

Extreme Point Use for Ship Design in Slag

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Assuming that the reader has already read earlier articles on ship design, one might wonder what is the actual “ultimate” military ship design given a limited amount of points to spend on the ship(s). While specialized ships have their own uses, especially during situations where it is not all out war, the focus of this article is for such a scenario, or at least an all-out battle.

If one were to use constraints of points of 50, 100, and 1,000, then an intriguing optimized ship design appears. While some have professed the belief that it will come down to only aircraft carriers and battleships type designs, the actual final optimized design is actually in between. It involves carefully balancing Sensor Ratings for various weapons, Weapon Damages and salvos, various defenses against various threat ships, etc. to reach an optimum design. The result is a battleship with blend of weapons and ranges with various types of re-usable drones (fighters). Ideally, the larger the ship the better the features, but it does reach a limit at Size 11, and it would be better to spend any further points on another ship. While the use of Jump Gates (to funnel fighters across and empire) or Burp Drives (to allow Bases to move at “high speeds”) could alter the optimized design, they are not considered for the purposes of this work. The actual layout will be left to the ship designer, with regard to layers and location, and advice in the Slag! Manual covers that topic well enough. For the purpose of this work, only Medium Tech will be used.

The drone Fighters will be discussed first.

These drone Fighters are all automated (but does not qualify as AI systems) craft of Size 0 designed for delivering payloads to an area. This breaks them into three types of Fighters: Missile type, Layer type, and Fast Layer type.

Missile type has the following systems: 1 Hull, 1 Scout Sensor, 2 Anti-matter engines, and 1 Missile system (it can be Anti-matter Missile if the opponent has Dampening technology). Its characteristics are:

DMG Mod: 0

Ship cost: 1

Sensors: 2

Max. Sensor: 2

Thrust: 6

Armor / Shields: 0/0

Layer type has the following systems: 1 Hull, 3 mine-types (which can be either Sensor Drones or Mines or even Anti-matter Mines, if they are allowed), and 1 Anti-matter engine. Its characteristics are:

DMG Mod: 0

Ship cost: 1
Sensors: 0
Max. Sensor: 2
Thrust: 3
Armor / Shields: 0/0

The actual load carried in its 3 systems will depend on that Fighter's particular purpose.

Fast Layer type has the following systems: 1 Hull, 2 mine-types (which can be either Mines or even Anti-matter Mines, if they are allowed), and 2 Anti-matter engine. Its characteristics are:

DMG Mod: 0
Ship cost: 1
Sensors: 0
Max. Sensor: 2
Thrust: 6
Armor / Shields: 0/0

In terms of design, the Layer design is considered first. To make maximum use of Sensor Drones, you will need to drop one Sensor Drone counter in 7 adjacent sectors (one in the center, surrounded by 6 sectors) so 7 Sensor Drone counters are needed to get a sensor rating bonus of +7, so it will take 3 Sensor Drone Layers to meet this requirement (assuming that the main ship will not be leaving the sector it decides to fight from). To stop enemy Fighters of the Suicide Drone Swarm type from reaching the main ship, it will take 15 Grazer Mine counters in a single sector that the main ship will fight from, so it will take at least 5 Grazer Mine Layers to accomplish that mission, assuming that the main ship will not be leaving the sector it decides to fight from. The bulk of the any remaining ships should be of the Missile Fighter type, possibly with a few of the Fast Layer type. The use of the ships will be covered later.

The main ships will be discussed now.

The 50 point design is rather limited and far from optimum, but it can defeat most opponents of equal point cost, assuming strategy and tactics and luck are all equal and good, though it will likely try to avoid getting too close to opponents if it can do so. Despite its limitations, it is a good general purpose cruiser and probably can be found patrolling areas for piracy and border patrol missions.

The main ship itself has the following systems: 6 Hull, 1 Bridge, 6 Ablative Armor, 3 Force Screens, 1 Damage Control, 1 Sensor, 4 Fighter bays (which can hold 4 Fighters each), 1 Jump drive, 3 Anti-matter engines, 1 APU, 1 Graser2D, 1 Particle6, 1 Graser5. It will also have a total of 14 Fighters (14 Points): made up of 5 Graser Mine Layers, 3 Sensor Drone Layers, and 6 Missile Fighter types. If 2 or more of these types of main ship design is used, then the percentage of Missile Fighter types can be increased.

Its characteristics are:
Size: 5
DMG Mod: -2

Ship cost: 36 (and +14 for the Fighters for a total of 50 points)

Sensors: 5

Max. Sensor: 12

Thrust: 3

Armor / Shields: 12/3

The 100 point design is a very powerful battlecruiser class design. While it is slow, it can easily destroy most opponents before they can even get close once it has decided to make its stand on a sector its occupying. It is also heavily ECMed and run by AI systems making it very difficult to fight unless opponents choose to get uncomfortably close to it. While it is not the ultimate ship design possible for governments with even larger resources, not many other fleets or ship designs can survive a battle against this ship without taking tremendous losses or some sort of sneak attack. If space government with vast resources was optimizing its fleets, it would actually fewer versions of this design than the next larger ship, since it is not quite as capable while being slower than the previous ship design.

The main ship itself has the following systems: 9 Hull, 1 Bridge, 9 Ablative Armor, 4 Force Screens, 3 Damage Control, 1 Sensor, 3 Fighter bays (which can hold 7 Fighters each), 1 Jump drive, 3 Anti-matter engines, 2 ECM, 1 AI, 1 APU, 2 Graser5D, 2 Particle9, 2 Graser8. It will also have a total of 19 Fighters (19 Points): made up of 5 Graser Mine Layers, 3 Sensor Drone Layers, and 11 Missile Fighter types (a few of which might be Fast Layer types if desired). Note that there is an extra 1.8 points that can be used for an extra fighter, weapon, Boarding Parties, or even mounting incredibly powerful Kinetic Energy Missiles to the main ship.

