
        - ▪ The SW path areas have three more expos / There are two island expos in the far SW / One gold is in the far NE blocked by rocks
    - o **Notable Features**: The paths of this map is random and symmetrical which makes it excellent for multi-front attacks

- **Ulaan Deeps** - http://wiki.teamliquid.net/starcraft2/Ulaan_Deeps
    - o **4 Paths**: Two side paths, two central paths blocked by rocks
    - o **2 Towers:** Center paths each have one tower
    - o **Team Setup**: Allies have their own bases
    - o **Expansions**:
        - ▪ Each ally has their own expo, the allies on the sides have protected expos but the center ally has an more exposed expo
        - ▪ The sides of the map have exposed golds
    - o **Notable Features**: The center high ground can help control an entire side path

(A.6.4) 4v4 Map Rotation
- **District 10** - http://wiki.teamliquid.net/starcraft2/District_10

- o **6 Paths**: There are two center paths and four side paths which lead into the shared area for one team
- o **2 Towers:** Center has two towers covering the two central paths
- o **Team Setup**: Allies share one huge high ground base which has three exits (a center ramp, side ramp, and side backdoor protected by rocks)
- o **Expansions**:
    - ▪ At the edges of the high ground are an expo for each ally
    - ▪ The sides of the map have shared high ground areas with two normals each / the side path has a gold expo blocked by a rock
- o **Notable Features**: Be sure to watch the side entrance protected by rocks because both a center path and a side path lead into it

- **Extinction** - http://wiki.teamliquid.net/starcraft2/Extinction
    - o **4 Paths**: There are four side paths that lead to two choke points on the sides of the shared enemy base
    - o **8 Towers:** Center has four towers, two for each team's shared low ground area / Each side area has two high ground areas with one tower each
    - o **Team Setup**: Allies share one large base that is setup as a square, with each base in a corner of the square
    - o **Expansions**:
        - ▪ One natural expo is on low ground at the center of the shared base square / two naturals are on the sides of the shared base and exposed to the side path / one natural is in front of the shared square base and exposed to the center area / remaining natural is an island behind the shared square area
        - ▪ At the edges of the map are two high ground with one expo each, protected by rocks / the outermost sides have gold expos
    - o **Notable Features**: The center area quickly leads near the enemy shared square base

- **High Ground** - http://wiki.teamliquid.net/starcraft2/High_Ground
    - o **3 Paths**: There is one large center path leading to the middle of the of the enemy's two separate two-person bases, and two smaller side paths leading directly to one of the enemy's two-player bases
    - o **2 Towers:** NW and SE shared bases have a tower overlooking their gold and the center path
    - o **Team Setup**: Each team has two 2-player bases that share one ramp, each base is far away from the other
    - o **Expansions**:
        - ▪ Each two-person base has two expos outside
        - ▪ Each center path has one gold near a team's half of the map / two golds are in the center of the map on high ground

- o **Notable Features**: There are four gold expansions in the map, controlling these will be a huge economic advantage

- **Lava Flow** - http://wiki.teamliquid.net/starcraft2/Lava_Flow
    - o **2 Paths**: The two main side paths split into two smaller paths for a total of four smaller paths in the center of the map, each main side path leads to one choke point into the shared natural expansion area
    - o **2 Towers:** Side paths are each overlooked by one high ground tower
    - o **Team Setup**: Allies each have their own base, with three allies on their side of the map, and noe ally in the center
    - o **Expansions**:
        - ▪ Each ally has a natural expo on low ground nearby their base
        - ▪ Each side has an island with two normal expos / each side of the main land area has two gold expos
    - o **Notable Features**: The cliffs are very accessible to reapers, colossus, and blink stalkers

- **Megaton** - http://wiki.teamliquid.net/starcraft2/Megaton
    - o **3 Paths**: There is one center path and two side paths that lead to the two sides of the shared enemy base
    - o **Towers:** Center has one tower / Side paths has one tower
    - o **Team Setup**: Allies share one huge high ground base with two exits on the sides, only two allies are exposed by the ramps
    - o **Expansions**:
        - ▪ Natural expos are found on the side of the shared base, one for each ally (three on one side, one of the other side)
        - ▪ The outermost sides of the map have two golds each
    - o **Notable Features**: Since none of the expansions are inside the shared base, so disrupting or preventing the expansions can lead to a winning advantage. However, attacking the shared base is more difficult because of the closeness of the players.

- **Outpost** - http://wiki.teamliquid.net/starcraft2/Outpost
    - o **2 Paths**: There are two side paths that are NOT connected in the middle, each leading to the shared team expo area
    - o **2 Towers:** Center shared expo areas have one tower each
    - o **Team Setup**: Each team has two 2-player bases that share one ramp, each base is far away from the other
    - o **Expansions**:
        - ▪ There are three natural expos in a shared natural expo area between both bases, forcing one player to expo elsewhere.

- three separate expos each are on each low ground side of the map / golds are located in the center of the map
    - o **Notable Features**: There are only three natural expos, forcing one player to expand on the sides or in the center

- **Sand Canyon** - http://wiki.teamliquid.net/starcraft2/Sand_Canyon
    - o **2 Paths**: There are two side paths that are connected in the middle
    - o **2 Towers:** Center has two high ground shared expo areas, each one having one tower
    - o **Team Setup**: Allies have their own bases
    - o **Expansions**:
        - Each corner of the map has two naturals, so each ally has a natural to share with a teammate
        - Center has two high ground areas with two expos each / top and bottom of the map has a low ground gold protected by rocks, in between opposing teams
    - o **Notable Features**: The gold expansions are on low ground and between opposing teams, making them difficult to hold

- **Toxic Slums** - http://wiki.teamliquid.net/starcraft2/Toxic_Slums
    - o **3 Paths**: Two side paths and one center path
    - o **2 Towers:** Center has two towers (on the higher ground sides) covering the two side paths
    - o **Team Setup**: Each ally has their own base
    - o **Expansions**:
        - Each ally has their own natural
        - The sides of the map have island areas with normal expos / the center has two golds
    - o **Notable Features**: Minerals will quickly run out since each player only has their main and one natural, and then there are only 4 areas left to be split among 8 players

Additional Information:
Liquidpedia: "Maps" – http://wiki.teamliquid.net/starcraft2/Maps
Liquidpedia: "Ladder Maps" – http://wiki.teamliquid.net/starcraft2/Maps#Battle.net_Ladder_Map_Pool
ShackNews: "New Maps" - http://www.shacknews.com/article/67645/starcraft-2-adds-and-removes

(A.7) Advanced Unit Tricks (All Races)

- **Holding ctrl** while clicking the idle worker icon will select all idle workers at once
- **Holding shift** while clicking the idle worker icon will add workers to the group one at a time
- **Massive units (thors, ultralisk, colossus)** can destroy force fields by walking over them
- **Mules, changelings, and hallucinations** can all control a Xel'Naga watch tower

- **Resource nodes** take priority over units on the minimap display (meaning the minimap will not display units near resources)
- **Sensor Sweep** reveals an area roughly twice as large as its sweep graphic
- **Splash damage on your own units** can damage nearly cloaked enemy units
- **Units ordered to attack near a SCV** constructing a building will target and attack the SCV
- **Workers ordered to gather resources** can break free if they are surrounded by enemy units

Additional Information:

Liquidpedia: "Oddities" - http://wiki.teamliquid.net/starcraft2/Oddities

(B) <u>FIVE FUNDAMENTALS</u>

- **Macro** and **economy** are related concepts and deal with non-combat aspects of the game.

- **Micro** and **combat** are related concepts and deal with combat aspects of the game.

- **Information** deals with map control and knowledge of the enemy's strategy.

(B.1) <u>Macro</u>

- **Use "Associative Response" to help you remember related concepts**. This associates two actions, such as "WHEN X, THEN Y." Some examples of this are:
  - When you build army units, check your supply.
  - When a new expansion finishes, move workers to this expansion.
  - When your production buildings are making units and you have money left, make production buildings.

- **Remember to hotkey groups of buildings**! These are only three types of buildings, so group them by type:
  - "Worker-Energy Buildings" such as the (CC, Nexus, Queen*)
  - "Production Buildings" such as the (Barracks, Robotic Facility, Hatchery, etc)
  - "Upgrade Buildings" such as the (Ghost Academy, Forge, Spire, etc)

*It may seem awkward to consider the queen an "energy building", but that is what the queen is – an equivalent to the Terran CC and Protoss Nexus.

- **Always use your energy building's energy**! This is much easier they are all under a single hotkey. You never want to waste a chance to drop a mule (Terran CC), chrono boost (Protoss Nexus), or inject larva (Zerg Queen)
  Effective ways to use queen spawn larva - http://wiki.teamliquid.net/starcraft2/Queen#Spawning_Larvae

- **Each building can be set to "waypoint "units** by selecting the building and right-clicking a location so that all units go to that spot. Your worker buildings can have workers sent directly to minerals so that they will mine automatically, production buildings can send army units to specific areas of the base or map, etc.

- **You will be more efficient if you shift-queue frequently** (hold down shift while issuing commands). You can shift-queue workers, units, or groups of both to perform multiple tasks such as "build two depots and return to minerals" or "focus fire this enemy unit, then attack this enemy building". This allows you to decreases the time workers are idle and manage your army more effectively.

- **Keep your money low**! You can build army units, supply buildings, upgrades, and more buildings. Just keep money low, it is never a good idea to have more than 500 minerals or 100 gas (unless you are saving up for something).

- **Always make units**! Your production buildings should always be making units. You can hit your production building hotkey and see the buildings that are idle and which are not – try to keep every building working! Ideally try to queue no more than 1 unit per building, but at first stick to not queuing anymore than 2 units per building. Use the money left over to build new production buildings. Continue to make army units, especially when attacking! This is much easier to do if the production buildings are in a single hotkey, as you can still focus on your army currently fighting.

- **Always make supply before you need it**! Remember that the more production buildings you have the more supply it will take to build a unit in each building, so you will need to build supply more and more frequently as the game goes on.

- **Avoid queuing up too many units at production buildings**! This is because every queued unit has already used the money, but will not be available for a long time. Use those minerals elsewhere; possibly to create another barracks and now make two marines at once! It is better to have many production buildings each making one unit at once, than a few production buildings with many units queued up. The ideal way to queue is to only queue 1 unit per production building, but this takes a lot of practice and speed. If you forget to queue units when that "round" of units finishes, you cannot get back the time lost when units should have been building, and you will fall behind. Because of this, it is best to queue 2 units per building at first, until your speed increases and you can slowly queue less.

- **Keep making production buildings**! Whenever all of your production buildings are making army units (no more than 2 queued in each, ideally only 1) and you have money left over, consider building more production buildings. Each base (worker building) can support 3-5 production buildings of any type. Each time you expand, remember to build 3-5 more production buildings as your money increases (three bases means having 10-15 production buildings!) Note that as Zerg, your production buildings are hatcheries, so make more hatcheries whenever you can afford to do so.

- **Each base can support 3-5 production buildings of any type**! Every time you expand your income will increase, and you can get another 3-5 production buildings. A Terran with one base might have "2 rax, 1 factory, 1 starport", while a Protoss with two bases may have "6 gateways, 2 robotic facilities, 1 stargate". The exception to this rule is Zerg, as their production buildings are hatcheries injected by queens. As Zerg, build another hatchery whenever you have more money than you can spend using your current number of hatcheries and Queen inject larva.

- **Get upgrades whenever you have excess money! (Meaning you are making units and production buildings and still have some money)** You have excess money when have army units queued in production buildings, are building supplies, have enough production buildings for the number of bases you have, and still have money left over. Alternatively, if you have too much money and cannot spend it, upgrades are also a good idea.

- **Constantly cycle though your hotkeys**! Continuously check on your army, worker-energy buildings, production buildings, and upgrade buildings. You want to ensure your army is well positioned, your

worker-energy buildings are building workers and using their energy, your production buildings are making army units, and that upgrade buildings are making upgrades when possible.

- **As the mid-game approaches, start building higher-tier units**. Higher tier units require additional tech buildings to produce, such as Terran thors and banshees, Zerg mutalisks and brood lords, and Protoss colossi and templar.

- **As the game gets very long, add more "mineral-only" buildings** (barracks, gateways) **and start upgrading your "mineral only" units**. Eventually you will run out of gas and will need to rely on mineral units (such as marines, zerglings, zealots), so get these units fully upgraded and be sure you can produce them in large numbers.

- **Whenever you approach the 200/200 food cap make many production buildings** in order to reinforce as many as 20, 30, or even 40 units at once. It is likely that both sides will have large amounts of money, so whoever reinforces faster is likely to win.

Additional Information:
Liquidpedia: "Macro Mechanics" - http://wiki.teamliquid.net/starcraft2/Macro_Mechanics
SC2 Noob School: "Macro" - http://www.youtube.com/watch?v=fvQTF5IusTM

(B.2) Economy

- **Place workers on non-worked mineral nodes** (at the beginning of the game)! This can increase your minerals because workers are not spending time searching for a mineral node to mine. Later in the game transfer workers in a large group and click a node, deselect two workers from the wireframe menu at the bottom, and click another node. This will quickly allow you to get two workers on every node before they arrive.

- **Spend money**! You should always be making army units, supply, production buildings (3-5 per base), and upgrades. Once you have every production building making units, check supply and build more if needed. If every production building is making units and you have enough supply, you can then use the money to build extra production buildings (remember, three to five per base), or build upgrades buildings and/or get upgrades.

- **Each time you expand, remember to start making more production buildings** once your economy is up and running. Each base can support 3-5 production buildings of any type. Note that as Zerg, your expansions (more hatcheries) are more production buildings – just be sure to build more queens too!

- **Remember to protect your expansions as they are building**! Expansions are a short-term resource drain while they are building, and are a long-term resource gain once protected and full of workers. Because of this temporary resource drain, it is important to protect the expansion as it is building, so either keep your army there near it or go attack the enemy. If you see the enemy building an expansion, either attack it or start building your own!

- **Constantly build workers**! Each base has about 8 mineral nodes and 2 gas geysers, if you have 2 workers per mineral node and 3 per geyser this is (8*2) + (3*2) = 16+6 = 22. You can safely go up to 24 workers per base, which is "one full UI screen full of workers" at the bottom (each row is 8 units, with 3 rows for 24 units). A base with 20-24 workers is "saturated" with workers and is at maximum efficiency. Once a base has 24 workers you can either temporarily stop building workers if you have no bases to transfer them to, or continue to build workers if you are building a new expansion. (Zerg tends to focus on building drones until bases as saturated. Zerg only builds army units if they must or if all bases are saturated).

- **Pull workers off gas whenever necessary – but remember to replace them later**! Whenever you need more minerals, your gas is getting too high, or you will not be needing gas for some time, have workers on gas collect minerals instead. This will give you more needed minerals until you need gas again. Just be sure not to forget to replace the workers when you need more gas!

- **Protect each expansion with static defenses** such as Terran bunkers and turrets, Zerg crawlers, and Protoss cannons. Your first expansion at your natural is typically safer than a second or third expansion, so use heavier static defenses the further away the expansions are from your main base.

- **It is safe to expand during an attack on an enemy, or after winning a battle.** This is because during battle the enemy is busy responding to your attack. If the enemy recently lost a battle they will likely have to rebuild and reinforce, and cannot attack you right away.

- **When your workers are under attack, move them to safety.** While letting them continue to mine will get you more minerals in the short-term, you will lose your ability to make up the loss in the long-term if you lose too many workers. It is better to take a short-term loss (which is easily made up in the long-term) than to suffer long-term losses (which will take a long time to fix).

- **Consistently expand and maintain at least a two-base economy**! Complete your first expansion around 6-8 minutes and the second expansion within 12-16 minutes. A good idea is to try to expand roughly every 7 minutes. At the very least, keep a "two-base" economy (meaning two bases with 16-24 workers each). To ensure you maintain a two-base economy, get the 2ʳᵈ expo up before the main base runs out of minerals. Stay even or ahead of your opponent's economy! (Zerg want to expand even more than this, as they want to stay 1 base ahead of their enemy)

- **Send most of your probes to outside expansions**! Save your backdoor expansions and main base minerals for situations where you cannot expand because the enemy has map control (or the enemy has you contained). This way, you can continue to get minerals in despite being contained by the enemy.

- **There are four main kinds of expansion techniques**:
  - ATTACK/HARASS – Send units to attack the enemy while you set up your expansion. If you want to retreat and save the units, you can do so once the expansion is finished.

- o   CONTAIN/TECH – Use units to block the enemy from expanding or leaving their main base. Superior tech (like cloaked units) can also force the enemy to stay in their base.
- o   FAST – Skipping gas and only building enough production buildings for a few defensive units in order to gain an expo within the first 4-5 minutes.
- o   MINERAL DUMP – If minerals are getting really high (or gas is really low) and the money needs to be spend, consider expanding (400 minerals) to use the minerals and gain some gas.

Additional Information:
Liquidpedia: "Mining Minerals" - http://wiki.teamliquid.net/starcraft2/Mining_Minerals
SC2 Noob School: "Expansions Part 1" - http://www.youtube.com/watch?v=58oqB7UbHOg
SC2 Noob School: "Expansions Part 2" - http://www.youtube.com/watch?v=rjoYVNqTlZs

(B.3) Micro

- **Effectively hotkey your army units**, you should not have all of your army units in the same group. Separate groups by function such as "land, air", purpose "front units, flanking units", or abilities "basic units, special ability units". You should have 2-4 hotkeys for your army units. You may want to put all of the special/spellcaster units into separate groups for easier access.

- **In order to "kite" successfully** (attacking other units while avoiding taking damage), you will need a range and/or speed advantage. Here is how to kite: Move back a little, hit S or H, wait for the firing animation to start, repeat. (Note this does not apply to most Zerg units, who surround rather than kite)
- Kiting: http://wiki.teamliquid.net/starcraft2/Kiting

- **Continue to kite an enemy until the majority of their melee units are dead**. Against the Zerg, stand in a choke point or use a wall to avoid letting their melee units surround your army. Once all the melee units are dead, it should be safe to hold position or spread out. (Note this does not apply to Zerg, who surround rather than kite)

- **The Zerg army is large, fast, and mobile, so Zerg rely on surrounding the enemy**. The Zerg do not kite the enemy (the kiting method usually refers to T or P playing against the Z). Split your army up to attack from multiple angles. Try to use your zerglings against the enemy's ranged units to stop them from kiting, while your ranged units surround and attack everything.

- **Use high ground to protect spell-casters and other high-damage units**. Unless the enemy can see on the high ground, these units are safe from attack. Even if the enemy can see them, they are still safe from melee units.

- **Use the terrain to your advantage**! Try to lure or force the enemy into choke points and concave your army around them. Use high ground to protect your units. Remember that smoke, trees, bushes, etc. block vision so there may be hidden units or buildings behind these features. Be careful – this works against you too! Beware of choke points and enemy high ground.

- **Flee the weak**! Always move your damaged or dying units to the back of your army (or anywhere away from battle) to safety so that they live. Then let it fight again, preferably from the back or middle. It is better to attack with 10 damaged but alive units, than with 5 perfectly healthy units.

- **Never allow long-range, high-damage units to be in front** (siege tanks, colossi, etc). This is a total waste of their long range, and losing them weakens your army. Keep them spread out in the back.

Additional Information:
SC2 Noob School: "Micro Part 1" http://www.youtube.com/watch?v=teVwVEIxDfw
SC2 Noob School: "Micro Part 2" http://www.youtube.com/watch?v=sd2qR6aDyQE
SC2 Noob School: "Shift-Queue" http://www.youtube.com/watch?v=dBQPGa3hiGA

(B.4) Combat

(B.4.1) Battles

- **Use the terrain to your advantage**! Try to lure or force the enemy into choke points and concave your army around them. Use high ground to protect your units. Remember that smoke, trees, bushes, etc. block vision so there may be hidden units or buildings behind these features.

- **Before battle ensure you have adequate supply or queue a worker to build more**. While in battle, your money tends to get very high because you are too distracted to build effectively. If you manage to kill the enemy with minimal losses and become supply blocked you have to wait for additional units – units that could end the game. For this reason you want to ensure you have adequate supply to keep making units to both spend your money and bolster your forces if you suffering minimal losses.

- **You can start building supply buildings right before you attack the enemy if you wish**. This will allow you to have sufficient supply to reinforce yourself later on, without needing to click back on the base and start building supply buildings.

- **While attacking, keep building units and rally them into the battle**! If you manage to keep building units while the enemy does not, you will eventually overwhelm them. If you are fast enough you can even continue to build production buildings and expansions while attacking (both of which are good ideas).

- **When fighting the enemy and reinforcing/rallying, if you cannot manage to build more buildings it is okay to over queue a little**. It is understandable that during battle you are distracted, so while over queuing is not as good as more production buildings or a new expansion, it is good if it allows you to focus on the battle more effectively, and it is better than doing nothing at all.

- **You can retreat to your buildings to gain let your buildings take damage instead of your units.** This causes the enemy units to start attacking your buildings, prolonging the lives of your units as they get some free hits on the enemy units.

- **If you successfully attack the enemy and have units left, retreat and reinforce.** Do not enter their base with a few damaged units and try to fight their reinforced units; you will lose your units. It is better to retreat and continue to build, giving you the possibility of healing your damage units and an advantage in army size.

- **After winning a battle with the enemy, it is often safe to expand.** This is because the enemy will likely have to rebuild and reinforce and cannot attack you as you expand.

- **Do not enter small chokes near the enemy base while they have defending units.** It is better to contain them and deny them an expansion while expanding yourself, than risk engaging their units and lose them all because you were caught in a choke point.

- **If you cannot fight an enemy army directly, attack the enemy base instead**. This will cause the enemy to either attack your base in return, resulting in a base trade, or they will attempt to defend their base. If they retreat to the base, use your reinforced units from your base to sandwich the enemy units.

- **These are the main kinds of attacks**:
  - Timing attacks when your army is superior (or the enemy is at a disadvantage)
  - Distraction attacks move the enemy's army so that you can attack another location
  - Multi-front attacks are attacking two areas at once (usually with at least one drop)
  - Mis-position attacks are when the enemy's army is set up incorrectly (such as unsieged tanks)
  - Feint attacks are quick attacks or harasses that usually involve retreating, commonly used to set up expansions.

(B.4.2) Harassment

- **You can harass the enemy in multiple ways**:
  - Hurt their economy by targeting workers and expansions
  - Hurt their supply by targeting supply structures/units
  - Hurt their tech/production by targeting buildings

- **You can catch up from being at a disadvantage by harassing the enemy**! Target their economy, supply, or production and try to catch up as quickly as possible.

- **When doing drop attacks, be sure to check for AA first and then try to drop all of your units at the edge of the enemy base before attacking**. You do not want to run into any AA structures or forces and lose your expensive dropships. You also don't want the enemy to you your dropship and react before you unload your units, killing your dropship and all the units inside. Remember to always play safe when doing drops!

(B.5) Information

(B.5.1) Scouting

- **What does the enemy have in terms of buildings and army**? The buildings the enemy has will let you know what kind of units they are capable of making, and if you can effectively counter them. The units they currently have will let you know if it is safe to attack or not.

- **Where is the enemy's army**? Are there any undefended locations that you can attack? Is their army far away from any expansions? Always see where their army is, and attack where it is not.

- **When is it in the game in terms of time passed, what did the enemy have before and what may they have now**? If an enemy has a particular tech building, expect even higher tech as time passes. Start expecting higher tier units as the game approaches 7-12 minutes. Keep an eye on the time and do not get caught unprepared by an enemy who has high tier units available!

- **Why are you taking the actions you are taking?** Are you making the best decisions possible given the information you have about your opponent? Always be sure your own actions make sense as you gather more information about the enemy.

- **Can your units effectively counter their army units? Do their units counter yours?** Sometimes both players have a balanced army, but sometimes someone can counter the other. It is important to know if you can counter them so you can go attack, or if they can counter you, so you can prepare to defend yourself better.

- **Be sure to hide your tech buildings from places the enemy can easily scout.** You do not want the enemy to know what units you are capable of making, so try to hide your buildings. If you want to "force" an enemy to build, you can purposely show them some of your units or tech buildings.

- **Is the enemy expanding?** If so, you will need to react by either attacking the expansion or building your own. Examine the situation and decide what to do.

- **Recognize the signs of an early rush!** Anytime the enemy base is lacking buildings or has no gas, start preparing for a possible rush.
    - Terran: A lack of gas indicates they are doing a fast expand or a marine rush. A lack of buildings could mean a proxy barracks near your base.
    - Zerg: A lack of drones or an early pool is a sure sign of an early zergling rush.
    - Protoss: A lack of workers or buildings means a cannon rush or a proxy gateway.
    - http://wiki.teamliquid.net/starcraft2/Scouting#Early_Game_Scouting

Additional Information:

Liquidpedia: "Scouting" - http://wiki.teamliquid.net/starcraft2/Scouting

SC2 Noob School: "Scouting" - http://www.youtube.com/watch?v=YL2aq8ViqwQ
SC2 Noob School: "Scouting by Comparison" - http://www.youtube.com/watch?v=VkToDg0bfWI

(B.5.2) Map Control

- **Maintain control over (or at least deny the enemy from controlling) the Xel'Naga Towers** (or just "towers")! These towers show a large area of the map, and if the enemy can see your army coming, they can get defenses ready in time. You want to see as much of the map as possible while the enemy knows as little as possible, so focus on those towers.

- **Keep a few units at (or patrolling nearby) the mineral expansions on the map.** You want to know when the enemy is expanding so that you can respond (by either attacking them or making your own expansion).

- **Watch the pathways that lead to your base so that you can see the enemy coming**. If you see the enemy early enough in time, you can prepare to defend yourself and have a better chance of winning the battle.

- **If you turtle, the enemy will eventually out-produce you.** Playing defensively and not attacking or controlling the map ("turtling") will allow the enemy to gain more expansions then you. They can then continue to attack you and weaken your army and economy, while they keep reinforcing and eventually win.

(B.6) Five Fundamentals Summary

- This is a summary; you can find additional information and other sources in the more detailed sections of the five fundamentals in section (B.1) through (B.5).

(B.6.1) Macro

- Use hotkeys, waypoints, and shift queuing to be more efficient.
- Always keep money low! Continuously build units, supply, production buildings, and upgrades.
- Try not to over-queue units, spend excess money on more production buildings (increasing the amount of units you can make at once).
- Cycle through your hotkeys and check on your army, energy building's energy level, production buildings, and upgrade buildings. Keep your army in position, use your energy, and keep buildings working!
- In the mid-game start producing higher tier units. In the late game, build more production buildings for mineral-only units and start upgrading them. Once you hit the 200/200 cap build many production buildings so that you can reinforce quickly.

(B.6.2) Economy

- It is best to expand when you are attacking, containing, or harassing the enemy because they are distracted. While doing one of these, build the expansion base and set up static defenses to protect it. (You can also expand after having won a battle with an enemy because they are reinforcing/rebuilding)
- Maintain a two-base economy by constantly building workers and consistently expanding! You should have your first expansion around 6-8 minutes and the second expansion around 12-16 minutes (before the main base depletes). In general, expand every 7 minutes.
- and start making more production buildings when your money increases (for every base you should have 3-5 production buildings of any type).
- Spend money! You should always be making army units and supply. If all production buildings are making units but not over queued (2 max, ideally 1 each) then make more production buildings. Use excess money to get upgrades.
- Always try to mine from your expansions rather than your main or backdoor expansions, so if the enemy forces you into your main base you still have minerals left to mine.

(B.6.3) Micro

- Depending on your race you can kite the enemy to be more effective (As T, P), or surround them (As Z). Kite as long as the enemy has melee units: "Move, hit S, wait for firing animation, repeat".
- You should effectively hotkey your army units in 2-3 groups so that you can quickly select your special/spellcaster units. Always separate air and ground units. Protect your special units by using high ground if possible.
- Use the terrain to your advantage, and avoid letting the enemy use it against you! Use choke points, vision blocking objects, and high ground to help you defeat your opponent, and be aware to avoid any situations where they can do it to you.
- Flee the weak! Move the unit under attack away from the battle until it is safe, then let it rejoin the fight. Also, never allow long-range, high-damage units to be in the front, keep them spread out in the back and protect them.
- Never allow long-range, high-damage units to be in the front, keep them spread out in the back and protect them.

(B.6.4) Combat

- Before battle ensure you have adequate supply (or queue a worker to build more). In battle, queue army units and rally them into battle. If possible while in battle, expand or make more production buildings as well.
- Do not be afraid to retreat and reinforce if you have a few units damaged but alive after a battle. If you engage the reinforced enemy units you may lose all of your remaining units – sometimes it is better to retreat, let them heal, and get an advantage in terms of army size.
- Use the main kinds of attacks effectively: Timing, Distraction, Multi-front, Mis-position, and Feint.

- If you are behind or at a disadvantage, you can try to catch up by harassing the enemy's economy, supply, production, or tech.
- Before dropping into an enemy's base, check/scan for AA. Try to release all units from a dropship at the edge of an enemy's base before attacking. You never want to lose units because an enemy destroyed a dropship before you got all of the units out.

(B.6.5) Information

- WHO/WHAT/WHERE/WHEN/WHY – What kind of units and buildings does the enemy have? Where is the enemy army? When is it in the game, and what units might they have now? Why will your strategy work against the enemy, given the information you know? Who has the advantage at this time?
- Be aware of the position of your army and the enemy army, as well as your base and any vulnerable areas of the enemy base.
- Hide your tech buildings and special units from the enemy so that they cannot effectively counter you. If you want to force them to react, let them see certain units or buildings.
- Maintain map control by controlling towers, expansions, and pathways.
- If the enemy is expanding, be sure to react appropriately, by either attacking them or starting your own expansion. Do not let them get an economic advantage!

(C)   TERRAN STRATEGY

(C.1) Terran Buildings and Units

(C.1.1) Terran Buildings

- **Command Center:** Main Structure (resource collecting)
- **Orbital Command:** CC upgrade (energy building for mules, supply drops, and scans)
- **Planetary Fortress:** CC upgrade (adds a powerful ground cannon)
- **Supply Depot:** Food/Supply Structure
- **Refinery:** Gas Structure
- **Barracks:** Production Structure (marines, marauders, reapers)
- **Engineering Bay:** Tech Structure
- **Bunker:** Defensive Structure (allows infantry to go inside)
- **Sensor Tower:** Defensive Structure (shows location of enemies)
- **Missile Turret:** Defensive Structure (anti-air) and Detector
- **Factory:** Production Structure (hellions, siege tanks, thors)
- **Ghost Academy:** Tech Structure
- **Starport:** Production Structure (Viking, Medivac, Raven, Banshee, Battlecruiser)
- **Armory:** Tech Structure

- **Fusion Core:** Tech Structure
- **Tech Lab:** Tech Structure
- **Reactor:** Tech Structure

Additional Information:

Liquidpedia: "Terran Buildings" - http://wiki.teamliquid.net/starcraft2/Terran_Units

(C.1.2) Terran Units

SCV			
Can set repair to auto-cast. SCVs can be shields for MM or repair mechanical units during attacks.			
Abilities and Upgrades: Can set repair to auto-cast and repair any mechanical buildings or mechanical units			

MULES			
One mule gathers 250-blue, 350-gold. Can be dropped near mechanical units to repair, or on top of enemy forces for splash damage from their own tanks.			
Abilities and Upgrades: Can set repair to auto-cast and repair any mechanical buildings or mechanical units			

Marine			
Race	**Good Against**	**Weak Against**	**Strategy**
VS. T	Marauder, Banshees	Tanks	Effective all game for damage, AA, and support – also effective at quickly killing workers due to high DPS
VS. Z	Hydralisk, Mutalisk	Baneling	Good for supporting mech units and providing effective AA against mutalisks – also effective at quickly killing workers due to high DPS
VS. P	Immortal, Void Ray	Colossus	Good for early MM or MMM, good for supporting mech units – also effective at quickly killing workers due to high DPS
Abilities and Upgrades: Stimpack increases damage and speed at the cost of 10 health / Combat shield increases health by 10			

Marauder			
Race	**Good Against**	**Weak Against**	**Strategy**
VS. T	Mech units	Marines	Mobile anti-mechanical units, scouting purposes only
VS. Z	Roach, Baneling	Zerglings	Effective if supported by marines/hellions
VS. P	Stalker, Colossus	Immortal, Chargelot	Effective if used to kite, effective if supported by ghost EMP. While zealots are easily kited by marauders with con-shells, chargelots counter marauders.
Upgrades: Stimpack increases damage and speed at the cost of 20 health / Concussive shells slow down enemy units by 50% by 1.5 s			

Reaper			
Race	**Good Against**	**Weak Against**	**Strategy**
VS. T	Marines	All	Reapers can be used to scout the enemy base without using a scan, or provide early harassment
VS. Z	Zergling	All	Reapers can be used to scout the enemy base without using a scan, or provide early harassment
VS. P	Zealot	All	Reapers can be used to scout the enemy base without using a scan, or provide early harassment
Upgrades: Jet Pack allows the reaper to jump up and down cliffs / Nitro Packs increase the reaper's speed by almost 33% (from 3 to roughly 4)			

Ghost			
Race	**Good Against**	**Weak Against**	**Strategy**
VS. T	Banshee, raven		Exposes ghosts and banshees, drains ravens and medivacs, can nuke tanks and supply
VS. Z	All		Can snipe dangerous units (snipe can also be shift-queued)
VS. P	All		Can EMP all units, and drain sentries, immortals, and templar
Abilities and Upgrades: Snipe is a long-range 45 damage hit to biological targets (it can be shift-queued to quick multiple hits) / EMP			

round removes 100 shield, drains any energy, and temporarily reveals any cloaked unit / Cloak turns the ghost invisible / Tac Nuke Strike calls down a nuke which takes 20 s to land / Moebius Reactor increases the ghost's starting energy by 25 / Personal Cloaking allows the cloak to cloak

Hellion

Race	Good Against	Weak Against	Strategy
VS. T		Marauder	Hellions with the igniter upgrade can kill workers in just a few hits - If enemy does not wall off marines+hellions can do a lot of early damage
VS. Z	Zergling, Hydralisk	Roach	Useful against fast expands, effective almost all game
VS. P	Zealot, Sentry	Stalker	Effective expansion raiders, can snipe templars, zealots, and sentries

Abilities and Upgrades: Infernal Pre-Igniter (also known as blue flame) improves damage done to light units by 10

Tank

Race	Good Against	Weak Against	Strategy
VS. T	Marines	Banshee	Use air units to increase tank's vision and control ground areas
VS. Z	All ground units	Mutalisk, Broodlord	On creep, tanks need to leapfrog to avoid being overwhelmed by zerglings
VS. P		Immortal, Blink Stalker	Used in midgame and lategame as bio becomes weaker. Use EMP with tanks.

Abilities and Upgrades: Siege Tech allows for tanks to siege / Siege Mode places the tank into an immobile siege mode with splash damage, longer range, and increased damage

Thor

Race	Good Against	Weak Against	Strategy
VS. T	Banshee, Tank	Marauder	Provides AA for your tanks and can damage enemy tanks
VS. Z	Mutalisk, Roach	Zergling, Broodlord	Effective if supported by marauders and hellions / well-microed mutalisks using the "magic box" technique can kill solo thors
VS. P	Stalker, Colossus	Void Ray, Carrier, Zealot	Good vs. gateway units, Thors with strike cannons are effective versus immortals and colossus (Note that without cannons Thors are weak against immortals)

Abilities and Upgrades: 250mm Strike Cannons stun the target for 6 seconds, and cause 500 damage over those 6 seconds (can target units or buildings). Note that this will bypass an immortal's hardened shield and kill it.

Viking

Race	Good Against	Weak Against	Strategy
VS. T	Battlecruiser, Banshee	Raven PDD	Protects and gives vision to tanks, provides air dominance
VS. Z	Broodlord	Hydralisk	Useful for overlord sniping
VS. P	Carrier, colossus	Stalker	Take out colossus and kite void rays

Abilities and Upgrades: Fighter Mode turns the Viking into an air unit with a powerful AA attack / Assault Mode turns the Viking into a ground unit with a ground attack

Medivac

Race	Strategy
VS. T	Used to support MMM or provide drops, beware of Terran AA units and turrets
VS. Z	Used to support MMM or provide drops, necessary for MM to stay alive, can drop marines+hellions for harassment
VS. P	Used to support MMM or provide drops, necessary for MM to stay alive, can drop hellions for harassment

Abilities and Upgrades: Heal automatically heals nearby friendly biological units for 3 health per 1 energy (including Zerg and Protoss teammates) / Load can hold 8 cargo space / Caduceus Reactor increases the medivac's strating energy by 25

Banshee

Race	Good Against	Weak Against	Strategy
VS. T	Tanks, Marauders	Thor, Viking	With air dominance and ground support can clear tanks and ground forces out
VS. Z	Roach	Hydra, Mutalisk	Effective early rush units, can take a queen 1v1
VS. P	Immortal, Colossus	Stalker, Phoenix, Archons	Effective because P lacks AA

Abilities and Upgrades: Cloaking Field allows the banshee to cloak / Cloak turns the banshee invisible

Battlecruiser

Race	Good Against	Weak Against	Strategy
VS. T	Tanks, MMM	Viking	Used to push the win once air dominance is established
VS. Z	Mutalisk	Corruptor, Hydralisk	Ineffective due to corruptor, hydralisk, and neural parasite counters
VS. P	Phoenix	Void Ray, High Templar, Stalker, Archons	Used if 6+ gases available. Yamato cannon is effective vs. big units

Abilities and Upgrades: Behemoth Reactor increases the BC's starting energy by 25 / Weapon Refit enables the Yamato Cannon / Yamato Cannon does 300 damage to a single target

Raven			
Race	**Good Against (Cloaked units)**	**Weak Against**	**Strategy**
VS. T	Banshee	AA	Turret against tanks, PDD against most (especially Vikings and marauders)
VS. Z	Burrow, tumors	AA	Turret for choke points, turret can kill queen 1v1, PDD against most, seeker missile effective vs. clumped zerg units
VS. P	Observer, DT	AA	Turrets can force chargelots to charge, PDD effective vs. the main AA (stalkers)

Abilities and Upgrades: Detector allows the raven to see cloaked and burrowed units / Build Auto-Turret drops an turret down / Build Point Defense Drone builds a PDD that blocks the shots of many different enemy units / Seeker Missile follows its target and explodes for 100 splash damage / Corvid Reactor increases the raven's strating energy by 25 / Seeker Missile enables the raven to shoot missiles

Additional Abilities and Upgrades: Hi-Sec Auto Tracking increases the range of Auto-Turrets and PDD (available from the engineering bay) / Durable Materials increases the duration of auto-turrets and PDD to 240 seconds, as well as the missile to 20 seconds (Starport tech lab) / Building Armor increases the armor of auto-turrets and PDD from 1 to 3 (engineering bay)

Additional Information:

Liquidpedia: "Units" - http://wiki.teamliquid.net/starcraft2/Terran_Units

Liquidpedia: "Units vs. Zerg" - http://wiki.teamliquid.net/starcraft2/Terran_Unit_Roles_(vs._Zerg)

Liquidpedia: "Bio vs. Toss" - http://wiki.teamliquid.net/starcraft2/Bio_(vs._Protoss)

(C.1.3) Terran Harassment

- **Banshees** are effective for harassing mineral lines or areas without any AA. If cloaked they also force the enemy to get detectors.
- **Ghosts** can destroy the enemy economy or supply by nuking mineral lines or grouped-up supply buildings.
- **Hellions** have splash damage a bonus to lightly armored units, making them ideal for killing workers.
- **Medivacs** can drop units at the enemy mineral line or poorly defended areas of the enemy base.
- **Vikings** can land in a poorly defended area (like an expansion), cause damage, and then fly away. Against the Zerg Vikings can also snipe overlords.
- **Reapers** can quickly kill workers because of their bonus to light armor. In larger groups reapers can also quickly destroy buildings because of their secondary "against building" attack.

Additional Information:

Liquidpedia: "Terran Harassment" - http://wiki.teamliquid.net/starcraft2/Harassment#Terran

(C.1.4) Terran Forces

- **Against Terran**:
    - o TvT tends to revolve around tanks and Vikings. Both players are forced into constant Viking production to maintain air control.
- **Against Zerg**:
    - o Aggressive 2-rax strategies force the zerg to make zerglings and spine crawlers instead of drones, hurting their economy.
    - o Hellion harasses may force roaches, which can be countered by marauders.
- **Against Protoss**:
    - o Marauders may force immortals, which are countered with marines, ghost EMP, or banshees.

Additional Information:

Liquidpedia: "Terran Forces" - http://wiki.teamliquid.net/starcraft2/Forcing#Terran_Forcing

(C.2) Terran Combat Styles

- Terran has powerful but immobile defensive structures and units such as bunkers, turrets, planetary fortress, and siege tanks.
- Terran has highly mobile harass units such as the hellion, banshee, and medivac (for drops).

Additional Information:

Liquidpedia: "T General Strategy" - http://wiki.teamliquid.net/starcraft2/Terran_Strategy#General_Concepts

(C.2.1) Biological

- **The biological style of Terran play**:
    - o Uses biological units from the barracks, supported by medivacs
    - o Is very mobile, even more so with the medivacs
    - o Is weak against colossus, high templar, banelings, and infestors
    - o Is very aggressive, using frequent army trades (so build a lot of barracks for fast reinforcements), multi-front attacks, and harassment with mobile units.
    - o Works best if units are broken into smaller groups (called squads) to avoid tank, baneling, and colossus splash damage

- **Each of the biological units has a specific role**:
    - o Marines are the main damage and AA units. Constantly build marines because they will die quickly, especially to splash damage.
    - o Marauders support marines by acting as shields. They are the main damage to mechanical units. They can prevent the enemy from retreat using the con-shells.

- o Ghosts are effective to send any dangerous biological units, such a Protoss High Templar or Zerg Infestors. Ghosts can also EMP any caster units, such as medivacs, ravens, infestors, and high templar. Ghosts EMP also revealed cloaked units such as banshees or dark templar. Ghost EMP also removes 100 points of the Protoss shields, making them necessary against protoss.
- o Medivacs allow for more stims, keep the bio units alive, and provide transport for the Terran army. Medivacs are necessary to provide drops, which are a key part of Terran harassment.
- o Vikings are used against colossus to protect the ground army.

- **Bio against Terran**:
  - o Overall, TvT revolves around siege tanks and Vikings, but an effective "bio-mech" mix is better than purely mechanical due to bio adding mobility and harassment.
  - o MMM is powerful and mobile, and can take advantage of the immobile Terran mech with hit-and-run attacks, harassment, and drops.
  - o Bio vs. Terran requires good map control so that the enemy Terran cannot use siege tanks to contain you (or push into your base). With map control, bio is free to expand more easily, drop into the enemy base, and attacking enemy tank groups while they are un-sieged and in transit.
- **Bio against Zerg**:
  - o Bio is effective at constantly pressuring Zerg to make army units instead of drones, to prevent them from getting a superior economy. If the Zerg can be harassed they will be prevented from having enough money to have a large, easily reinforced army.
  - o As mechanical is preferred against Zerg, bio tends to support the large mechanical pushes in addition to providing harassment.
- **Bio against Protoss**:
  - o Early in the game bio is very effective versus Protoss. Marauders are a key unit throughout the game because many of the Protoss units are armored. Ghosts are also important because of EMP against Protoss shields. Protoss tech is also difficult to deal with, so marauders can be dropped as "snipe teams" to destroy various protoss tech buildings.
  - o Bio can harass the Protoss as they attempt to expand. You do not want to allow the Protoss to have a 3 base economy, otherwise their powerful units and tech can easily overwhelm you.

Additional Information:
Liquidpedia: "T Biological Strategy" - http://wiki.teamliquid.net/starcraft2/Terran_Strategy#Biological

(C.2.2) Mechanical

- **The mechanical style of Terran play**:
  - o Uses mechanical units from the factory, commonly used against Zerg
  - o This style tends to be defensive, leading up to a few (or even one) huge, slow-moving push
  - o Tanks must leapfrog to avoid being caught unsieged, and all units must protect others
  - o This huge push has to be performed before the enemy can get their most powerful units to counter, in the case of the Zerg, broodlords

- **Each of the mechanical units has a specific role**:
    - Marines are general damage and anti-air support.
    - Siege tanks are the backbone of this style, but they are weak to air units, melee units when sieged, cannot do splash damage when unsieged, and may cause friendly fire. For these reasons, tanks must have effective AA, leapfrog forward, spread out, and units need to be aware of potential friendly fire.
    - Hellions are used to harass and counter the large numbers of lightly armored units, such as zerglings, zealots, and marines.
    - Thors are the main anti-air unit, supported by marines. Thors are useful against all races as they can soak siege tank fire, absorb baneling damage, destroy mutalisks, and use strike cannons against immortals and colossus.
    - Ravens allow you to see the invisible creep tumors, and then your tanks can blast them from a safe range. Once tumors are destroyed the creep slowly goes away.

- **Mech against Terran**:
    - TvT matches will require Vikings and siege tanks to attempt to control both the air and the ground. Whoever has air control can provide vision to their tanks, and safely use banshees against the enemy tanks. Whoever has air control can protect their tanks better and control the ground better.

- **Mech against Zerg**:
    - Nearly every mech unit is very effective against zerg. Hellions are effective versus zerglings, tanks are effective versus all ground units, and thors are effective versus nearly everything except zerglings and brood lords. Mechanical units should be supported by bio, however.

- **Mech against Protoss**:
    - Most T players prefer to use bio against Protoss early, but as the game goes on Protoss can effectively counter bio units with colossus, templar, and archons.
    - Early in the game or in mid-game mech tends to support bio. Tanks can keep colossus from getting too close, while Vikings or banshees can snipe colossus directly.
    - As late game approaches, mech becomes more effective, and bio tends to end up supporting mech.

Additional Information:

Liquidpedia: "T Mechanical Strategy" - http://wiki.teamliquid.net/starcraft2/Terran_Strategy#Mechanical

(C.3) Terran Build Orders

- The most general Terran opening is the "Orbital Command Opening".

TvX	Orbital Command Opening	Basic Opener
Strategy: General opening related to almost every T build, aims to get a OC quickly for mules and scans		

Food	Mineral	Gas	Event	Actions to Take
10/11				Depot (1)
12/19				Barracks (1)
13/19				Refinery (1)
15/19				Marine (1)
15/19				Orbital Command
16/19				Depot (2)
Additional Information: http://wiki.teamliquid.net/starcraft2/Orbital_Command_Opening, http://www.youtube.com/watch?v=DX8X9WkMwMQ				

Additional Information:

Liquidpedia: "Terran Build Orders" - http://wiki.teamliquid.net/starcraft2/Terran_Strategy#Match-ups

(C.3.1) General Terran Build Orders

TvX 1/5		2 Rax Orbital		Rush / Economic
Strategy: Builds units for safety without cutting economy by delaying gas. Good for team games or bio-heavy builds. This can be even safer if a wall-in or bunkers are used.				
Food	Mineral	Gas	Event	Actions to Take
10/11				Depot (1)
11/11				Barracks (1) – constant marines
	150			Barracks (2) – constant marines
			@Rax(1)	Orbital Command
			@6marine	Consider attacking the enemy to harass them and force defensive units from them
			@OC	You can either get an expansion, get gas, add more rax, or start adding mech buildings and units.
Additional Information: http://wiki.teamliquid.net/starcraft2/2_Rax_Orbital				

TvX 2/5		1 Rax Fast Expand		Economic
Strategy: Getting a fast expansion up for a long-term economic advantage. This requires a wall-in				
Food	Mineral	Gas	Event	Actions to Take
10/11				Use the orbital command opening but do not get gas
15/19				You can build the 2, 3, and 4 rax before getting the OC, or after – but you need 4 rax! While building rax get between 2-5 bunkers for defense, depending on what is scouted.
20/27				Get the second CC
			@CC (2)	Quickly get 2-4 gas and a factory/starport to support the heavy bio army.
Additional Information: http://wiki.teamliquid.net/starcraft2/1_Rax_FE, http://www.youtube.com/watch?v=ttsm6Raw8pI				

TvX 3/5		1 Rax 1 Fact		Balanced
Strategy: Aims to get an early factory for factory units and mechanical play				
Food	Mineral	Gas	Event	Actions to Take
10/11				Use the orbital command opening
		100		Factory (1)
			@Factory	Refinery (2)
Additional Information: http://wiki.teamliquid.net/starcraft2/1_Rax_Fact				

TvX 4/5		1 Rax 1 Fact 1 Port, or "1-1-1"		Tech
Strategy: Make the rax, fact, and port before anything else, opening up all tech routes for maximum adaptability, be aware of early				

Food	Mineral	Gas	Event	Actions to Take
rushes!				
Food	Mineral	Gas	Event	Actions to Take
10/11				Use the orbital command opening
16/19		100		Refinery (2), marine (1)
		100		Factory (1)
			@Factory	Starport (1)
Against T: To prepare against a 2rax, get bunkers and prepare to defend				
Against Z: To prepare against a 2gas baneling rush, wall-in with buildings, not depots				
Against P: To prepare against a 2gate, get bunkers and units. To prepare against stargates get marines.				
Additional Information: http://wiki.teamliquid.net/starcraft2/1Rax_1Fact_1Port, http://www.blip.tv/file/3637626				

TvX 5/5			MMM Timing Attack			Tech
Strategy: Aims to drop 8 marines and 4 marauders in the enemy base using 2 medivacs, around 8-10 minutes. You must save a scan to check for anti-air before trying to drop the units into the enemy's base.						

Food	Mineral	Gas	Event	Actions to Take
10/11				Use the orbital command opening
16/19				Depot (2)
		100		Factory (1), Gas (2)
	150			Barracks (2) – only makes marines
			@3 marines	Tech lab on the rax
			@Fact 100%	Reactor on factory, Starport (1)
			@techlab	Stimpack, Marauders (1-4) on techlab rax
			@Port 100%	Swap with factory to put reactor on starport. Medivacs (1-2). Start saving for a scan!
Once the two medivacs are full and a scan is ready, move the medivacs near the enemy base, scan for AA< then drop the units into the enemy base. Stim the units and cause as much damage as possible. Continue to reinforce!				
Additional Information: http://wiki.teamliquid.net/starcraft2/MMM_Timing_Push				

(C.3.2) Terran vs. Terran

TvT 1/5			"Ghost First" Rush			Rush
Strategy: Best used on 4 player maps, this strategy sets up a midgame bio style. Designed to harass enemy and cause economic damage and frustration. Be sure to use the ghost's snipe against marines and then kill some workers!						

Food	Mineral	Gas	Event	Actions to Take
10/11				Depot (1)
11/11				Refinery (1)
12/19				Barracks (1), scout, marine
16/19				Orbital Command, Depot (2)
16/19				Ghost Academy, techlab on rax
18/27			@Academy	Ghost – Get some scvs, the marine(s), and go attack! Protect the ghost!
20/27				Refinery (2), Barracks (2), techlab rax and get marauders and stim.
Additional Information: http://wiki.teamliquid.net/starcraft2/Stc_1_Rax_expand_into_3_rax_marine-marauder_(vs._Terran), http://www.youtube.com/watch?v=k5y0SlFFlkM&feature=player_embedded#at=434				

TvT 2/5			1 Rax Expand into Bio			Economic
Strategy: Get one rax and expand quickly, into a bio style game. This is effective versus "1-1-1" because of the long-term economic advantage, and effective against "tank-viking" because of the mobility of the bio style. This requires map control to position units effectively!						

Food	Mineral	Gas	Event	Actions to Take
10/11				Start with an orbital command opening.

17/27				Reactor on rax
18/27				CC (2), Depot (2)
20-24				Rax (2, 3, 4), techlab rax(2)
X				Use mobility to consistently attack the enemy, and quickly set up a 3rd base.
Additional Information: http://wiki.teamliquid.net/starcraft2/Stc_1_Rax_expand_into_3_rax_marine-marauder_(vs._Terran), http://www.youtube.com/watch?v=EZoVJHEZYcE&feature=player_embedded#				

TvT 3/5			Siege Expand		Balanced
Strategy: Use siege tanks to secure an expansion before the enemy. Build close to CC to cover more buildings with fewer turrets (since there will be a lack of anti-air and detection)					
Food	Mineral	Gas	Event	Actions to Take	
10/11				Use the orbital command opening	
17/27				Marine (2), Depot (2)	
		100		Factory (1), Refinery (2)	
		25		Techlab on Rax	
			@Fact	Swap techlab on factory, Research siege mode.	
21/27				Tank (1), CC (2)	
If a starport is scouted, get an engr-bay and some turrets for protection against banshees. Keep a tank near the mineral line in case of any drops. If a lot of rax are scouted use bunkers for defense.					
Additional Information: http://wiki.teamliquid.net/starcraft2/Siege_Expand_(vs._Terran)					

TvT 4/5			Tank-Viking		Tech
Strategy: Use tanks for ground dominance, leapfrogging them towards the enemy. Use Vikings to gain air dominance and extending vision of tanks. This can work to contain the enemy or just slowly push into their base and kill them.					
Food	Mineral	Gas	Event	Actions to Take	
10/19				Start with a "1 Rax 1 Fact", or "1-1-1", opening	
16/27				Build marines, tanks, and Vikings.	
- Versus a mechanical T, consider your own infantry/hellion drops to damage them.					
- Versus a bio T, beware of their mobility and drops! Use Vikings to eliminate medivacs.					
• If air dominance is gained, add banshees or even battlecruisers to destroy the enemy's ground army /					
• If air dominance is lost, consider using raven PDD to stop the enemy Vikings from attacking, and use mobility to the fullest.					
Additional Information: http://wiki.teamliquid.net/starcraft2/Tank_Viking_(vs._Terran)					

TvT 5/5			2 Port Banshee		Tech Rush
Strategy: Have 4 cloaked banshees by 8 minutes, splitting the banshees over weak AA areas, wasting scans and causing damage and frustration.					
Food	Mineral	Gas	Event	Actions to Take	
9/11				Depot (1)	
10/11				Barracks (1) – Make 4 marines	
11/19				Gas (1, 2)	
15/19				Orbital Command	
16/19				Depot (2), Factory (1)	
			@4 marine	Techlab both rax and the factory, then continue marines	
			@factory	Starport (1, 2), when complete swap both onto the techlabs, get banshee cloak	
				Banshees (1-4)	
			@cloak	Go harass the enemy and keep building	
Additional Information: http://wiki.teamliquid.net/starcraft2/2_Port_Banshees_(vs._Terran)					

(C.3.3) Terran vs. Zerg

TvZ 1/5	3 Rax Bio	Rush
Strategy: Designed to get stimpack, combat shields, and +1 weapons for an aggressive harass or attack that allows you to expand (or even win). Rally in marines to reinforce the assault. Take care to keep units separated in small squads led by marauders to minimize damage from banelings.			

Food	Mineral	Gas	Event	Actions to Take
10/11				Orbital Command Opening – Must wall-off and use 2 marines to prevent any Zerg aggression
17/27				Barracks (2)
18/27				Engineering Bay and TechLab on Rax 1 – Get Marauders, Stimpack and +1 Weapons
20/27				Barracks (3), Depot (3)
25/35				TechLab on Rax 2, Reactor on Rax 3. – Get combat shield
30/35				Depot (4) – Keep making marines and marauders
			@40 pop	When stimpack, +1weapons, and combat shields are finished, get 40 pop and go attack. Expand while attacking. Get a factory and get mech support or go starport for MMM.
Additional Information: http://wiki.teamliquid.net/starcraft2/3_Barracks_(vs._Zerg)				

TvZ 2/5	Reactor Hellion	Economic
Strategy: Use hellions to harass zerglings and drones, and allow for your own expansion.			

Food	Mineral	Gas	Event	Actions to Take
10/19				Orbital Command Opening
16/19				Marine (2)
		100		Factory (1), CC (2)
		50	@Fact	Reactor on Rax, Swap factory onto reactor, hellions (4-6)
			@2 Hellions	Go harass/scout with the first 2 hellions, pull them back for repairs
			@4-6 Hellions	Do a full attack on the Zerg, land CC (2) while attacking, double bunker the expo
		100		Factory (2), techlab for either siege tanks or pre-igniter
Additional Information: http://wiki.teamliquid.net/starcraft2/Reactor_Hellion_Expand_(vs._Zerg)				

TvZ 3/5	Siege Expand	Balanced
Strategy: Use 5-6 marines+hellion to pressure and harass Zerg to make it safe to expand. Use siege tanks to secure the expo and go into mech style of play. (Consider semiwallking near natural expo to stop baneling bust)			

Food	Mineral	Gas	Event	Actions to Take
10/11				Start with an orbital command opening – constant marines
		100		Factory (1), Hellion (1)
			@Hellion	With a hellion and 5-6 marines, go cause damage to the Zerg (retreat if needed)
			While Attk	CC (2) in base, Tech Lab Factory, get Tanks and Siege Mode
			@3 tanks	Secure expansion, get armory and engineering bay
			@ Expo	Further secure base with turrets and thor
Additional Information: http://wiki.teamliquid.net/starcraft2/Siege_Expand_(vs._Zerg)				

TvZ 3/5	3 Tank Push	Balanced
Strategy: Get three tanks supported by hellions before expanding to cause damage to the Zerg natural. Use hellions on lings and marine+tank on everything else. Rally In hellions to deal with reinforced lings.			

Food	Mineral	Gas	Event	Actions to Take
10/11				Use the orbital command opening
16/27				Refinery (2)
		200		Factory (1), Factory (2) - get each as soon as 100 gas is available

			@Fact	Get 1 hellion with each factory, then tech lab each factory
			@techlab	Research siege mode, gets 2 tanks @ fact1, 1 tank @ fact 2 for "3 tanks total"
			@3 tank	Resume hellion production and send 4-6 marines, 2 hellions, 3 tanks to the Zerg natural, rally in new hellions and marines – do not lose tanks! Keep tanks sieged, spread, and protected.
			While Attk	Continue to make marines at home for AA against mutalisks if needed. Make EBay and Armory for turret and thor AA. Prepare to expand during the attack/contain.
Additional Information: http://wiki.teamliquid.net/starcraft2/3_Tank_Push_(vs._Zerg)				

TvZ 5/5			1-1-1 Banshee		Tech Rush
Strategy: A risky cheese strat designed to win via fast banshees. Requires a wall-off and very safe base.					
Food	Mineral	Gas	Event	Actions to Take	
10/11				Refinery (1), Depot (1)	
11/19				Barracks (1) @ choke, build 1-2 marines for defense	
11/19				Factory (1) @ choke, techlab factory	
11/19				Orbital Command, bunker(s) at choke for defense	
13/19			@Factory	Starport, swap with techlab, banshees ASAP	
15/19				Banshees should attack immediately! Banshee will beat a queen 1v1, and beat a spore crawler 2v1.	
18/19				Continue to make marines at home for defense, and pumping banshees to eliminate any AA. Whenever AA is down, attack the enemy economy and base.	
Additional Information: http://wiki.teamliquid.net/starcraft2/Cauthonluck_cheese, http://www.youtube.com/watch?v=tAkK7wqBpRQ					

(C.3.4) Terran vs. Protoss

TvP 1/5			2 Rax Bio		Rush
Strategy: Designed to safely expand, so do not over commit (retreat if needed). If possible use offensive bunkers at P natural to strengthen attack/contain. Use bunkers to defend your expansion from attacks.					
Food	Mineral	Gas	Event	Actions to Take	
9/11				Depot (1)	
10/11				Barracks (1) @ choke, make marines	
11/19				Refinery (1)	
13/19		75		Barracks (2) – At 25 gas techlab rax1, at 50 gas reactor rax 2	
			To Attack	Make 2-3 marauders, 4-7 marines, and attack with this force and 2-3 SCVs as shields/bunker builders. Begin constructing a CC and prepare to expand. Transition into MMM or add ghosts.	
Axis 222 Style – Axis 222 Style is an aggressive modification of Select 2 Rax Bio.					
Rax # 1 makes 1 marine, gets a tech lab, then gets concussive shells and 2 marauders. Rax # 2 makes 1 marine. When this 2M-2M squad is complete, make 1 reaper and rally it to outside the enemy base, and get two SCVs to head outside the enemy base with the 2M-2M squad. Set the SCVs to auto-repair and let them go in first to serve as protection for the 2M-2M squad. If a sentry FFs the ramp, use the reaper for vision, otherwise use the reaper to kill probes. While this attack occurs continue building at your base – build a CC in your base, keep making production structures, and rally a few more units to the enemy base.					
Additional Information: http://wiki.teamliquid.net/starcraft2/SeleCT_2_Rax_expand_(vs._Protoss					

TvP 2/5			Fast Double Orbital		Economic
Strategy: Ineffective on backdoor maps because it relies on a possible contain of the enemy. Weak against void rays and DTs.					
Food	Mineral	Gas	Event	Actions to Take	
10/11				Depot (1) – NOT at the wall/choke (walloff with rax and cc)	
12/19				Barracks (1) – at the wall	
16/19				Orbital Command (use energy for a calldown)	

18/19				Command Center (2) to seal off the wall/choke
			100% OC	Call Down Supply, Barracks (2,3)
			100% CC(2)	Refineries (1-4) depending on following up strategy

Additional Information: http://wiki.teamliquid.net/starcraft2/Fast_Double_Orbital_(vs._Protoss), http://www.youtube.com/watch?v=IyJTwgZBE1E

TvP 3/5			Thor Cannons and EMP		Balanced

Strategy: Use Thors with strike cannons as the backbone of the army, with ghost EMP support. This build requires a wall-in and some marines+hellions to defend against void rays and zealots.

Food	Mineral	Gas	Event	Actions to Take
10/11				Start with an orbital command opening.
16/27				Reactor on rax, constant marines
		100		Factory (1), Refinery (2)
			@Factory	Hellion (1), Armory – send the hellion to scout if you feel comfortable doing so
			@Hellion	Tech Lab Factory
			@Armory	Thor (1,2) – upgrade strike cannons when affordable
	150	50		Ghost Academy, lift barracks and create techlab
			@Thor	CC in base, Factory (2)
				Use the thors to safely expand, and keep building marines, ghosts, and thors. Around 6-8 thors make a push towards the P base.

Counters: Chargelots can be countered by hellions (can even add blueflame) / immortals can be countered by marines, emp and cannons / void rays can be countered by marines.

Additional Information: http://wiki.teamliquid.net/starcraft2/Thor_EMP_expand_(vs._Protoss)

TvP 4/5			Raven PDD Timing Attack		Tech

Strategy: Two rax opening may force colossus, which is effectively countered by banshee and raven-PDD. As the raven-pdd shuts down the stalkers, the banshees can kill colossus, while the MM units kill sentries, zealots, immortals, and stalkers. Use SCVs to repair the banshees.

Food	Mineral	Gas	Event	Actions to Take
10/11				Start with an orbital command opening – get 2 marines
14/19				Refinery (2)
			@2 marines	Reactor on Rax – make marines
				Barracks (2), techlab rax 2 – make marauders
		100		Factory (1), build a techlab, then use the factory to scout the enemy base
			@Factory	Starport (1) – Continue to build MM
			@Scouting	Swap the starport onto the factory's techlab. If there are colossi or stargates, get Vikings (1-2)
			@Starport	Raven (1), Banshees (2)
			@Ports	Get cloak and build banshees. Use minerals on barracks, marines, expansion, and bunkers.
			@PDD Ready	Attack the enemy but be sure not to waste the PDD. It must allow for the banshees to kill any colossus and damage P ground forces.

Stargate or Colossus can be countered with Vikings (Cannot always wait for the raven PDD if the colossus come to attack your base). Against 4gate get cloaked banshees and destroy the ground army, using PDD once the cloak wears off.

Additional Information: http://wiki.teamliquid.net/starcraft2/Polt_timing_attack_(vs._Protoss), http://www.gomtv.net/2010gslopens1/vod/1034

TvP 5/5			Hellion Drop into 2 Port Banshee		Tech Rush

Strategy: Use marines and bunkers for defense, focusing on a hellion drop to do economic damage. This leads into two starport play.

Food	Mineral	Gas	Event	Actions to Take
10/11				Start with an orbital command opening – constant marines
16/27				Refinery (2)
		100		Factory (1)
			@Factory	Hellion (1-3), Starport (1)
			@Starport	Medivac (1)
			@Medivac	Get marines+hellions and drop on the enemy, trying to do economic damage.
			@Drop	Starport (2) TechLab both factory and starport(1), swap starport(2) with techlab
			@Ports	Get cloak and build banshees. Use minerals on barracks, marines, expansion, and bunkers.
			@2-4 Banshee	Attack the enemy base all-out, or use the banshees to harass/contain.
			While Attk	Expand and use bunkers to defend the expansion. Keep the attack up, consider adding MMM, raven PDD, ghosts, or even mech support.
Any robotics facility or stargate can be countered by building two Vikings before the banshees to kill void rays or phoenixes at the P base, and to protect home against colossus. Marines will protect against void rays at home. A 4gate will have no observers, so cloak will destroy the P army and base. Any dark templar can be stopped by a raven.				
Additional Information: http://wiki.teamliquid.net/starcraft2/Hellion_Drop_(vs._Protoss)				

(C.4) Terran Advanced Unit Tricks

- **Buildings currently lifted** grant vision of high ground.
- **Building rally points** can point to a Bunker and have it automatically load.
- **Ghost EMP** will drain all of the energy from a CC or Nexus.
- **Ghost EMP** can drain a Raven PDD's energy so it cannot block shots anymore.
- **Ghost EMP** can force permanently cloaked units out of cloaking for a short time, or in the case of the banshee, for a much longer time.
- **Tech-Labs and Reactors** belonging to another player (even an enemy) can be used by your buildings
- **Marauders** unloaded from a medivac on top of banelings will get them to explode with the least amount of damage to your army.
- **Missile turrets** are the strongest anti-air defense in the game.
- **Mules** can drop and cause enemy siege tanks to splash their own units. Dropped mules can also repair your Terran units, or a friendly Protoss' units. (SCVs can also repair protoss units, but neither a SCV or a mule can repair protoss buildings)
- **Orbital Commands Extra Supplies Drop** can go onto an ally's supply depots
- **Raven auto-turrets** benefit from the building armor upgrade.
- **Raven seeker missile** can target one of your cloaked units, allowing for kamikaze runs into the enemy's army.
- **SCVs that have repair on auto-cast** can right-click a unit, then follow and repair it automatically.
- **SCVs set to auto-repair** can shift-queue move to a location, and shift-queue return to mining. Once the SCV arrives at the location it will repair everything within range, and then return to mining.
- **SCVs** can start to build on a ramp and then halt construction, and the unfinished building will still block the ramp (This can also be used to gas steal by building and halting a refinery)
- **Tanks at towers** use the tank's maximum range.

- **Tech-Labs and Reactors** belonging to another player (even an enemy) can be used by your buildings

Additional Information:

Liquidpedia: "Oddities" - http://wiki.teamliquid.net/starcraft2/Oddities

(D) ZERG STRATEGY

(D.1) Zerg Buildings and Units

(D.1.1) Zerg Buildings

- **Hatchery**: Main Structure (resource collecting and unit producing)
- **Lair:** Upgraded Hatchery, allows for more tech structures
- **Hive:** Upgraded Lair, allows for all tech structures

Note: All units are produced at the hatchery/lair/hive, and these three structures tend to be referred to as "hatcheries" (even if they are upgraded)

- **Spine Crawler:** Defensive Structure (anti-ground)
- **Spore Crawler:** Defensive Structure (anti-air) and Detector
- **Extractor:** Gas Structure
- **Spawning Pool:** Production/Tech Structure (unlocks zerglings at the hatchery)
- **Evolution Chamber:** Tech Structure
- **Roach Warren:** Production/Tech Structure (unlocks roaches at the hatchery)
- **Baneling Nest:** Production/Tech Structure (unlocks banelings at the hatchery)
- **Hydralisk Den:** Production/Tech Structure (unlocks hydralisks at the hatchery)

- **Infestation Pit:** Production/Tech Structure (unlocks infestors at the hatchery)
- **Spire:** Production/Tech Structure (unlocks mutalisks and corruptors at the hatchery)
- **Greater Spire:** Upgraded Spire (unlocks brood lords at the hatchery)
- **Ultralisk Cavern:** Production/Tech Structure (unlocks ultralisks at the hatchery)
- **Nydus Network:** Transport Structure (creates nydus worms for transport of units)
- **Creep Tumor:** Creep Producing Structure (each one can create one, very first one built by a queen)

Additional Information:

Liquidpedia: "Zerg Buildings" - http://wiki.teamliquid.net/starcraft2/Zerg_Units

(D.1.2) Zerg Units

Larva
Larvas are automatically made from the hatchery, 1 every 15 seconds. A hatchery stops making larva once 3 out, and will resume when there are less than 3. Queens can spawn larvae at hatcheries to add more, but a single hatchery can only hold 19 at once.
Abilities and Upgrades:

Drone
Drones are worker units that collect resources; they build structures by turning into them.
Abilities and Upgrades:

Overlord
Overlords are the supply "buildings" for the zerg. They can morph into Overseers.
They are also used as shuttles (if upgraded), scouts (because they can fly), and creep creators (once lair is complete).
One way to hide tech is to generate creep somewhere hidden and build there.
Abilities and Upgrades: Generate Creep makes creep / Ventral Sacs (hatchery) allows OLs to become shuttles / Pneumatized Carapace increases speed / Morph into overseer turns the OL into an OS

Overseer
Made from overlords, these units are overlords with detection and new spells (they can no longer generate creep or transport units)
Abilities and Upgrades: Spawn changing turns into the image of the enemy units to blend in and act as spies / Contaminate stops structures from producing for 40 seconds

Queen
Note that the Queen has energy for the Zerg race, and is the equivalent of the Terran Orbital Command (mules, scans, etc) or Protoss Nexus (chrono boost).

Abilities	Usage
Spawn Larva	The primary spell for Zerg, this needs to be used every time it is available through the game
Spawn Creep Tumor	Creates a creep tumor (creep tumors can create additional creep tumors)
Transfusion	Heals a friendly biological unit or building for 125 health
Tips for Spawning Larva: http://wiki.teamliquid.net/starcraft2/Queen#Spawning_Larvae	

Zergling			
Race	Good Against	Weak Against	Strategy
VS. T	Marauder	Hellion	Effective in surrounding and slowing the Terran army
VS. Z	Hydralisk, Zergling	Baneling	Effective all game as harassment and support units / Good for fast queen snipes and drone raids as well
VS. P	Stalker, Immortal	Zealots, Colossus	Only useful if the P is not making zealots, or if they have immortals that need to be taken out
Upgrades: Morph to baneling / Adrenal Glands increase attack speed 16% / Metabolic boost increases speed 60% (and gives them wings)			

Baneling			
Race	Good Against	Weak Against	Strategy

VS. T	Marine	Marauder	Devastating to marines, can wipe out a poorly positioned MM squad
VS. Z	Zergling, Hydralisk	Roach	
VS. P	Zealot, Sentry	Stalker	Effective in exposing DTs by manually exploding next to them
Upgrades: Banelings can become land mines if they unburrow to autocast / Explode causes the baneling to attack where it is / Banelings can hit more enemies if fungal growth has froze them in place			

Roach

Race	Good Against	Weak Against	Strategy
VS. T	Hellion	Marauder	Roaches are necessary later in the game to soak tank hits
VS. Z	Zergling, Hydralisk	Ultralisk	Effective opening that counters zergling/banelings
VS. P	Zealot	Immortal	Effective against all P units except the immortal
Abilities and Upgrades: Rapid Regeneration heals the roach at 5 HP per sec when its burrowed / Glial Reconstitution increases speed 33% / Tunneling Claws doubles heal regen while burrowed and allows roaches to move while burrowed			

Hydralisk

Race	Good Against	Weak Against	Strategy
VS. T	Banshee	Siege Tank	Take care around tanks and hellions and hydralisks are effective
VS. Z	Mutalisk	Zergling	Use to support roaches by keeping them behind the tanking roaches
VS. P	Void Ray, Stalker	Colossus	Support unit that is effective all game
Abilities and Upgrades:			

Infestor

Race	Good Against	Weak Against	Strategy
VS. T	Marine	Ghost	FGrowth is effective against MMM bio squads, ITerrans can be used to soak tank damage or as AA, or even bait tanks into hitting their own forces
VS. Z	Mutalisk	Ultralisk	Fgrowth is necessary is this matchup to damage and slow the large numbers of zerg ground forces
VS. P	Gateway Units	High Templar	Fgrowth is useful for slowing zealots and allowing the zerg to surround and snipe more powerful units, FGrowth can also stop stalkers from blinking and reveal DTs, Neural Parasite on a Colossus can help win battles
Abilities and Upgrades: Neural Parasite controls an enemy unit for 15s / Fungal Growth damages and freezes enemy units / Infested Terrans can be cast while burrowed, and can be used as tanks, AA, or harassment units			

Ultralisk

Race	Good Against	Weak Against	Strategy
VS. T	Thor, Marine, Tanks	Banshee	Effective against bio or mech, and preferred over brood lords because Vikings easily counter those. Ultralisks can soak tank damage, allowing zerglings to surround and destroy the tanks
VS. Z	Roach	Mutalisk	Decent in late-game, especially if combined with fungal growth.
VS. P	Stalker	Void Ray, Immortal	Effective versus the P ground forces, but are countered by immortals. Brood Lords are preferred to Ultralisks for ZvP
Abilities and Upgrades: Frenzied makes the Ultralisk immune to stuns, snares, or mind control effects / Chitinous Plating gives the Ultralisk 2 more armor			

Mutalisk

Race	Good Against	Weak Against	Strategy
VS. T	Viking	Thor, Marines	Very effective in hit-and-run attacks on undefended parts of the Terran base, make SCVs and depots a priority – but beware of missile turrets and marines!
VS. Z	Brood Lord	Corruptor	Necessary for map control and OL harassment
VS. P	Void Ray	Phoenix	Effective against the P forces because of the lack of AA, especially if they focus on robotics facility units
Abilities and Upgrades: Using "the magic box" to take on Thors http://www.youtube.com/watch?v=68H8FeZHkWg			

Corruptor

Race	Good Against	Weak Against	Strategy
VS. T	Battlecruiser	Viking	Effective against Vikings and Battlecruisers; able to protect brood lords
VS. Z	Mutalisk	Hydralisk	Useful to counter mutalisks

VS. P	Phoenix	Void Ray	Very effective at controlling air and killing colossus
Abilities and Upgrades: Corruption causes a unit to take 20% more damage for 20s / Morph into Brood Lord			

Brood Lord			
Race	**Good Against**	**Weak Against**	**Strategy**
VS. T	Marauder, Tank	Viking	Effective vs. the ground-based bio and mech units of Terran
VS. Z	Zerg ground	Corruptor	Strong option against the ground-heavy zerg army
VS. P	Immortal	Void Ray, Carrier	Very effective because protoss lack effective counters against brood lords
Abilities and Upgrades:			

Additional Information:

Liquidpedia: "Zerg Units" - http://wiki.teamliquid.net/starcraft2/Zerg_Units

(D.1.3) Zerg Harassment

- **Mutalisks** are effective at hit-and-run tactics on workers and buildings, and will force AA structures and units to be built, and possibly cause the enemy army to be poorly positioned.
- **Infestors** can burrow and sneak behind enemy lines, then use infested terrans and fungal growth to kill enemy workers
- **Roaches** with burrow can sneak behind enemy lines and attack workers and structures
- **Banelings** can be dropped on top of enemy mineral lines, devastating groups of workers
- **Zerglings** can be used to make suicide runs into mineral lines to kill enemy workers

Additional Information:

Liquidpedia: "Zerg Harassment" - http://wiki.teamliquid.net/starcraft2/Harassment#Zerg

(D.1.4) Zerg Forces

- **Against Terran**:
  - o Mutalisks can force a high marine count if the enemy does not have an armory or starport, and cause terran to waste money building missile turrets. If the Terran responds with a large number of marines banelings are an effective choice.
- **Against Zerg**:
  - o Banelings are the ZvZ unit, as they force roaches or banelings in response, otherwise banelings can run by enemy forces and cripple mineral lines by killing workers.
  - o Roach/Hydralisk battles are very common in ZvZ, so both sides are forced to continuously upgrade and use Infestors for support (fungal growth)
- **Against Protoss**:
  - o A few roaches attacking the enemy can force immortals, which you can counter by making hydralisks and zerlings.

Additional Information:

Liquidpedia: "Zerg Forces" - http://wiki.teamliquid.net/starcraft2/Forcing#Zerg_Forcing

(D.2) Zerg Combat Styles

- Place overlords at as many expansions as you can, and have them generate creep. This will give you knowledge of when and where the enemy expands, and delay expansion by as much as 40 seconds (as creep goes away)
- Have one queen at each hatchery, plus 1-2 more for defense against air units and transfusion use
- Get overlord/overseer speed (pneumatized carapace) and at least 1 overseer for detection. Speed will help your overlords run away from attacks faster, and the overseer will provide detection at your base.
- A single hatchery will create up to 3 larva, then stop until there are less than 3 larva. More larvae are generated through using the queen's "inject larva". A single hatchery can hold 19 larva maximum.
- Zerg needs map control because you should always try to have one more base than your opponent.
- Balance drones and combat units throughout the game, do not over do it and have a weak economy or a weak army!
- Extend creep using creep tumors and overlord generate creep
- If your economy is running smoothly and you cannot spend all your money fast enough on units, create a few extra hatcheries. It is common to have extra minerals as Zerg, and extra larva production is a huge bonus to army reinforcement.

Additional Information:
Liquidpedia: "General Concepts" - http://wiki.teamliquid.net/starcraft2/Zerg_Strategy#General_Concepts

(D.2.1) Zerg (vs. T)

- **Zergling/Baneling** is a common opener. This can easily end the game if the player is not ready for it. It is very important to keep a scout in the opponents base long enough to see what tech path is being chosen. If your scout dies, send a Zergling to scout the base, or send an Overlord. You have two choices if you scout this a baneling nest or banelings - Immediately go for Roaches, or go Zergling/Baneling as well and have a micro war with your opponent. Either choice is acceptable.

- **Mutalisk/Baneling/Zergling** is effective against the tank-heavy Terran builds. Mutalisks can snipe tanks as well harass and frustrate the terran player. If the terran responds to mutalisk attacks with more marines, banelings can wipe them out.

- **Mass Roach** is an effective method to try to end the game quickly, since it will break down any wall the enemy has made. Once the wall is broken roaches supported by banelings or zerglings can wipe out remaining forces.

(D.2.2) Zerg (vs. Z)

- **Roach/Hydra with Baneling/Infestor support** is the common result of most ZvZ games. The bluk of the forces consist of roaches and hydra, using banelings to kill zerglings or hydralisks, and infestors to use fungal growth to damage and stun large numbers of zerg forces.

(D.2.3) Zerg (vs. P)

- **Hydralisk/Zergling** combinations are effective against protoss forces because zerglings can slow down protoss forces while hydralisks do damage from afar. The only problem with this combination is colossus, which can be countered by corruptors (not mutalisks, they are too easily countered by stalkers)

- **Mass Roach** – see ZvT, "mass roach".

- **Mutalisk/Zergling** is effectively only if the mutalisks are microed well to avoid engaging stalkers too often. If the mutalisks can effectively harass workers and cause economic harassment, the protoss is forced to build cannons, either way resulting in a zerg economic advantage.

(D.3) Zerg Build Orders

- The most general Zerg opening is the "13 Gas 14 Pool Opening".

ZvX				13 Gas 14 Pool Opening	Basic Opener
Strategy:					
Food	**Mineral**	**Gas**	**Event**	**Actions to Take**	
9/10				Overlord (1)	
10/10				Drone (1)	
10/18			@OL	Drone (build 4)	
14/18				Extractor	
13/18				Drone	
14/18				Spawning Pool	
16/18				Overlord	
			@Pool	Queen, Metabolic boost	
			@Queen	Inject larva	
Additional Information: http://www.youtube.com/watch?v=7eyizqtFAcU					

Additional Information:

Liquidpedia: "All Z Build Orders" - http://wiki.teamliquid.net/starcraft2/Zerg_Strategy#General_Builds

(D.3.1) General Zerg Build Orders

ZvX 1/5				10 Pool Speedling	Rush
Strategy: Use zerglings with the speed upgrade to cause major damage to players who do not block off their ramp.					
Food	Mineral	Gas	Event	Actions to Take	
10/10				Spawning Pool	
9/10				Drone	
10/10				Extractor (1) – three drones asap	
9/10				Drone	
10/10				Overlord	
10/18			@OL	Zerglings (1, 2, 3) – total of 6 zerglings	
14/18				Zergling Speed – metabolic boost from the spawning pool	
			While ATK	You can get your queen and begin working towards an expansion, or keep up harassment	
Additional Information: http://wiki.teamliquid.net/starcraft2/10_Pool_Speedling					

ZvX 2/5				Golath Style 14 Gas 14 Pool	Economic
Strategy:					
Food	Mineral	Gas	Event	Actions to Take	
9/10				Overlord	
10/18			@OL	Drone	
14/18				Gas	
13/18				Drone	
			@Gas	3 Drones to Gas	
14/18				Spawning Pool	
Additional Information: http://wiki.teamliquid.net/starcraft2/14_Gas_14_Pool (This build was modified by editor Golath)					

ZvX 3/5				14 Pool Baneling	Balanced
Strategy: This risky strategy aims at destroying the enemy economy, or ending the game quickly.					
Food	Mineral	Gas	Event	Actions to Take	
9/10				Overlord (#1)	
10/10				Scout	
14/18				Spawning Pool	
13/18				Gas (1)	
12/18				Drones – make two	
			@Gas	Place three drones in gas	
14/18				Overlord (#2)	
			@Pool	Queen (#1), Zerglings (make 3 pairs)	
19/26				Drone	
		100		Zergling Speed	
19/26				Zerglings (build three pairs)	
		50		Baneling Nest	
22/26				Overlord	
22/34				Zerglings (many)	
			@Bane Nest	Morph Banelings - attack with zerglings and banelings when banelings are finished	
				From here you can transition into another build, expand, or continue attacking	
Against Terran: If you see hellions, go roaches instead / If you see a bunker need the terran wall, run around it to the mineral line					
Against Zerg: If you see roaches, transistion, as roaches will block this / If you see banelings, protect your zerglings from them					
Against Protoss: Beware of sentry FF, try to fake an attack to drain their energy / Try to surround zealots / If you see void rays make another queen or two					
Additional Information: http://wiki.teamliquid.net/starcraft2/14_Pool_Baneling					

ZvX 4/5				14 Pool 15 Hatch	Balanced
Strategy: This macro build focuses on getting a better economy than the opponent gets, but it is vulnerable to early aggression.					
Food	Mineral	Gas	Event	Actions to Take	
9/10				Overlord (#1)	
14/18				Spawning Pool	
15/18				Hatchery expansion	
			@Pool	Queen	
18/18				Extractor (#1)	
18/18				Overlord (#2)	
18/26				From here you can transition into almost any build, because your economy will support it	
Additional Information: http://wiki.teamliquid.net/starcraft2/14_pool_15_hatch					

ZvX 5/5				1 Base Roach	Balanced
Strategy: This strategy is designed to overwhelm the opponent with 8 roaches and 14 lings early in the game.					
Food	Mineral	Gas	Event	Actions to Take	
9/10				Overlord	
10/10				Drone – go scout	
13/18				Spawning Pool	
15/18				Extractor	
16/18				Roach Warren	
15/18				Queen	
17/18				Overlords (make 2) – Do NOT create a drone for 18/18, you need to save the larva!	
17/34			@Queen	Inject twice, then make a creep tumor for the third set of energy	
			@R Warren	Roaches (make 3), send to your choke point	
			@Larva	Roaches (make 5) – when all 8 roaches are complete, send the roaches to enemy ramp	
		100		Metabolic Boost	
			@Larva	Zerglings (7 pairs) – rally zerglings to roaches, attack ASAP!	
		100		Lair	
	200			Hatchery expansion – send the drone out now, you should have 300 when it arrives	
			While ATK	Make more drones and overlords, transition as desired	
Additional Information: http://wiki.teamliquid.net/starcraft2/1_Base_Roach					

(D.3.2) Zerg vs. Terran

ZvT 1/5				Baneling Bust	Rush
Strategy: This build sacrifices economy to try for a fast win with an early baneling and zergling attack.					
Food	Mineral	Gas	Event	Actions to Take	
10/10				Overlord	
11/18				Spawning Pool	
11/18				Extractor	
15/18				Queen	
15/18				Overlord, Zerglings – continue producing overlords and zerglings	
		100		Metabolic Boost	
		50		Baneling Nest	
			@Bane Nest	Banelings – morph 6 near the Terran base, but out of vision range	
			@Banelings	Attack with the 6 banelings and roughly 16 zerglings	
				If the Terran walls off with two barracks and a factory and stops this attack, you will be left with only 14 drones! If you see a solidly built wall, transition into a standard game	
Additional Information: http://wiki.teamliquid.net/starcraft2/Baneling_Rush_(vs._Terran)					

ZvT 2/5				14 Hatch	Economic
Strategy: This build secures an early expansion to gain a strong economy speed up larva production.					
Food	Mineral	Gas	Event	Actions to Take	
9/10				Overlord	
10/10				Drone – go scout	
14/18				Hatchery expansion	
14/18				Spawning Pool	
16/18				Gas	
16/18				Overlord – You may wish to make another OL to sacrifice and scout with if T walled off	
17/26				Queen, Zerglings (make 2-4 pairs of zerglings)	
Against gas: Try to gas steal to delay any fast banshees, or get 3-4 queens.					
Against 2rax: This means one of three things: Fast CC, Two Rax All-In, Four Rax					

Fast CC means you need to make zerglings to prepare for a 5-6 marine push, get drones to keep up with the T economy / 2Rax all in means a lot of marines and SCVS, so have a lot of drones at natural to help fight / 4Rax means you need zergling speed, try to get banelings

Additional Information: http://wiki.teamliquid.net/starcraft2/14_hatch_(ZvT)

ZvT 3/5				Roach Fast Expand	Economic
Strategy: This build is safe against many of the common Terran openings, but vulnerable to fast bio pushes or starport tech.					
Food	Mineral	Gas	Event	Actions to Take	
9/10				Overlord	
14/18				Spawning Pool	
16/18				Extractor	
15/18				Overlord	
			@Pool	Queen, Zerglings (1 pair)	
	300			Hatchery expansion	
		100		Lair	
	150			Roach Warren	
Additional Information: http://wiki.teamliquid.net/starcraft2/Roach_Fast_Expand_(vs._Terran)					

ZvT 4/5				5 Roach Rush	Balanced
Strategy: This build is very balanced, ensuring a decent economy while having a strong force to threaten the Terran wall-off.					
Food	Mineral	Gas	Event	Actions to Take	
10/10				Overlord	
11/18				Spawning Pool	
12/18				Extractor	
14/18				Zergling	
15/18				Queen	
18/18				Roach Warren	
			@Queen	Inject Larva	
		100		Metabolic Boost (Zergling Speed)	
18/18				Overlord (make two)	
19/34				Roaches (make 5)	
		125		Pull drones off gas, you want to focus on making zerglings now!	
29/34				Hatchery expansion	
30/34			While ATK	Zerglings and Overlords	
Roaches should attack while zerglings rally behind the roaches. Roaches should target SCVS first, then depots, and then hellions. Once the wall is broken, zerglings can enter and deal with any marauders and damage the T economy. Focus on zerglings as the T may counter on marauders (since they fear more roaches).					
Additional Information: http://wiki.teamliquid.net/starcraft2/5_Roach_Rush_(vs._Terran), http://www.teamliquid.net/forum/viewmessage.php?topic_id=145740					

ZvT 5/5				2 Base Muta	Tech
Strategy: This strategy is capable of holding off early Terran rushes to protect an expo, but still gets mutalisks for the midgame.					
Food	Mineral	Gas	Event	Actions to Take	
9/10				Overlord – scout, consider a gas steal to delay or stop any banshee rushes	
14/18				Extractor	
14/18				Spawning Pool	
15/18				Overlord	
16/26				Queen	
		100		Metabolic Boost	

Food	Mineral	Gas	Event	
18/26				Zerglings (two pairs)
20/26				Hatchery expansion
			@Queen	Queen (#2)
		100		Lair, Extractor (#2)
			@Lair	Spire, Overseer
Get up to five mutalisks and use them primarily for economic and supply harassment, taking care not to allow them to die. If they die the Terran may feel confident about expanding, taking map control, or attacking you – all of which are bad for you!				
Against Marine+Tank get some banelings to try to kill the marines, use mutalisks to kill stray tanks and buildings, and try to get brood lords to deal with the tanks / Against pure mech try to pick off tanks, thors, and Vikings whenever they stray too far from the other units.				
Additional Information: http://wiki.teamliquid.net/starcraft2/2_Base_Muta_(vs._Terran)				

(D.3.3) Zerg vs. Zerg

ZvZ 1/5			Spine Crawler Rush	Rush
Strategy: This strategy is a risky all-in designed to kill Zerg opponents who get a late pool for an earlier expansion.				
Food	Mineral	Gas	Event	Actions to Take
8/10				Spawning Pool
7/10				Drone
8/10				Drone – go scout with this drone, try to keep it alive and in or near the enemy base
9/10				Overlord
9/18				Zerglings (make three pairs) – when zerglings are half done, send another drone or two to to the enemy base
				Keep making zerglings, rally them to the enemy base
			@Zerglings	Send the zerglings to the enemy base and then place 2-3 spine crawlers directly next to each other (to minimize the area they can be hit from) and near the hatchery. Only attack with your zerglings when the enemy is attacking your crawlers, and retreat if they attack your zerglings.
Additional Information: http://wiki.teamliquid.net/starcraft2/8_Pool_Spinecrawlerrush_(vs._Zerg)				

ZvZ 2/5			13 Pool Evolution	Rush
Strategy: Quickly get 1-1 speedlings (evolution chamber upgraded zerglings with speed) and end the game before the enemy can tech to mutalisks.				
Food	Mineral	Gas	Event	Actions to Take
9/10				Overlord
13/18				Spawning Pool
12/18				Extractor
16/18				Evolution Chamber
18/18				Queen
19/26				Overlord
				Extractor (#2)
Upgrade your zerglings with speed, weapons, and armor, and place nonstop pressure on the enemy. Executed correctly, this build will kill roaches and banelings as well (if you spread your zerglings out and minimize baneling splash). Pull damaged zerglings back and continue to pressure them all game – you must kill them before they can tech!				
Additional Information: http://wiki.teamliquid.net/starcraft2/13_pool/evolution				

ZvZ 3/5			Fast Banelings	Rush
Strategy: This build is designed to survive any early pool builds (6-8 pools), and do a lot of early damage to any late pool builds.				
Food	Mineral	Gas	Event	Actions to Take

Food	Mineral	Gas	Event	Actions to Take
10/10				Extractor Trick – Make an extractor, make another drone, cancel the extractor
11/10				Spawning Pool
10/10				Extractor
10/10				Extractor Trick
11/10				Overlord
11/18				Zerglings (make three pairs)
14/18				Baneling Nest
14/18				Zerglings (two pairs)
16/18				Banelings (make 6) – create this near the enemy base, but out of their vision
			While ATK	Queen, drones, and overlords
				If you feel you can win, continue with zergling and baneling pressure.
				If you feel you cannot, make more drones and use a standard ZvZ midgame build
Additional Information: http://wiki.teamliquid.net/starcraft2/Fast_Banelings_(vs._Zerg)				

ZvZ 4/5			**1 Base Roach Expand**	**Balanced**
Strategy: This is one of the standard ZvZ builds, it played defensively while still trying for a better economy.				
Food	Mineral	Gas	Event	Actions to Take
10/10				Overlord
13/18				Spawning Pool
15/18				Overlord (#2)
15/26				Zerglings (two pairs)
17/26				Queen
19/26				Extractor
18/26				Drones (make 2)
20/26				Roach Warren
19/26				Drone
20/26				Hatchery
19/26				Overlord (#3)
Additional Information: http://wiki.teamliquid.net/starcraft2/1_Base_Roach_Expand_(vs._Zerg)				

ZvZ 5/5			**1 Base Speed Roach**	**Balanced**
Strategy: This build will give you a strong early economy and allow you to easily transition into many different midgame builds.				
Food	Mineral	Gas	Event	Actions to Take
9/10				Overlord (#1)
9/10				Drone – scout
14/18				Spawning Pool
14/18				Extractor
15/18				Overlord (#2)
16/18			@Pool	Queen, Zerglings (two pairs)
20/26				Drone
21/26				Evolution Chamber – get +1 missile attack
			@Queen	Lair
20/26				Drones (make two)
22/26				Roach Warren (lair should be about 1/3 done)
21/26				Extractor (#2)
			@Evo Chamb	Get +1 missile attacks
20/26				Drones (get two)
22/26				Overlord (#3)
			@Roach Warren	Upgrade Roach Speed (Glial Reconstitution)
Against speedlings use spine crawlers for defense / Against speedling+baneling you can be aggressive because roaches counter				

banelings / Against spire get spore crawlers and go hydralisk, do not be afraid to attack because mutalisks take a long time to kill roaches / Against rushes you need to micro very well with your drones and zerglings
Additional Information: http://wiki.teamliquid.net/starcraft2/%2B1_Speed_Roach_Opening_(vs_Zerg), http://www.youtube.com/watch?v=TJe2v0SMsnI, http://www.youtube.com/watch?v=WUd6fEqd4uY

(D.3.4) Zerg vs. Protoss

ZvP 1/5			15 Hatch		Economic
Strategy: This very fast expansion aims to get a fast economic lead in order to get a strong midgame, but it is vulnerable to early pressure.					
Food	Mineral	Gas	Event	Actions to Take	
9/10				Overlord	
15/18				Hatchery expansion - send 2 drones around 200 minerals, one for hatch, the other to scout	
				If you see any chrono boosted zealots be prepared for early aggression	
14/18				Spawning Pool	
16/18				Extractor	
16/18				Overlord	
16/26			@Pool	Queen, zerglings (one pair)	
Additional Information: http://wiki.teamliquid.net/starcraft2/15_Hatch_(vs._Protoss)					

ZvP 2/5			3-5 Roach Speedling		Balanced
Strategy: This balanced strategy provides strong pressure towards the P wall-in while maintaining a decent economy (from getting a queen and an expansion)					
Food	Mineral	Gas	Event	Actions to Take	
10/10				Overlord	
11/18				Spawning Pool	
12/18				Extractor	
14/18				Zergling (one pair) – deny any enemy probes from scouting the roach warren	
15/18				Queen	
18/18				Roach Warren – queen should be 1/2 done	
			@Queen	Inject Larva	
		100		Metabolic Boost	
18/18				Overlord (make two)	
19/34				Roaches (make 5)	
		125		Pull drones off of gas, you will be making zerglings	
			While ATK	Overlords and Zerglings – use zerglings rallied to enemy base to reinforce the attack	
Additional Information: http://wiki.teamliquid.net/starcraft2/5_Roach_Rush_(vs._Protoss), http://wiki.teamliquid.net/starcraft2/3_Roach_Rush_Speedling_all-in_(vs._Protoss)					

ZvP 3/5			Speedling Expand		Balanced
Strategy: This build is a safe way to expand in ZvP by ensuring zerglings are available to defend the expo					
Food	Mineral	Gas	Event	Actions to Take	
10/10				Overlord	
11/18				Spawning Pool	
10/18				Extractor	
11/18			@Pool	Queen, Zerglings (one pair)	
		100		Metabolic Boost	
	300			Expand	
17/18				Overlord	

Against 1gate you should be safe to drone up and saturate the natural / Against forge first he is expanding quickly, so try to get 8 speedlings and check for holes in the wall – if you find any holes sneak into the base and do damage / Against heavy zealot pressure retreat and let the queen or spine crawlers assist in the defense

Additional Information: http://wiki.teamliquid.net/starcraft2/Speedling_Expand, http://www.teamliquid.net/forum/viewmessage.php?topic_id=133023 http://wiki.teamliquid.net/starcraft2/2_Hatch_Hydra_(vs._Protoss)#2_Gate_Rush

ZvP 4/5			2 Hatch Hydra		Tech
Strategy: This strategy skips zergling speed and roach warren for a faster economy, and techs to hydras quickly					
Food	Mineral	Gas	Event	Actions to Take	
10/10				Overlord	
11/18				Drones (to 13/18) – go scout with 11th drone, be sure there is a core! If there is a 2gate rush you must transition into "1 base roaches" to protect yourself! Adaptation info here http://wiki.teamliquid.net/starcraft2/2_Hatch_Hydra_(vs._Protoss)#2_Gate_Rush	
13/18			@Pool	Queen, Zerglings (until 18/18) – be aggressive with the first 6 zerglings	
18/18				Overlord, Extractor (#1)	
18/18				Keep making drones and zerglings	
The below follow-up assumes that the protoss has a gateway and a core, so you should be safe to expand to your natural					
20/26				Hatchery expansion – add a spine crawler or two if you are playing blind, have confirmed a rush, or just want to play safely	
25/26				Lair, Overlord (make two)	
25/26				Extractor (#2), Drones (make quite a few, saturate the natural)	
34/44			@Lair	Hydra Den, Drones to (37/44), then Overlord – stop producing at 37!	
37/52				Hydralisks (make 5)	
48/52				Extractor (#3), drones (many)	
				Use the hydralisks to hold off any protoss attacks	
Additional Information: http://wiki.teamliquid.net/starcraft2/2_Hatch_Hydra_(vs._Protoss), http://www.youtube.com/watch?v=qo-gTcWwd0o					

ZvP 5/5			3 Hatch Muta/Ling		Tech
Strategy: This risky builds has few defenses against early aggression, but will play you in an excellent economical situation for midgame, with mutalisks and zerglings available off three hatcheries in two bases					
Food	Mineral	Gas	Event	Actions to Take	
10/10				Overlord	
15/18				Hatchery expansion	
14/18				Spawning Pool	
16/18				Overlord	
17/18				Queen (make two) – place the second queen at your natural Use the first queen to build a creep tumor, so creep connects the bases	
21/26				Gas (get two)	
20/26				Zerglings (one pair)	
24/26				Overlord (make two)	
		100		Metabolic Boost	
38/42				Lair	
38/42				Roach Warren	
40/42				Overlord	
			@Lair	Spire, Hatchery (in main base) – If the protoss expanded you may wish to build this at a third base	
You should not rush to mutalisks, see what the enemy is doing first. Do not lose your mutalisks and focus on harassing the enemy and keeping them from expanding (or pinned in their base) – the mutalisk harassment will allow you to continue to expand					

Against 1 gate core you should be safe to make drones / Against pylon block means you will need roaches to counter any aggression / Forge first means you must make many drones to stay ahead of their economy / Against 1 base protoss means a strong attack is coming, so use your army and spine crawlers to hold off any attacks / Against stargates be ready to make queens and hydralisks to defend your bases

Additional Information: http://wiki.teamliquid.net/starcraft2/3_Hatch_Muta/Ling_(vs._Protoss), http://www.teamliquid.net/blogs/viewblog.php?id=156907

(D.4) Zerg Advanced Unit Tricks

- **Banelings set to automatically unburrow** can pop up near enemies, functioning like a land mine. Two burrowed banelings can destroy anything building at an expansion before it gets finished.
- **Banelings** set to detonate manually can kill cloaked units.
- **Banelings** that are burrowed can be manually detonated for full damage
- **Broodlings from Broodlords** get the melee and armor increases from evolution chambers
- **Burrowed roaches and infestors** can move under force fields
- **Burrowed Roaches and Infestors** cast a shadow on the ground when moving, so enemies can spot your units
- **Burrowed Roaches** can move through a lowered supply depot and prevent it from being raised again
- **Burrowed units** can prevent buildings from being placed there (great at expos)
- **Changelings** can block unit movement, because enemy units will not attack the changeling
- **Changelings** dropped on enemy tanks will cause the tanks to fire at their own units
- **Changelings** will blend in better if ordered to follow a unit
- **Creep tumors** can be built on enemy creep
- **Creep tumors** generate vision of the map, and turn invisible once they spawn another tumor – only tumors that have not yet made a tumor are visible to the enemy (without detectors)
- **Drones morphing into a building** and cancelling will temporarily cause units that were attacking it to stop
- **Hatcheries** can be built and cancelled too leave a patch of creep in the area, costing 75 minerals
- **Hatcheries** can only have 19 larva maximum
- **Infestor fungal growth** can reveal cloaked units
- **Infestor fungal growth** can stop air units from moving during their hit-and-run attacks, and then use infested terrans to destroy the air units
- **Infestor neural parasite** can control an enemy queen and make creep tumors, granting you vision of the enemy hatchery
- **Infestor infested terrans** can cause tanks to splash their own units, or soak up tank fire as your units move in
- **Infestor spells (any)** can take out a Raven PDD (infested terrans can shoot it, fungal growth will stop it and kill it)
- **Nydus Networks** can be rallied to, and all units will automatically load

- **Overlord generate creep** can be done at every expansion on the map, allowing information about expansions and delaying non-zerg enemies from expanding right away
- **Overlord generate creep** can be used on higher ground, allow a creep tumor to go up cliffs
- **Overlords generating creep in large groups** can cause creep to rapidly appear, but the creep will disappear slowly
- **Overseer contaminate** can hit ground units
- **Overseer contaminate** will stop Terran buildings from lifting or landing
- **Roaches holding position** can block a choke point
- **Roaches with tunneling claws** have crystals on their backs, exposing that they are capable of moving underground
- **Zerglings with speed** have wings on their bodies

Additional Information:
Liquidpedia: "Oddities" - http://wiki.teamliquid.net/starcraft2/Oddities

(E) PROTOSS STRATEGY

(E.1) Protoss Buildings and Units

(E.1.1) Protoss Buildings

- **Nexus:** Main Structure (resource collecting) – (energy building for chrono boost)
- **Pylon:** Food/Psi Structure
- **Assimilator:** Gas Structure
- **Gateway:** Production Structure (Zealots, Stalkers, Sentries, Dark Templar)
- **Forge:** Tech Structure
- **Cybernetics Core:** Tech Structure
- **Photon Cannon:** Defensive Structure (anti-air, anti-ground) and Detector
- **Robotics Facility:** Production Structure (Observer, Warp Prism, Immortal, Colossus)
- **Warpgate:** Gateway Upgrade (units can be warped in anywhere with a power field)
- **Stargate:** Production Structure (Phoenix, Void Ray, Carrier)
- **Twilight Council:** Tech Structure
- **Robotics Bay:** Tech Structure

- **Fleet Beacon:** Tech Structure
- **Templar Archives:** Production Structure (High Templar, Archon)
- **Dark Shrine:** Tech Structure

Additional Information:

Liquidpedia: "Protoss Buildings" - http://wiki.teamliquid.net/starcraft2/Protoss_Units

(E.1.2) Protoss Units

Probe
Harass workers until shield reaches 0, run away to regenerate shield, and then continue harassing. This is very effective versus Terran because it forces SCVs to defend the building SCV. Probes can also block buildings from being built by standing in the way or warping in pylons.
Abilities and Upgrades: None

Zealot			
Race	Good Against	Weak Against	Strategy
VS. T	Marine, Marauder	Hellion	Effective tanks that protect army, capable of surrounding enemy army, useful to charge into siege tanks
VS. Z	Hydralisk	Baneling	Effective tanks that can slow zerg surrounds
VS. P	Immortal	Colossus	Effective tanks, especially when combined with sentry FF
Abilities and Upgrades: Charge increases movement speed 25% permanently and allows the Zealot to charge into an enemy at high speed for better surrounds			

Stalker			
Race	Good Against	Weak Against	Strategy
VS. T	Reaper	Marauder	Blink can be used to bypass defensive setups like bunkers and wall-offs, or teleport into tanks and cause them to splash their own units
VS. Z	Mutalisk	Zerglings	Blink can be used to snipe brood lords and avoid being surrounded
VS. P	Void Ray	Immortal	Ineffective against zealot+sentry armies, good for killing void rays
Upgrades: Blink teleports to nearby locations it has vision at, including up and down cliffs and through units			

Sentry			
Race	Good Against	Weak Against	Strategy
VS. T		Hellion	FF can stop MM retreats / GS reduces marine damage
VS. Z	Mutalisk	Zergling	FF split Zerg armies or create chokes / GS reduces mutalisk damage
VS. P	Void Ray	Stalker	FF hold back Zealots from surrounding / GS reduces stalker damage
Upgrades: Force Field is used for blocking ramps, trapping enemy armies, creating chokes, or separating enemy armies / Guardian Shield greatly reduces damage taken / Hallucination is used for scouting, absorbing damage, or tricking the enemy by faking tech			

High Templar			
Race	Good Against	Weak Against	Strategy
VS. T	Marine	Ghost	Storm is effective vs. MM balls, Feedback can stop medivacs from healing
VS. Z	Zergling	Roach	Storm is effective vs. large Zerg groups
VS. P	Stalkers	Zealot	Not as effective as colossus, so not used too often
Abilities and Upgrades: Feedback removes a unit's energy and deals damage / Psionic Storm deals 80 damage over 4 seconds / Archon Warp turns two remplar (of any kind) into an Archon / Psionic Storm allows Psionic Storm to be used (from Templar Archives) / Khaydarin Amulet gives HT 25 more starting energy (Templar Archives)			

Dark Templar			
Race	Good Against	Weak Against	Strategy
VS. T		Detection, Ghost	Forces scans costing the Terran 250 minerals, forces turrets to be built
VS. Z		Detection	Forces overseers and wastes gas
VS. P		Detection	DT rushes are effective if the enemy is late to get detection
Abilities and Upgrades: Dts are permanently cloaked / Can be used to morph into archons			

Immortal			
Race	**Good Against**	**Weak Against**	**Strategy**
VS. T	Tank	Marine	Effective against smaller numbers of tanks and marauders, can quickly destroy groups of depots
VS. Z	Roach, Ultralisk	Zergling	Effective against the armored roaches and ultralisks, but ineffective against other lower DPS units
VS. P	Stalker, Colossus	Zealot	Effective against stalkers and colossus
Abilities and Upgrades: Hardened Shield reduces any damage to the immortal greater than 10, to just 10 damage (some special abilities are not affected by this)			

Colossus			
Race	**Good Against**	**Weak Against**	**Strategy**
VS. T	Marine	Viking, Thor	Necessary against MMM balls, beware of Vikings (use stalkers to support)
VS. Z	Zergling	Ultralisk, Corruptor	Very effective vsus zergling, baneling, and hydralisk mixes, beware of corruptors and mutalisks
VS. P	Zealot	Immortal	Necessary unit as protoss lacks a good counter (immortals lose their effective once colossus gains range), beware of blinking stalker snipes though
Abilities and Upgrades: Colossus can walk up and down cliffs, but is also targeted by air units and anti-air attacks / Extended lance increases the range by 50%, making the colossus an effective kiting unit			

Archon			
Race	**Good Against**	**Weak Against**	**Strategy**
VS. T	Marine, Marauder	Thor, Ghost	DTs and HTs are effective against T, and if the T counters them archons are effective against MMM balls
VS. Z	Mutalisk	Ultralisk	Very effective against the all-biological zerg army, combined with zealots as shields they can tear through zerg armies
VS. P	Zealot		Effective against gateway units and excellent tanks for stalker fire and colossus splash damage
Abilities and Upgrades: Any combination of two templar (high or dark) form an archon / Use the high shield to run an archon out of battle and let it regenerate / Once detection is making DTs ineffective or HTs have no more energy, creating an archon is a good idea			

Observer	
Race	**Strategy**
VS. T	Used for scouting – Good at detecting cloaked banshees on incoming drops
VS. Z	Used for scouting – Good at detecting burrowed roaches or banelings
VS. P	Used for scouting – Good at detecting DTs
Abilities and Upgrades: Get this unit ASAP to gain scouting information of the enemy's units, army, and bases / Use defensively to prepare for attacks, offensively to find undefended bases / Gravitic Drive increases speed and acceleration	

Warp Prism			
Race	**Good Against**	**Weak Against**	**Strategy**
VS. X		AA	Primarily used to drop zealots, DTs, or HT storms on enemy workers
Abilities and Upgrades: Gravitic Drive increases speed and acceleration / Cargo space of 8 / Can deploy a power field and warp in units (which is effective, but proxy pylons do the same thing) / To the fastest unit reinforcement deploy the powerfield, unload units while the field is deployed, and warp in as units drop			

Phoenix			
Race	**Good Against**	**Weak Against**	**Strategy**
VS. T	Banshee	Battlecruiser	Used to pick up siege tanks in siege mode, force ghosts to EMP early, or even cancel a ghost's nuke
VS. Z	Mutalisk	Corruptor	Able to snipe queens (need 4 phoenixes), snipe OLs, discourage mutas, and protect void rays from AA units (by lifting them)
VS. P	Void Ray	Carrier	Useful for sniping colossus, or lifting and killing immortals
Abilities and Upgrades: Graviton Beam can lift non-massive units into the air for 10s, which is useful to disabling powerful units or harassing workers / Phoenixes can attack while moving, making kiting very easy			

Void Ray			

Race	Good Against	Weak Against	Strategy
VS. T	Banshee	Battlecruiser	Must use max range to go cost-for-cost against vikings
VS. Z	Mutalisk	Corruptor	Very effective against the large zerg ground army
VS. P	Void Ray	Carrier	Ineffective because they are easily countered by stalkers + sentry GS
Abilities and Upgrades: Graviton Catapult increases launch speed of interceptors / Interceptors can be set to auto-cast / Carriers are useful to cause the enemy army to auto-target inceptors, forcing micromanagement				

Carrier			
Race	Good Against	Weak Against	Strategy
VS. T	Thor	Battlecruiser	Used to pick up siege tanks in siege mode, force ghosts to EMP early, or even cancel a ghost's nuke
VS. Z	Zerg Ground	Corruptor, Hydralisk	Able to snipe queens (need 4 phoenixes), snipe OLs, discourage mutas, and protect void rays from AA units (by lifting them)
VS. P		Stalkers, Sentry	Useful for sniping colossus, or lifting and killing immortals
Abilities and Upgrades: Graviton Beam can lift non-massive units into the air for 10s, which is useful to disabling powerful units or harassing workers / Phoenixes can attack while moving, making kiting very easy				

Mothership			
Race	Good Against	Weak Against	Strategy
VS. T			Used to vortex siege tanks in siege mode, waste scans for 250 minerals each
VS. Z			Used to vortex large amounts of zerg units, splitting their army
VS. P			
Abilities and Upgrades: Cloaking Field cloaks all nearby units and buildings / Vortex causes all units caught inside to leave the battle for 20s / Mass Recall teleports selected units to underneath the mothership				

Additional Information:

Liquidpedia: "Protoss Units" - http://wiki.teamliquid.net/starcraft2/Protoss_Units

(E.1.3) Protoss Harassment

- **Void Rays** harass Terran and Zerg. If the enemy lacks AA, this can cause significant damage.
- **Phoenixes** in groups can use the fast speed and use graviton beams to lift and kill workers in hit-and-run attacks. They can also snipe Zerg OLs.
- **Warp Prism drops** of HT storms or colossus splash damage can quickly kill workers.
- **Dark Templars** not detected in time can kill all the workers at an enemy base.

Additional Information:

Liquidpedia: "Protoss Harassment" - http://wiki.teamliquid.net/starcraft2/Harassment#Protoss

(E.1.4) Protoss Forces

- **Against Terran**:
    - Dark Templar forces scans (costing 250 minerals) or missile turrets (more minerals).
    - Early Void Ray (hallucinated or real) can force large numbers of marines, which can be countered by colossus.
- **Against Zerg**:
    - Early Zealot pressure may cause roach production, which stalkers, immortals, or even void rays can easily counter.

- **Against Protoss**:
  - PvP resolves around colossus production, so whoever has extended range and more colossus has a significant advantage.

Additional Information:

Liquidpedia: "Protoss Forces" - http://wiki.teamliquid.net/starcraft2/Forcing#Protoss_Forcing

(E.2) Protoss Combat Styles

- A standard protoss army consists of a lot of zealots, stalkers, and sentries, roughly in a 3:2:1 ratio. This is effective in most situations. As t2 and t3 units are added this mix gets much stronger.

Additional Information:

Liquidpedia: "P General Concepts" - http://wiki.teamliquid.net/starcraft2/Protoss_Strategy#General_concepts

(E.2.1) Protoss vs. Terran

- Early game is about survival until you can tech because of MM pressure. A ratio of 3 zealots, 2 sentries, and 2 stalkers is a good mix to fight against any MM squads that come to attack you. Use FF to keep these MM squads out, split them in half, or prevent them from retreating. Get stalkers early to counter any reaper harass. Also note that blink stalkers can completely bypass terran defenses, and do damage to more vulnerable parts of the base.

- Early game depends on getting a robotics facility after your 3rd gate, or as soon as you finish expanding. Immortals are effective against marauders and siege tanks, observers allow for effective scouting, later you can add colossus. Note that some players prefer to get a robotics facility even sooner, possibly after their first or second gate (gate-robo-gate, or gate-gate-robo), because gateway units struggle against barracks units.

- Mid game depends on what the Terran is doing.
  - MMM: get colossus and tech to Templar.
  - Marine-Tank: try to avoid this powerful but immobile army using warp prism drops, stargate units, or blink stalkers. Use phoenixes to pick up tanks and snipe them.
  - Thor-SCV: get a decent amount of immortals and void rays.
  - Banshee-Raven Combinations: This is a difficult combination to counter. Phoenixes are the best choice to waste Raven PDD and directly attack banshees and ravens, while blink stalkers are able to blink and move away from PDD range. Use a few zealots to protect your stalkers if they are affected by Raven PDD. Get a few photon cannons or extra observers to detect cloaked banshees!

- Mid game requires more observers or well-placed pylons to spot any Medivac drops, as Terran rely on drops for harassment and damage. Use blink stalkers to bypass any terran defenses and try to damage

vulnerable parts of the base.

<u>Additional Information:</u>
Liquidpedia: "PvT Strategy" - http://wiki.teamliquid.net/starcraft2/General_PvT_Strategy

(E.2.2) Protoss vs. Zerg

- Early game is concerned with limiting the Zerg economy (and not falling behind in economy). If the Zerg expands early, you can do the same with a 15 Nexus, OR pressure the zerg with stalkers to prevent them from building too many drones while getting your own expansion. Because Zerg can quickly harass you if you chose to expand with a 15 Nexus, it is recommended that you continue getting warp gates and just harass the zerg, forcing them to build army units instead of drones. You can always expand after warp gates.

- The important units in the early game are the zealots, stalkers, and sentries. Stalkers are the key unit because they can pressure and force drones until zerglings get speed (around 3:00-3:15). Sentries FF and GS will help cannons and units defend your expo. Adding +1 weapons will increase your offensive ability even further. Zealots are there to kill zerglings and prevent stalker deaths.

- Mid game means the Zerg will have 3-4 bases, 2-2 upgrades, a hive started, and be focusing on hydra/roach or muta/ling. Protoss needs to keep zerg expos in check and stay ahead in upgrades to counter the much large zerg armies. Be sure to use observers to expose the invisible creep tumors – you want to kill them and stop creep from expanding, or possibly push back the creep.

- There are two main mid game styles for protoss – stalker/sentry/colossus (SSC) or immortal/stalker/templar (IST).
  - o SSC does well against hydra/roach armies but is not as effective against muta/ling. You need many sentries to FF and split the Zerg army for you to retreat, especially to snipe corruptors that will try to kill your colossus. GS lowers damage from the many zerg units. If the Zerg has a high corruptor count, start transitioning to IST.
  - o IST is effective against muta/ling but is not as effective against hydra/roach. Storm will deal with hydras and immortals against roaches, leaving stalkers as AA and support. Drained templar can become archons and do excellent damage. A few storms can also cause heavy muta or worker damage.

- Late game requires a large shift in style because sentries FF is not as effective due to ultralisks and brood lords, so use hallucinations to soak damage instead. IST should adjust by adding DTs, and CCS needs to protect colossus – both styles should slow stalker production, and focus on adding void rays and immortals. Void rays can quickly take down ultralisks, brood lords, and zerg expos. At this stage the mothership becomes very useful because it requires zerg to have detection, and vortex can effectively split a zerg army.

Additional Information:

Liquidpedia: "PvZ" - http://wiki.teamliquid.net/starcraft2/General_PvZ_Strategy

Plexa's TL Forum: "PvZ" - http://www.teamliquid.net/forum/viewmessage.php?topic_id=167992

(E.2.3) Protoss vs. Protoss

- Common builds in PVP are
  - 4 Warpgate Rush – forces the enemy to also 3-4gate or get quick countered to avoid being overwhelmed
  - Dark Templar Rush – Can cause massaive damage if the enemy lacks detection
  - 2-3 Gate Robo – Early immortals and colossus will do significant damage all game, and colossus is the key units through the entire game.

- Colossus is the key units, and whoever has more of them has a clear advantage because of their effective against gateway units, which make up the bulk of the protoss army.

- Gateway units will be in use all game, and can effective against most t2 and t3 units – except the colossus.

- Blink stalkers are good against zealots, immortals are good against stalkers, and zealots are good against immortals (leaving a paper-rock-scissors situation).

- Phoenixes are useful because they can attack colossus and pick up immortals.

- DTs can be effective if the enemy is lacking detection. High templar are nearly useless in this matchup. Archons are effective against the biological gateway units (zealots and sentries) while able to do respectable damage to everything else.

Additional Information:

Liquidpedia: "PvP" - http://wiki.teamliquid.net/starcraft2/General_PvP_Strategy

(E.3) Protoss Build Orders

- The most general Protoss opening is the "1 Gate Core Opening".

PvX				1 Gate Core	Basic Opening
Strategy:					
Food	**Mineral**	**Gas**	**Event**	**Actions to Take**	
9/10				Pylon (1)	
10/18			@ Pylon	Chrono boost nexus for faster probes	
12/18				Gateway (1) – send a probe to scout (some strats get a zealot, others wait for stalker)	
13/18				Assimilator (1) - chrono boost nexus again	
16/18				Pylon (2)	
17/26				Cybernetics Core	

Additional Information: http://www.youtube.com/watch?v=BGlxM0V8ieg, http://wiki.teamliquid.net/starcraft2/1_Gate_Core

Additional Information:

Liquidpedia: "All P Build Orders" - http://wiki.teamliquid.net/starcraft2/Protoss_Strategy#General_Builds

(E.3.1) General Protoss Build Orders

PvX 1/5				Cannon Rush	Cheese Rush
Strategy: Cripple enemy economy by forcing them to build early army units or pull workers away from minerals.					
Food	Mineral	Gas	Event	Actions to Take	
7/10				Probe	
8/10				Probe	
9/10				Probe	
10/10				Pylon (1) – scout with a probe	

11-13				Pylon (2) – A proxy pylon you can position in three ways
				
				   A) On low ground near the ramp, then slowly build cannons up the ramp
				
				   B) Inside the enemy base, hidden from view
				
				   C) Near their minerals, blocking access to the cannon	

12-14				Photon Cannon (many)	
Additional Information: http://wiki.teamliquid.net/starcraft2/Cannon_Rush *Counters for Terran*: Either hold them off and tech to siege, or lift buildings and move elsewhere *Counters for Zerg*: Use zerglings to kill probes, and use spine crawlers to attack cannons *Counters for Protoss*: Send 1-2 probes to kill probe, use 3-4 others to kill pylon, use gateway units to kill off established cannons. *General Counters*: Counterattack their base, forcing them to pull back and defend with cannons or lose everything.					

PvX 2/5				Wall-In at Natural	Economic
Strategy: Instead of walling-off your main, wall-off at the choke of your natural expo					
Food	Mineral	Gas	Event	Actions to Take	
9/10				Pylon (1) – a little behind natural choke	
10/10				Gateway (1) – at natural choke – send probe to scout Look for early spawning pools or refineries, which could mean early zergling or reaper harassment.	
12/18				Forge (1) at natural choke – use a small space for unit movement (could also build a second gate and completely wall-off)	
14/18				Zealot (1) – use "hold" to block entrance	
16/18				Photon Cannon (1) – behind the gateway and forge	
Additional Information: http://wiki.teamliquid.net/starcraft2/Wall-In_at_Natural					

PvX 3/5				4 Warpgate Rush	Rush
Strategy: This aggressive opening can overwhelm the enemy with units to cause damage or even win, but it does not allow you to tech or expand, leaving you vulnerable to counters.					
Food	Mineral	Gas	Event	Actions to Take	
9/10				1 Gate Core opening – only use two chrono boosts on probes	
18/26				Zealot – start saving chrono boosts for the warp gate tech research	
22/26				Stalker – use one chrono boost on a stalker	
23/26				Warp Gate Tech, Gas (2) – chrono boost the warp tech 4 times	
26/26				Gateway (2, 3, 4)	
26/26				Pylon (3) – Build the gateways first!	
26/34				Pylons – These are proxy pylons near/in the enemy base, build 2-3 of them	

			@ProxyPylons	Warp in units!

Additional Information: http://wiki.teamliquid.net/starcraft2/4_Warpgate_Rush,
http://www.youtube.com/user/HDstarcraft#p/u/27/rYURoBXkFeA

PvX 4/5			3 Gateway Robo		Balanced

Strategy: Have a build strong enough to hold off early pushes from 3rax or 4gate while teching to immortal and/or colossus, allowin your army to be more effective. Be sure to scout for enemy air unit production buildings if you go colossus!

Food	Mineral	Gas	Event	Actions to Take
9/10				1 Gate Core opening
18/26				Zealot – start saving chrono boosts for the warp gate tech research
22/26				Pylon (3)
23/26				Stalker
25/34				Warp Gate Tech, Gas (2)
27/34				Gateway (2)
28/34				Sentry (1), Pylon (4)
31/34				Gateway (3)

Additional Information: http://wiki.teamliquid.net/starcraft2/3_Gate_Robo, http://www.youtube.com/watch?v=uJSsWWoS1pw

PvX 5/5			DT Rush		Tech Rush (T3)

Strategy: Get three DTs before 7:00 to either cripple the opponents army and base, or force them to use (and spend more on) detector units.

Food	Mineral	Gas	Event	Actions to Take
9/10				1 Gate Core opening
18/26				Gas (2) – start saving chrono boost for warp gate research
20/26				Stalker
22/26				Twilight Council
22/26				Pylon (3)
22/34				Gateway (2)
26/34				Dark Shrine – try to hide this as much as possible
26/34				Gateway (3)
26/34				Warp Gate research – use 4 chrono boosts

Additional Information: http://wiki.teamliquid.net/starcraft2/Dark_Templar_Rush

(E.3.2) Protoss vs. Terran

PvT 1/5			1 Gate FE		Economic

Strategy: Get ahead economically against any passive Terran, while remaining strong enough to fight off aggression by using chrono boost on the gateway for more units. This build can transition into many other builds.

Food	Mineral	Gas	Event	Actions to Take
9/10				1 Gate Core Opening
18/26				Zealot
22/26				Pylon (3)
			@ Core	Stalker (1) – chrono boost
27/34				Warp Gate Tech – chrono boost
28/34				Stalker or Sentry
30/34				Nexus (2)
33/34				Pylon (4), Gateway (2)

Additional Information: http://wiki.teamliquid.net/starcraft2/1_Gate_FE_(vs_Terran), http://day9tv.blip.tv/file/4065228/

Counters: T reaper harass can be stopped by stalkers / T early double gas for banshee, get robotics facility once nexus is done / T

3Rax MM get a second gas earlier and use sentries / T 111 means either MMM or Raven-PDD, which can be countered by a few phoenixes

PvT 2/5				2 Gate Pressure Expo	Economic
Strategy: Use two fast gateways build an army and attack while you begin to expand					
Food	Mineral	Gas	Event	Actions to Take	
9/10				1 Gate Core opening – scout after gateway – use two boosts on nexus	
18/24				Zealot	
21/24				Gateway (2)	
22/24			@Core	Sentry, Warp Gate Tech – three boosts on warpgate tech	
24/24				Pylon (3)	
27/34				Stalker (1) – one boost on this stalker, then another boost ob warpgate tech	
27/34				Stalker (2)	
32/34				Pylon – proxy pylons near enemy base	
32/34				Nexus (2)	
32/42				Stalkers (3, 4) – go attack the enemy to protect your expansion and damage them	
Additional Information: http://wiki.teamliquid.net/starcraft2/2_Gateway_Pressure_into_Expansion					

PvT 3/5				3 Gate Expo	Balanced
Strategy: A safe opening that allows for a fast expansion and enough units to attack the enemy. A gas steal can even delay or prevent banshees, making this even safer.					
Food	Mineral	Gas	Event	Actions to Take	
9/10				1 Gate Core opening – consider doing a gas steal with your scouting probe	
20/24				Gas (2)	
20/24				Zealot, then either stalker or sentry – but get one of each of these units before expanding	
22/24				Pylon, Warp Gate Research	
24/32				Gateway (2, 3)	
			@3 units	Nexus	
Additional Information: http://wiki.teamliquid.net/starcraft2/3_Gateway_Expansion, http://www.youtube.com/watch?v=86r-mshrDWk					

PvT 4/5				1 Gate Fast Immortal	Tech
Strategy: A defensive build that holds off early MM pressure using a stalker, sentry, and immortal					
Food	Mineral	Gas	Event	Actions to Take	
9/10				1 Gate Core opening	
18/26				Gas (2)	
			@Core	Robotics Facility (1)	
22/26				Stalker, Warp Gate Research	
24/26				Pylon (3)	
26/34				Immortal (1), Sentry (1) – immortal around 5:00, sentry around 6:00	
33/34				Pylon (4)	
35/42				Gateway (2, 3)	
Additional Information: http://wiki.teamliquid.net/starcraft2/1_Gate_Fast_Immortal_(vs._Terran)					
Counters: MMM can be stopped with more immortals and colossus / MM and tanks can be stopped with immortals, you can get a second robot facility / Banshees can be stopped with stalkers and an observer / Bunker contain can be stopped with immortals					

PvT 5/5	1 Gateway Stargate	Tech Rush
Strategy: This strategy can crush marauder-heavy builds and fast expansions.		

Food	Mineral	Gas	Event	Actions to Take
9/10				1 Gate Core opening
18/24				Gas (2)
21/24				Stalker (1) – Deny any scouting with this stalker, T can easily counter with mass marines
24/24				Stargate (1) – If you wish, you can build a proxy pylon and built the stargate elsewhere
24/24				Pylon (3), Warp Gate tech
26/34				Stalker (2)
29/34				Void Ray – you can attack with either 1 or 2 void rays, 1 is safer / charge up against a depot or refinery / do not lose your void rays at any cost, force the T to build turrets and vikings
Additional Information: http://wiki.teamliquid.net/starcraft2/1_Gateway_Stargate_(vs._Terran), http://day9tv.blip.tv/file/3823643/, http://day9tv.blip.tv/file/3823769/				

(E.3.3) Protoss vs. Zerg

PvZ 1/5		Forge Fast Expo		Economic
Strategy: This risky fast expansion using cannons to stop any early zerg units. This build is vulnerable to baneling or roach early aggression, so get units quickly! Maintain your economic advantage by pressuring the zerg, to keep them from taking 3 bases.				

Food	Mineral	Gas	Event	Actions to Take
9/10				Pylon – behind choke point of natural expansion – scout
12/18				Forge – at natural choke
14/18				Photon Cannons (1, 2) - behind forge
14/18				Nexus at natural expansion
14/18				Gateway – narrow the choke point more
16/18				Transitions: Stargate / DT / Blink Stalker / 6 Warpgate
				Be careful of: Early drops, Nydus Worms, Baneling Busts, and Roach Busts
In order to defend against any roache or baneling busts, you must quickly get gateway units to defend your base.				
Additional Information: http://wiki.teamliquid.net/starcraft2/Forge_Fast_Expansion_(vs._Zerg), http://www.youtube.com/user/HDstarcraft?feature=chclk				

PvZ 2/5		Blink Stalker Push		Balanced
Strategy: Aggressive build used against a FE zerg.				

Food	Mineral	Gas	Event	Actions to Take
9/10				1 Gate Core opening
18/24				Pylon (3), Gas (2)
21/32				Stalker (1, 2) – chrono boost both
			Stalkers started	Warp Gate research
28/32				Gateway (2, 3), Pylon (4)
30/40				Twilight Council, Gateway (4)
34/42				Blink research – chrono boost until finished (should be started around 6:00)
38/42				Pylon (5)
46/50			@ blink	Get 12 stalkers and go attack (should occur around 8:10)
Additional Information: http://wiki.teamliquid.net/starcraft2/Blink_Stalker_Push				

PvZ 3/5		3 Gate Sentry Expo		Balanced
Strategy: Build an expo as safety as possible, build many sentries to support your army later on.				

Food	Mineral	Gas	Event	Actions to Take
9/10				1 Gate Core opening
18/24				Gas (2)
20/24				Zealot

23/24				Pylon (3)
26/32				Gateway (2, 3)
30/32				Pylon (4) – near natural or ramp, to build a wall
32/42				Nexus – you should have 1 zealot and 6 sentries by this time

Additional Information: http://wiki.teamliquid.net/starcraft2/3-Gate_Sentry_Expand

Counters: Roaches mean build stalkers instead of sentries / Zerglings mean use FF to allow sentries to hit from range safety / Zerg takes 3rd base, get a fourth gateway and attack with zealot, stalker, and sentries

PvZ 4/5			2 Base Robo	Balanced
Strategy: This mid-game strategy for the production of colossus or immortals counters zerg ground armies				
Food	Mineral	Gas	Event	Actions to Take
9/10				1 Gate Core opening
				Each base can support 1 robotic facility and 3 gateways. So for two bases that is 2 RF, 6 GW
				Upgrades are critical - +1 zealots can two-shot zerglings, +1 immortals can take 4 roaches each, and +2 colossus can one-shot zerglings
				Colossus require extended lance ASAP to outrange hydras

Additional Information: http://wiki.teamliquid.net/starcraft2/2-Base_Robo, http://www.youtube.com/watch?v=CqdX37Z7A_s, http://www.youtube.com/watch?v=rEsxvHWbvbU

PvZ 5/5			1 Gate Stargate	Tech Rush
Strategy: Take advantage of the Zerg's lack of AA to get phoenixes or void rays to effectively harass the zerg / You must wall-off with your pylon, core, and gateway, using a zealot to hold and close the ramp.				
Food	Mineral	Gas	Event	Actions to Take
9/10				1 Gate Core opening – get a zealot and a sentry when core finishes
18/26				Gas (2), FORGE ASAP if you spot roaches, get 1-2 cannons
21/26				Zealot (2)
23/26				Pylon (3) – use sentries to chase away any scouting OLs
24/34				Stargate – save chrono boost, stop production at 28
28/34				Void Ray (1) – chrono boost
31/34				Void Ray (2) – chrono boost

Additional Information: http://wiki.teamliquid.net/starcraft2/1_Gate_Stargate_(vs._Zerg)

(E.3.4) Protoss vs. Protoss

PvP 1/5			Adel Slow-Gas Fast-Expand	Rush / Economic
Strategy: This build delays gas and core in order to expand quickly and safely.				
Food	Mineral	Gas	Event	Actions to Take
9/10				Pylon (1)
13/18				Gateway (1) – scout with probe
14/18				Pylon (2)
16/26				Gateway (2)
17/26				Zealot (1)
19/26				Gas (1)
22/26				Zealot (2), Pylon (3)
24/34				Core, Warp Game Tech – chrono boost warp tech
26/34				Zealot (3, 4) – attack with these four zealots (should occur before 5:00)
32/34				Stalkers (1, 2), Pylon (4)
32/42				Rally stalkers to enemy base, keep pressure up
				Transitions: Expand to natural if you did decent damage / Gateways (3, 4, 5) to make army units to stop any counterattacks

Additional Information:	http://wiki.teamliquid.net/starcraft2/Adel's_No_Gas_PvP, http://www.youtube.com/watch?v=hYY-JWY_Vhw&feature=player_embedded#!

PvP 2/5			Korean 4 Warpgate		Rush
Strategy: An aggressive early attack that can quickly end the game by overwhelming the enemy with units, but it is easily scouted because of you saving chrono boost.					
Food	Mineral	Gas	Event	Actions to Take	
10/10				Pylon (1)	
10/18			@Pylon	Gateway (1)	
13/18				Gas (1)	
15/18			@Gateway	Core	
			@Core	Warp Gate Tech	
18/18			ASAP	Gateway (2, 3, 4) – consider building all 3 at once to avoid giving the strat away	
			@75% warp tech	Pylons – Proxy pylons in the enemy base, preferably 3-4	
Additional Information: http://wiki.teamliquid.net/starcraft2/Korean_4_Warpgate_All_In_(vs._Protoss)					

PvP 3/5			3 Stalker Robo		Balanced
Strategy: This gets a force strong enough to hold off any 4 warpgate pressure while opening up. The three stalkers are used to kill the proxy pylon and force the enemy to place it further away.					
Food	Mineral	Gas	Event	Actions to Take	
9/10				Pylon (1) – scout, use second chrono boost twice, then save chrono boost	
12/18				Gateway (1)	
14/18				Gas (1)	
16/18				Pylon (2)	
18/26			@Gate	Core	
22/26			@75% Core	Gateway (2) – stop production at 22/26 to avoid having the stalker blocked	
22/26			@Core	Stalker (1), Warp Gate Tech – chrono boost the stalker once, do NOT cboost the warp tech	
22/26				Gas (2) – scout the enemy again around 22/26, if you accidentally got to 23 let the probe die	
26/26				Stalker (2, 3) – chrono boost both	
26/26				Pylon (3)	
26/34				Robotics Facility, Gateway (3)	
30/34				Sentry (1)	
Additional Information: http://wiki.teamliquid.net/starcraft2/3_Stalker_Robo, http://www.youtube.com/watch?v=bb_X8Jlfj5g					

PvP 4/5			Rebirth Early Void Ray		Tech Rush
Strategy: Block off choke point with gateway, core, and zealot holding position – do not let them see your stargate tech!					
Food	Mineral	Gas	Event	Actions to Take	
10				Pylon (1) – placed near the choke point	
				Gateway (1) – placed to block off the choke point, keep making zealots	
12				Gas (1)	
13				Core – placed to block off the choke point	
14				Gas (2)	
16				Pylon (2) – hidden from enemy vision	
17				StarGate – place near pylon #2, hidden from enemy vision	
20				Void Ray (1) – chrono boost the void ray	
23				Void Ray (2) – chrono boost the void ray	
24				Pylon (3)	
26				Void Ray (3) – chrono boost the void ray	
			@ 3 VR	You should have 3-5 Zealots and 3 VR, which should be able to do significant damage to the	

				enemy, especially if the VR target stalkers (and even more so when VRs are charged!)
Additional Information: Rebirth VR strategy is a faster version of Nony 2 Gate VR http://www.youtube.com/watch?v=jmLkmPnP5CI				

PvP 5/5			Mothership Rush	Tech Rush
Strategy: This risky tech rush can allow defense against later attacks, or very effective attacks backed up by the vortex or mass recall.				
Food	Mineral	Gas	Event	Actions to Take
9/10				Pylon (1) – place it near the choke point, go scout
15/18				Gateway (1) – place it at the choke point, constantly make zealots and stalkers
16/18				Core – Placed at the choke
16/26				Pylon (2, 3)
16/26				Gas (1)
17/26				Pylon (4)
24/34				Stargate – this should be hidden to avoid giving the strategy away
28/42				Gateway (2) – save chrono boost for mothership
30/42				Fleet Beacon – this must be hidden because it is a dead giveaway
34/42				Do not build past 34/42 unless you can add another pylon, the MShip is 8 food
	400	400		Mothership
Note that this is a VERY risky build, so be aware of that. You need to try to keep the enemy from seeing what you are doing!				
Additional Information: http://wiki.teamliquid.net/starcraft2/Mothership_Rush_All_In, http://www.youtube.com/watch?v=qbSodiGyABg				

(E.4) Protoss Advanced Unit Tricks

- **Archons** can be made from a combination of two of any templar (high or dark)
- **Chrono Boost** can be heard by nearby enemies
- **Colossus** provides long-range vision like air units, but it can also be hit by air units
- **Graviton Beam, Vortex,** and other incapacitation moves on a ghost will cost the Terran the nuke while stopping it from landing **Hallucinations of Immortals** still have hardened shields
- **Hallucinations** of air units or colossus grant vision for blink
- **Hallucination of Phoenixes** can quickly drain a Raven PDD
- **Hallucinations of Colossus** are still massive units, and can destroy force fields
- **Hallucinations** can soak up baneling damage
- **Hardened Shield + Guardian Shield** stack, so immortals take 8 damage maximum
- **High Templar Feedback** will drain a caster unit of all its energy and make it useless, if it does not kill them directly (usually 75% or more will kill the unit)
- **High Templar Feedback** can drain a Raven PDD
- **High Templar Psionic Storm** deals the same damage to flying units, but be sure it is hitting them! You can use the "flyer helper" in "options, game play options"
- **Immortal Hardened Shield** is bypassed by spells such as Thor Cannon, Templar Psi Storm, or BC Yamato Cannon
- **Phoenix Graviton Beam** can pick up a building SCV and stop that building's construction
- **Photon Cannons** outrange a Planetary Fortress
- **Phoenixes** that are well-microed can kill up to 6 mutalisks by itself

- **Stalker Blink** can dodge Raven Seeker Missile
- **Sentry Guardian Shield** affects air units, even if they are not visibly in the bubble
- **Void Ray Charge** is kept during mass recall
- **Vortex** can be made more effective by placing archons inside, or using psi storm once it ends
- **Warp Prism's Phase Mode** provides a power field, and this can be used to construct a building
- **Zealots with +1 Weapons** can two-shot a zergling instead of three-shot, making them much more effective
- .

Additional Information:

Liquidpedia: "Oddities" - http://wiki.teamliquid.net/starcraft2/Oddities

(F) <u>Team Strategy</u>

- Team games require coordination and coordination with each other. To help you communicate more efficiently, you and your partners should use voice chat. Voice chat allows you to discuss intended builds, scouting information or attack strategies quickly and easily. Use the load screen to start discussing your intended builds (rush, economic, balanced, tech, or tech rush).

- Thanks to the added mobility available to Terran and Protoss (because of warp gates and medivacs), and the introduction of shared bases, all team combinations are viable in 2v2.

- Shared control is available, and it is recommended you become comfortable using with regular teammates to increase the efficiency of the team. However, use shared control responsibly and respectfully!
    - o Only control your teammates units if they ask you to do so beforehand, or if they are being attacked and do not seem to notice.
    - o Never use spells for them (perhaps they were saving energy for some reason), or control their units because "you can play better than them". Doing this can mess up their strategies, and is incredibly arrogant – you not only insult them as players, but also deny them the opportunity to improve themselves.

Additional Information:
Liquidpedia: "Races" - http://wiki.teamliquid.net/starcraft2/General_2v2_strategy#Races

(F.1) <u>Team Fundamentals</u>

- This section assumes you and your partner have read and understood the "Five Fundamentals" section of this guide, Section B, and will continue to use them in team games. As such, this section only discusses additional concepts that relate to team play.

(F.1.1) Macro

- **All of the individual players builds should complement each other to increase the team's versatility and effectiveness.** For example, two players with the same race should pick different builds, such as two terrans – one going bio/MMM and the other going mech. Each individual player should have a "role" to focus on, even if they choose to get a more balanced army, such as "player A focuses on air units, player B focuses on ground, etc." You do not want every teammate to use similar builds and unit compositions – each with the same weaknesses.

- **Each individual should focus on upgrading the units that their role/build requires.** This will save each individual money and enable your team to get 2/2 and 3/3 units into battle much faster than if each

individual was upgrading everything. Having the "air support" person with 3/3 air units and the "ground army" person with 3/3 ground forces is much more effective than a huge mixture of 1/1 or 2/2 units.

- **Pick the best aspects of each race to accomplish team goals.** If one teammate's race has a significant advantage over the other teammate's races, that teammate should perform that particular function. Terran and Protoss have the best long-range ground units (tanks and colossus), so they should fulfill this role. Zerg have the best anti-ground spells (Infestor fungal growth), so that should be the Zerg role. Using the best aspects from each race and working together will make the team far more effective.

- **Each race should use their individual structures and abilities to defend and support teammates.** Terran should place sensor towers in teammate's bases or around the map, allowing teammates to see any incoming drops or attacks. Zerg can place nydus worms in areas to allow for fast reinforcement when defending allies. Protoss have the best defense available and should be the primary defenders, as they can place pylons in each teammate's base and instantly warp in reinforcements. Terran and Protoss also have superior static defenses (bunkers, turrets, cannons) and should use these to defend any important areas.

- **The best macro defense is Protoss because they can instantly warp in units.**

(F.1.2) Economy

- **Always support and help your teammates when they are expanding!**
  - Out of combat, one person should expand at a time while various teammates use their forces to defend the expo and ensure it gets up safely.
  - In combat, one teammate can use "shared control" and temporarily control the one person's units so that they may focus solely on expanding and base management for a few seconds. When they have finished, they can do the same for the other person. Using shared control this way allows everyone to take 10-15 seconds to focus on expanding and base management!

- **The money each player has is "Team Money", not "Individual Money".** Each player should always be sharing excess minerals and gas whenever they can afford to do so. If each player has a specific role and every teammate understands which role requires what kinds of money, be sure to share excess money to that player. For example, a player focusing strictly on mineral-heavy units will need excess minerals from teammates, while this player can give excess gas to any tech-heavy teammates. There is also a "request" function available in the share money menu – be sure to use it when necessary!

- **If there are any Terran players on the team, consider letting them take the gold expansions - then they can share the minerals with the whole team.** There are a few reasons for this. First, Terrans can fortify this expansion by using a planetary fortress and missile turrets, making it far stronger than the other races could. Secondly, the Terran can drop many mules on the gold patches and deplete it much faster than the other races, getting more income faster for the team as a whole. If the team lets Terrans do this they should be sure to share excess minerals with the whole team regularly.

- **The best economy race is Terran, because they can quickly deplete any base by saturating it with mules.**

(F.1.3) Micro

- **If using shared control, your team can increase team micromanagement by having each teammate perform a specific role during combat.** It is much easier to perform complicated tasks if they are broken up in simpler ones and shared. To improve team micromanagement, assign teammate a "location-based" or "unit-type-based" role.

  o For location-based play, separate into two groups of any unit combination (even mixes of the different races) and hit the enemy at two different locations. This will allow each player to focus solely on one location, allowing each player to use all units there more effectively.

  o For unit-type-based play, decide which player will control which types of units. Perhaps one player can control the majority of the ground forces of all races, while the other focuses on air units, drop attacks, or even spellcaster units. It is much easier to use spells effectively if your teammates are temporarily controlling your other units.

- **Use the terrain to your team's advantage!** Many maps offer shared choke points that lead into your team's shared base, teammate's individual bases, or expansion area. Everyone should pitch in and help defend this shared choke point, as it offers a great opportunity to use the terrain to defend these important areas against enemy attacks.

(F.1.4) Combat

(F.1.4.1) Battles

- **Never act alone, always act as a team**. Whether the strategy is to attack, harass, distract, or just sit and defend – always act together as a team. Trust and cooperation are huge parts of teamwork, as people playing individually will often lose to players who work together. If the team plan calls for distraction or harassment, the player doing those actions should wait for the team to confirm it is time to do so. If the plan is to attack, wait for your teammates and attack together. Never act alone – it is very easy for one player to be quickly outnumbered and lose everything. After all, what is easier – fighting 10v10, or fighting 10v1 ten times?

- **Use shared control to increase combat effectiveness** – assign each teammate a role and the team will perform better as a whole! This is discussed in more detail under "Team Fundamentals, Micro", section (F.1.3)

(F.1.4.2) Harassment

- **Use your teammate's attacks and distractions to provide opportunities so one teammate to effectively harass the enemy team!** While the enemy team is distracted or defending, one allied teammate can sneak into bases and cause economic, supply, or tech damage.

- **If multiple teammates are scouting (which they should be), players can work together to harass any Terran SCVS.** If your team manages to slow down the enemy Terran players, you can severely delay them from walling-off or making any units – providing a good first target to hit!

(F.1.5) Information

(F.1.5.1) Scouting

- **Use the best scouting techniques available to your team based on the races available.** Protoss offer the best general scouting available with observers, Zerg can use overlords or burrowed zerglings throughout the map, and Terran can use scans on any well-defended areas that normal scouting cannot reach.

- **Protoss or Terran should do the initial scouting because they can recover from the loss of the scouting workers more easily.** At first, Protoss lose the least because they do not need their worker to stand and build any buildings. As the game goes on a Terran MULE can recover the lost expenses from having a worker scout.

- **The best scouting races are Protoss (observers for general scouting) and Terran (scanner sweeps on well-defended areas, as well as sensor towers to detect enemy movement).**

(F.1.5.2) Map Control

- **Your team needs to keep control over towers, expansions, and choke points.** Any combination of units can control the towers, though Protoss Dark Templar are especially effective at it. Zerg provide the best expansion knowledge because they can burrow zerglings in the mineral patches and keep an eye on every expo, or even use Overlord generate creep to delay any expansion attempts by the enemy. Everyone can work together to control choke points.

- **Map control is important because it allows your team to fight the enemy with even numbers.** Once your team sees an incoming attack, everyone can get their forces and intercept the attack before it arrives at the target. If the target is a teammate's base, it is easier to defend them by using the terrain to your advantage and fighting 2v2, 3v3, or 4v4 from the beginning, instead of everyone responding late and allowing the enemy to fight 3v1 multiple times.

- **The best map control race is Zerg, because they can creep the expansions and slow down the enemy expansions.**

(F.1.6)   Team Five Fundamentals Summary

- This is a summary; you can find additional information and other sources in the more detailed sections of the five fundamentals in section (F.1.1) through (F.1.5).

(F.1.6.1) Macro

- All of the individual player builds should complement each other to increase the team's versatility and effectiveness.
- Each individual should focus on upgrading the units that their role/build requires.
- Pick the best aspects of each race to accomplish team goals.
- Each race should use their structures and abilities to defend and support teammates.
- Protoss should be the primary defenders for the team because they can instantly warp units into teammate's bases.

(F.1.6.2) Economy

- Always protect and support your teammates when they are expanding.
- The money each player has is "Team Money", not individual money – share excess and help support each other economically as needed.
- Terran players should take gold expansions because they can get the minerals more quickly by saturating it with mules, and they can defend them with a planetary fortress and turrets – but the Terran needs to share the minerals with the team if this occurs!
- The best economy race is Terran, because they can quickly deplete mineral fields by using mules.

(F.1.6.3) Micro

- By assigned each teammate a role (location-based or unit-type-based), your team can micromanage all of the team's units more effectively.
- Use terrain to the team's advantage! There are many shared choke points; everyone should defend these areas to prevent enemy movement and attacks.

(F.1.6.4) Combat

- Never act alone, always act as a team! Always attack, defend, distract, or harass according to the team plan.
- Use shared control to increase combat effectiveness.
- Never try to harass alone – make harassment part of the team plan and use your teammate's actions to provide a good opportunity to harass the enemy.

(F.1.6.5) Information

- Use the best scouting units and techniques your team has available. Let Terran or Protoss do the initial scouting because they suffer less economically.

- When multiple people scout, they should work together to harass and kill any Terran SCVS that are constructing buildings.
- Your team should fight to control towers, expansions, and choke points.
- Map control is important because it will allow your team to respond to incoming attacks faster and fight the enemy in equal numbers.
- The best general scouting races are Protoss (observers) and Terran (scanner sweeps and sensor towers). The best map control is the Zerg as they can generate creep over expansions and burrow units to see enemy movement.

(F.2) 2v2 Strategy

- This section covers information about two player teams.

- Be sure to look over the 2v2 maps in league play, available in Section (A-6), "Map Notes".

- Teams should quickly discuss their build orders in the beginning and decide what each person is doing (remember the build types: rush, economic, balanced, tech, or tech rush).

Additional Information:
Liquidpedia: "General 2v2 Strategy" - http://wiki.teamliquid.net/starcraft2/General_2v2_strategy

(F.2.1) Terran-Terran

- This team is well balanced. TT can perform fast rushes, good mid-game attacks, and have a strong late-game mix. TT also has double the amount of scans available, and can perform very large drops.

- Be sure to use the TT strengths to the fullest – do lots of scans and harassment.

- Various builds for this team combination:
  - Rush/Rush – Each player can make reapers or just proxy barracks. Both of these are risky, but they can be very effective against a shared base team. Another option is speedling+hellion, saving the gas for a large amount of mutalisks.
  - Balanced/Balanced – One player can go MMM whether the other goes mech. This allows for mobility and harassment with the MMM, while using powerful mech units as well.
  - Balanced/Tech – One player can go bio and factory, while the other focuses on starport units. The bio-mech player can support the starport player so that the team is balanced and effective. If the enemy team is weak to T tech, let one player get the specific tech units needed while the other stays balanced.

Additional Information:
Liquidpedia: "TT Team" - http://wiki.teamliquid.net/starcraft2/General_2v2_strategy

(F.2.2) Terran-Zerg

- This team is well balanced but has a strong biological combination. TZ can perform fast rushes, perform consistent harassment, and dominate with powerful late-game air units.

- Be sure to use the TZ strengths to the fullest – constant harassment and air superiority.

- Various builds for this team combination:
    - Rush/Rush – Zergling+Reaper is effective if players micro well. Reapers can quickly kill light units while zerglings surround any units that might give the reapers trouble.
    - Balanced/Balanced – The Terran can go MMM and support the zerg bio army with medivacs, or the Terran can go mech and slowly push as the Zerg supports the mech army.
    - Balanced/Tech – The Terran can tech to ravens, banshees, and Vikings in order to eliminate the biggest threads to the Zerg ground army (banshees kill tanks, Vikings kill colossus, with raven PDD for support). If the enemy team is weak to either T or Z tech, let that player get the specific tech units needed while the other stays balanced.

Additional Information:
Liquidpedia: "TZ Team" - http://wiki.teamliquid.net/starcraft2/TZ_Strategy

(F.2.3) Terran-Protoss

- This team is well balanced but has a strong technological combination. TP can perform fast rushes, tech-heavy mid-game attacks, and devastating tech-heavy late-game combinations – all with full map information thanks to observers and scans.

- Be sure to use the TP strengths to the fullest – powerful units supported by technology, and superior scouting abilities.

- Various builds for this team combination:
    - Rush/Rush – Zealots provide excellent support for any MM placed safely behind them, allowing the MM free hits against the enemy. If you are effectively damaging the enemy the Terran can give gas to allow the Protoss to tech to DTs, effectively ending the game.
    - Balanced/Balanced – Terran can go MMM or Mech while the Protoss goes 4-Gate or Gate-Robo. This balanced strategy can dominate at long range (tanks, thors, and colossus) and short range (zealots, stalkers, marines, and marauders) while being supported by tech units (sentries, templar, ghosts, and ravens).
    - Balanced/Tech – One player can focus on a more balanced army while the other techs. This is best T or P tech easily counters the opposing team (such as using ghosts and ravens against a PP team, or sentries and templar against a ZZ team).

Additional Information:
Liquidpedia: "TP Strategy" - http://wiki.teamliquid.net/starcraft2/TP_Strategy

(F.2.4) Zerg-Zerg

- This team is effective if timing is considered. ZZ is effective at early rushes and harassment, mid-game economic advantages, consistent heavy attacks late-game, and attacking various locations at once almost all game long.

- Be sure to use the ZZ strengths to the fullest – use mobility to keep up pressure and attacks, and do not be afraid to perform early rushes.

- Various builds for this team combination:
  - Rush/Rush – The double 6 pool is difficult to stop if the enemy players have their own bases and do not wall off in time. It can severely hurt or even kill one of the enemy players. A less risky but equally effective start would be one or both zergs doing a baneling bust, supported by speedlings or even roaches.
  - Balanced/Balanced – One Zerg can go roach/hydra well the other goes muta/lings. This combination will allow each zerg to upgrade their specific units, while the team as a whole can defend or attack against almost any enemy unit combination.
  - Balanced/Tech – Allowing one player to allow in some infestors, brood lords, or even ultralisks can greatly damage specific enemy unit combinations. If you're facing an enemy team that is easily countered by zerg tech, let one player get these tech units while the other stayed more balanced.

Additional Information:
Liquidpedia: "ZZ Strategy" - http://wiki.teamliquid.net/starcraft2/ZZ_Strategy (be sure to read "random tips at the bottom!)

(F.2.5) Zerg-Protoss

- This team is well balanced as a whole, as zerg offers mass weak units while protoss has a few powerful units. ZP can perform fast rushes, good mid-game attacks, and have a strong late-game mix. ZP also has some interesting tech combinations.

- Be sure to use the ZP strengths to the fullest – use force fields and zerg surrounds to pin the enemy down so you can eliminate any possibility of retreat.

- Various builds for this team combination:
  - Rush/Rush – A baneling bust or roach pressure combined with a 4 warpgate will provide a powerful, overwhelming rush that can break down enemy walls and do a lot of damage.
  - Balanced/Balanced – The zerg can either hydra/roach or muta/ling while the protoss goes 4 warpgate or 3-gate/robo.
  - Balanced/Tech – Both races offer unique air harassment units (mutalisks and void rays) and good ground armies. Let one player stay balanced and focus on ground units while the other decides to harass with air units (mutalisks can harass workers, or charged void rays can quickly

destroy supply structures). If the enemy team is weak to either Z or P tech, let that player get the specific tech units needed while the other stays balanced.

Additional Information:
Liquidpedia: "ZP Strategy" - http://wiki.teamliquid.net/starcraft2/PZ_Strategy

(F.2.6) Protoss-Protoss

- This team is well balanced but has a definite technological advantage. PP can perform fast rushes, good mid-game attacks, and have a strong late-game mix. A PP team also has plenty of support available from P tech.

- Be sure to use the PP strengths to the fullest – use available tech to strengthen the powerful P forces

- Various builds for this team combination:
    - Rush/Rush – Double 4 Warpgate can provide constant pressure that may overwhelm the enemy team early in the game.
    - Balanced/Balanced – One player can 4-gate while the other gets 3-gate-robo, stargate, or templar, providing a large number of gateway units supported by powerful tech units.
    - Balanced/Tech – Adding a few carriers or even a mothership to a large protoss army can be devastating to the enemy team, as it will require plenty of detection and micro to stop such a combination.

Additional Information:
Liquidpedia: "PP Strategy" - http://wiki.teamliquid.net/starcraft2/PP_Strategy

(F.3) 3v3 and 4v4 Strategy

- As the teams get larger, it is even more important to act as a team – always attack and defend together, because individuals will be overwhelmed.

- There are countless combinations on complementary builds and strategies. The best advice for 3v3 and 4v4 is to read the team fundamentals in this guide (Section F-1) and execute them well. Reviewing the 2v2 strategies in this guide (Section F-2) will show you many of the combinations available.

(F.3.1) 3v3 Strategy

- Version 1 of this guide does not include any detailed strategies for 3v3. If you are reading this guide and have well-written strategies with videos of gameplay execution, free feel to submit them to this guide!

Additional Information:
Source: "Article Title" – Link to source here

(F.3.2) 4v4 Strategy

- Version 1 of this guide does not include any detailed strategies for 4v4. If you are reading this guide and have well-written strategies with videos of gameplay execution, free feel to submit them to this guide!

- <u>Additional Information</u>:
  Source: "Article Title" – Link to source here

(G) How to Improve

"The journey of a million miles begins with a single step."
~ Confucius / Lao Tzu

(G.1) Improvement Advice

(G.1.1) Liquidpedia Advice

"The first step to improving, is committing yourself to improving."
~ Chill, "The Self Guided Road to Improvement"
http://www.teamliquid.net/forum/viewmessage.php?topic_id=66048

- **Use "Associative Response" to help you remember related concepts**. This associates two actions, such as "WHEN X, THEN Y." Some examples of this are:
    - When you build army units, check your supply.
    - When a new expansion finishes, move workers to this expansion.

- **The game has various parts that relate to each other**. In order to be an effective player you must practice improving at them all. The main parts are:
    - Mechanics – How well you manage your building and production (macro), and how well you control your army (micro)
    - Knowledge – Understanding of the game
    - Information – Learn how to obtain and understand information in real-time

- **You must practice all parts of the game in order to improve**. Knowledge is useful only if you can execute it with good mechanics. Mechanics are pointless if you do not have enough information to make good decisions. Information itself only helps if you have the knowledge and experience to understand it.

- **Focus on improving one or a few things at a time**. Do not try to improve every aspect of your game at once.

- **Improvement tips for Mechanics**
    - Keep resources low / Check your supply / Constantly build workers / Constantly build units
    - Practice, practice, practice! Repetition will help you become faster.
    - Use "A" to move your units, so they automatically defend themselves
    - Use multiple groups for your army units; do not put them all in one group!

    o   Queue commands by holding shift and issuing multiple commands

Additional Information:
Liquidpedia: "How to Improve" - http://wiki.teamliquid.net/starcraft2/How_to_Improve
Chill: "Road to Improvement" - http://www.teamliquid.net/forum/viewmessage.php?topic_id=66048
Orb: "Four Steps to Diamond" - http://us.battle.net/sc2/en/forum/topic/628075143

(G.1.2) Ajek's Advice

"The first step is to learn accurate information so you know what to practice, and the best way to practice it. Practice the right techniques the right way, and you will execute them correctly."
~ Paul "Ajek" Stales

- **The best way to improve in SC2** is to focus on learning and mastering one small aspect of the game at a time. There is too much to master in SC2 to do everything in a single day. To improve will require a good attitude about learning (including willingness to see mistakes as learning opportunities) and a commitment to practice. You can learn by following this procedure (Notice it is a very similar method to learning in school!):

  - "Lecture" - Read or watch videos and learn a single concept, such as "hotkeys" or "TvZ build 1"
  - "Practice Examples" - Play a few rounds against the computer, focusing on this concept
  - "Quiz" – Play against humans, remembering to focus on performing this new concept well
  - "Review Quiz" – Watch your replays, did you use the concept correctly?
  - "Exam" – Play a few league games - focus on the game!
  - "Review Exam" – Watch your replays, did you use the concept correctly?

- **The best long-term improvements** will come by mastering small concepts regularly, and continuing to build on your existing skill set.

(G.2) Ajek's Improvement Guide

- I base this section of the guide on my earlier advice – approach StarCraft like you would any college class. Learn about the subject, practice it, and then execute it.

- The earlier sections suggest practicing fundamentals and builds against the computer. There are good reasons for this. First, the computers play standard, which is ideal for someone learning the basics. Second, computers have customizable difficultly, which allows you to adjust the challenge as you improve. Last, the computers are consistent, so you can benchmark your progress (example: last week you could not beat hard, and now you can!) as you play.

- Later, this guide will focus on the practice techniques recommended for improving in league play.

(G.2.1) Section One – New Players

- **Lesson 1 – Setting Up Your Game**
    - <u>Goal</u>: Learn how to adjust your game settings
    - <u>Read Sections</u>: (A-1)
    - <u>Practice</u>: Go to multi-player and make a custom game. Add one "very easy" computer and be sure that the game runs smoothly. If the game runs smoothly, go to the next lesson.

- **Lesson 2 – Hotkeys and Experiencing All Three Races**
    - <u>Goal</u>: Learn what hotkeys are and how to use them, learn about the 3 races
    - <u>Read Sections</u>: (A-2) and take some basic notes
    - <u>Practice</u>: Play the following games:
        - 3 Games – Terran(You) vs. Very Easy Random CPU – Any 2 or 4 Player Map
        - 3 Games – Zerg(You) vs. Very Easy Random CPU – Any 2 or 4 Player Map
        - 3 Games – Protoss(You) vs. Very Easy Random CPU – Any 2 or 4 Player Map

- **Lesson 3 – Challenges**
    - <u>Goal</u>: Experience more of the three races of StarCraft while having fun
    - <u>Practice</u>: Do the single player challenges to learn more about the races and have some fun
        - Basic challenges – Get bronze in all 3 of these.
        - Advanced challenges – Get bronze in all 3 of these
        - Expert challenges – Skip these.

- **Lesson 4 – Terms and Definitions**
    - <u>Goal</u>: Learn what the common game terms are, and where to reference them if needed
    - <u>Read Sections</u>: (A-3) and take some basic notes
    - <u>Practice</u>: Test yourself on a few terms if you like

- **Lesson 5 – Hotkeys and Experiencing All Three Races, Part II**
    - <u>Goal</u>: Practice hotkeys more, start deciding what race you like best. If you cannot decide at the end of this lesson, repeat this lesson until you can choose ONE race you want to use
    - <u>Practice</u>: Play the following games:
        - 3 Games – Terran(You) vs. Easy Random CPU – Any 2 or 4 Player Map
        - 3 Games – Zerg(You) vs. Easy Random CPU – Any 2 or 4 Player Map
        - 3 Games – Protoss(You) vs. Easy Random CPU – Any 2 or 4 Player Map

- **Section One Test**
    - <u>Goal</u>: Determine if you are ready to play against medium CPUs and learn more advanced concepts
    - <u>Test</u>: Play the following games:
        - 7 Games – (Your Race) vs. Easy Random CPU – Any 2 or 4 Player Map
    - <u>Pass</u>: If you win at least 4 games, go to the next section
    - <u>Fail</u>: If you win 3 or less, you need more practice. Redo lessons 2, 4, and 5

(G.2.2) Section Two – Basic Practice

- **Lesson 6 – Your Race's Buildings and Units**
  - <u>Goal</u>: Fully understand your race's buildings and units
  - <u>Read Sections</u>: The first section of your race's section (C-1, D-1, or E-1) and take good notes
  - <u>Practice</u>: Test yourself on the units and buildings, try to remember what the buildings are for, and what the units do in battle

- **Lesson 7 – Challenges, Part II**
  - <u>Goal</u>: Experience the units and special units for your race
  - <u>Practice</u>: Do the single player challenges that involve your race
    - Basic challenges – Get silver for your race
    - Advanced challenges – Get silver for your race
    - Note: If you are having trouble getting silver, skip this lesson and come back later

- **Lesson 8 – Build Order Basics**
  - <u>Goal</u>: Understand what builds orders are, and learn your race's most basic build order
  - <u>Read Sections</u>: (A-5), and the build orders in your race's section (C-3, D-3, or E-3). The very first build order is a "general build order" – write this down carefully because you will need to refer to it later (use a notebook or an index card so you can review as you practice)

- **Lesson 9 – Learn the League Maps**
  - <u>Goal</u>: Understand common parts of multiplayer
  - <u>Read Sections</u>: (A-6) write down the list of the right 1v1 league maps, these will be the maps you practice on from now on

- **Lesson 10 – Practice Your Race's General Build Order on the League Maps**
  - <u>Goal</u>: Learn the league maps, because you will only practice on them from now on!
  - <u>Practice</u>: Play the following games:
    - 8 Games vs. Medium Random CPU – 1v1 League Maps

      Practice your race's general build order, and do each map once!
  - NOTE: From now on, only practice on the eight 1v1 league maps

- **Section Two Quiz**
  - <u>Goal</u>: Evaluate how well you know lessons 6-10
  - <u>Practice</u>: Play the following games:
    - 5 Games vs. Medium Random CPU
  - <u>Pass</u>: If you win 3 or more games, go to lesson 11
  - <u>Fail</u>: If you win 2 or less games, repeat lessons 6-10 and then retake this quiz

- **Lesson 11 – Gameplay Elements**
  - <u>Goal</u>: Understand common parts of multiplayer
  - <u>Read Sections</u>: (A-4) and take good notes
  - <u>Practice</u>: Test yourself on a few terms and definitions; be sure you understand these elements!

- **Lesson 12 – Five Fundamentals of StarCraft**
  - <u>Goal</u>: Understand the fundamentals of the game
  - <u>Practice</u>: In sections (B-1) through (B-5), there are detailed paragraphs explaining the fundamentals. Read five paragraphs at a time and take careful notes. After every 5 paragraphs, play 1 game against the computer – Be sure you are practicing the fundamentals you are learning, as well as your race's general build order!
    - 1 Game against an Medium Random CPU after every 6 paragraphs
    - (Note: There are roughly 60 paragraphs, so you should play around 10 games)

- **Section Two Test**
  - <u>Goal</u>: Evaluate if you can play vs. Hard computers and learn more advanced concepts
  - <u>Practice</u>: Play the following games:
    - 7 Games vs. Medium Random CPU
  - <u>Pass</u>: If you win 5 or more games, go to lesson 13
  - <u>Fail</u>: If you win 4 or less games, repeat lessons 11-12 and then retake this quiz

(G.2.3) Section Three – Advanced Practice

- **Guest Lecture – SC2 Noob School "Silver League Mistakes"**
  - http://www.youtube.com/watch?v=sUp_0BATnXA&feature=channel_video_title
  - http://www.youtube.com/watch?v=hqyB0E4heRU&feature=relmfu

- **Lesson 13 – General Builds for your Race**
  - <u>Goal</u>: Learn 5 new builds for your race!
  - <u>Practice</u>: Sections (C-3, D-3, or E-3) discuss your race's build orders. The first set of 5 builds are general builds, carefully write these down so you can review them while practicing
    - 10 Games vs. Hard Random – Practice a different build order each game, and do each build order twice!

- **Lesson 14 – Race Strategy and Combat Styles**
  - <u>Goal</u>: Understand your race's general strategy and combat styles
  - <u>Practice</u>: Sections (C-2, D-2, or E-2) discuss your race's combat styles and general strategies; take careful notes on this section. Be sure you are practicing your race's general build order and using league maps!
    - 3 Games vs. Hard Terran – Use your race's combat styles against Terran!
    - 3 Games vs. Hard Zerg – Use your race's combat styles against Zerg!
    - 3 Games vs. Hard Protoss – Use your race's combat styles against Protoss!

- **Lesson 15 – Race-Specific Build Orders**
  - <u>Goal</u>: Learn build orders against every race
  - <u>Practice</u>: Sections (C-3, D-3, or E-3) discuss your race's build orders. Carefully review and take notes on each build order, and then practice them against the computer.
    - 5 Games vs. Hard Terran – Use the five "vs. Terran" builds, do each one once
    - 5 Games vs. Hard Zerg – Use the five "vs. Zerg" builds, do each one once

- 5 Games vs. Hard Protoss – Use the five "vs. Protoss" builds, do each one once

- **Section Three, Quiz One**
  - o Goal: Evaluate if you can play vs. Very Hard computers and learn more advanced concepts
  - o Practice: Play the following games:
    - 7 Games vs. Hard Random CPU
  - o Pass: If you win 5 or more games, go to lesson 16
  - o Fail: If you win 4 or less games, repeat lessons 13-15 and then retake this quiz

- **Guest Lecture – Day9 Daily "Gold League Mistakes"**
  - o http://www.youtube.com/watch?v=2p94C-QjucM&feature=relmfu
  - o http://www.youtube.com/watch?v=m4pj_lv7BvE&feature=fvwrel
  - o http://www.youtube.com/watch?v=HXhTkGYIDug&feature=fvwrel
  - o http://www.youtube.com/watch?v=FeElbZVGJiw&feature=fvwrel

- **Lesson 16 – The Five Fundamentals Summary**
  - o Goal: Master the Fundamentals
  - o Practice: Sections (B-6) summarizes the fundamentals into 5 sentences for each of the five fundamentals. Write these down repeatedly until you have them memorized, they will help you play more effectively! Also, keep practicing your race-specific builds from lesson 14
    - 7 Games vs. Very Hard Terran CPU
    - 7 Games vs. Very Hard Zerg CPU
    - 7 Games vs. Very Hard Protoss CPU

- **Lesson 17 – The Importance of Replays**
  - o Professional player replays and games are available on youtube, Liquidpedia, and other sites. Watching these will help you understand how your race should be played.
  - o Watching your own replays allows you to see where you made mistakes. Did you forget how to do the build orders? Did you do all the fundamentals right? Figure out your mistake, and write it out. Practice so you do not make that mistake again!

- **Section Three, Quiz Two**
  - o Goal: Evaluate if you can consistently beat very hard computers
  - o Practice: Play the following games:
    - 7 Games vs. Very Hard Random CPU
  - o Pass: If you win 4 or more games, go to Section Two Test
  - o Fail: If you win 3 or less games, repeat lesson 16 and then retake this quiz

- **Section Three Test**
  - o Goal: Determine if you're ready for league play
  - o Practice: Play the following 9 games:
    - 1 Game vs. Very Hard Terran on Backwater Gulch
    - 1 Game vs. Very Hard Zerg on Delta Quadrant
    - 1 Game vs. Very Hard Protoss on Metalopolis

- 1 Game vs. Very Hard Terran on Slag Pits
- 1 Game vs. Very Hard Zerg on The Shattered Temple
- 1 Game vs. Very Hard Protoss on Typhon Peaks
- 1 Game vs. Very Hard Random on Scrap Station
- 1 Game vs. Very Hard Random on Xel'Naga Caverns
- 1 Game vs. Very Hard Random on Lost Temple (old league map)
  - o <u>High Pass</u>: If you win 7 or more games, congratulations! You are definitely ready for league!
  - o <u>Pass</u>: If you win 5-6 or more games, you may want to consider redoing lessons 13-16 and retaking this test, but you might be ready for league play
  - o <u>Fail</u>: If you win 4 or less games, repeat lessons 13-16, retake quiz 2, then retake this test, it is unlikely you are ready for league play

(G.2.4) Section Four – League Practice

- **If you are struggling in league games, review some of the lessons above.** Here are some possible problems you might be having, and the lessons that cover these problems.
  - o Are you using your hotkeys effectively? If not, practice using your hotkeys more often. Lesson 2 discusses hotkeys.
  - o Do you understand your race's units well? Do you know what units they can counter, and what counters them? Lesson 6 discusses units.
  - o Do you have your build orders memorized, and truly understand what the purpose of using them? Lessons 8, 13, and 15 discuss build orders.
  - o Do you understand the league maps well? Perhaps viewing them as a picture may help. Lesson 9 has all of the league map information.
  - o Do you understand the elements and fundamentals of gameplay? Many people continue to make the same mistakes because they struggle with these. Lessons 11, 12, and 16 can help.

- **Do you feel like you need to see others using the ideas discussed in this guide**? Lesson 17 recommends that you watch replays of high-level players. You should also watch your own replays, to see what mistakes you are making.

- **Do not be afraid to practice against some hard or very hard computers for 5 or 10 games.** If you really need to work on something, practice against the computer so that you can practice without worrying about losing in your league matches. Focus on this concept and getting it right.

- **Get a practice partner in the same league as you (or one higher).** Do 1v1 matches with this partner, and offer each other constructive criticism at the end of every game. What do you think your partner did right or wrong? Why did your partner win or lose? Help each other improve.

Information on how the ladder works, from Excaliber_Z
http://www.teamliquid.net/forum/viewmessage.php?topic_id=142211

(H) <u>References and Resources</u>

Here are some references that may help you improve even more.

- Liquidpedia - http://wiki.teamliquid.net/starcraft2/Main_Page

- SC2 Noob School - http://www.youtube.com/user/SC2NoobSchool

- Day9 TV - http://www.youtube.com/user/day9tv

- Force SC2 Strategy - http://www.youtube.com/user/ForceSC2strategy

- HD StarCraft - http://www.youtube.com/user/HDstarcraft

- Husky StarCraft - http://www.youtube.com/user/HuskyStarcraft

- Team Liquid - http://www.youtube.com/user/teamliquidnet#p/u