Its characteristics are:

Size: 8 (5 effectively with regards to targeting it due to ECM and AI)

DMG Mod: -4

Ship cost: 79.2 (and +19 for the Fighters for a total of 98.2 points, with an extra 1.8 point that can be spent as desired)

Sensors: 8

Max. Sensor: 18

Thrust: 1

Armor / Shields: 14/4

The unlimited point design is a very powerful battle-carrier dreadnought class design. While it is slow, it can easily destroy most opponents before they can even get close once it has decided to make its stand on a sector its occupying. It is also heavily ECMed and run by AI systems making it very difficult to fight unless opponents choose to get uncomfortably close to it, and the danger zone that it can destroy opponents is often a lot further away than most expect. It is pretty much the ultimate ship design possible for governments with extremely large resources and if governments have more resources they will try to have a number of these ship to match any other extreme points of resources use, outside of certain High Tech systems that would change its systems use. The main ship itself has the following systems: 12 Hull, 1 Bridge, 12 Ablative Armor, 6 Force Screens, 4 Damage Control, 1 Sensor, 7 Fighter bays (which can hold 10 Fighters each), 1 Jump drive, 4 Anti-matter engines, 2 ECM, 1 AI, 1 APU, 2 Graser8D, 2

Particle9D, 2 Particle12, 2 Graser11. It will also have a total of 70 Fighters (70 Points): made up of 5 Graser Mine Layers, 3 Sensor Drone Layers, and 62 Missile Fighter types (a few of which would be Fast Layer types if desired).

Its characteristics are:

Size: 11 (8 effectively with regards to targeting it due to ECM and AI)

DMG Mod: -5

Ship cost: 144 (and +70 for the Fighters for a total of 214 points)

Sensors: 11

Max. Sensor: 24

Thrust: 1

Armor / Shields: 24/6

The use of the ships will now be discussed.

In a campaign form with relatively unlimited budgets, space governments will have the cruiser type ship be the main patrol ship to counter space piracy, perform patrols, and generally “show the flag”. Ideally, there would be 4 of these ships per major center of population, commerce or strategic point, but this depends on the resources of the government. The battle-cruiser type of ship design here would be very rare, perhaps a holdover from the time when the dreadnought class of design were not yet within the budget reach of the space governments or perhaps used as a specialist type craft intended as some sort “doomsday” weapon to unleash against an enemy from which it is not expected to survive. The dreadnought class design is pretty much the ultimate space navy weapon, in some ways fulfilling the roles of both a battleship and aircraft carrier. The dreadnought class is used to “make a statement”, be the ones to fight and end wars, and completely annihilate any major threat to the government. Ideally, there might be at least 2 of the dreadnought class design per moderately populated solar system, and battle groups of 3 in a major war. The one drawback for the designs is that they do use up points in Damage Control to re-load the drones and missile systems of its Fighter drones as well as any Fighters destroyed in combat by enemy forces, though the enemy usually takes far greater damage in points so it is worth it overall.

In tactical use, the main ships will first try to get be in a good strategic position (like protecting the planet, base or convoy that they are assigned to) based on how far away the enemy is and probable time before the enemy closes to combat range. They will then deploy the fighters with mines and sensor drones, with the main ship providing covering fire and activating its force screens, hopefully at least 2 turns (generally at least 12 sectors away) before the enemy ships gets within weapon’s range based on defense array and sensor drone bonuses. The sensor drones will be dropped with one counter in the sector the main ship is and one counter in each of the 6 adjacent sectors. The grazer mines will be dropped with 15 counters in the sector the main ship is to destroy any suicide drones that attempt to get into the same sector or do close range combat. The fighters will then return to their fighter bays. Depending on the Size of the opponent and the distance, the main ship might just simply open fire at the enemies until they are all destroyed. Otherwise, the missile type fighters will be sent to chase down the larger enemy ships.

They will simply close to within close range (or in an adjacent sector if it is protected by space mines) and fire off their missiles in a single wave, then retreat back to their main ship's fighter bays. Damage control of the main ship is used to re-load and repair the fighters that return, with priority given to missile fighters and only when that fighter bay is fully occupied with depleted fighters. In some cases, a few of the missile fighters will be substituted with a fast layer type that will release a counter or 2 of space mines or anti-matter space mines to force the enemy ships to make a choice between evading with their Thrust and take mine damage or stay immobile and take Direct missile hits (which causes enhanced damage). Only if all of the damage control systems of the main ships are exhausted and the opponents can't be finished off by the main ships will the fighters be used as suicide craft to ram the opponents (who are likely to be so heavily damaged that they will not be able to shoot down the incoming craft), but this will likely never be needed. Usually after the initial one or two waves of missile fighter are over, the enemy is so heavily damaged that the main ship can easily get just close enough with its defense arrays or main weapons to eliminate any further struggle and request a salvage / analysis ship to check the remains from the government. Known space pirates are likely to just be fired upon until they are reduced to space debris.

If the owner is given a choice the usual priority of systems to destroy are: weapons, defenses, engines, and then everything else. There are exceptions to the above, such as if the opponent has only one system left of some critical system like AI, Bridge, or Sensors. Weapons are targeted as greatest priority, since they are the main systems that can be used to stop your Fighters and missiles, as well as dealing general damage to your ships. Defenses are second in choice to target, since they can absorb your missile hits or reduce the number of hits; if you can reduce them enough your main ship can have an easier time destroying whatever is left of the opponent's ships. Engines are third, since if the enemy can no longer outrun your main ship or at least your fighters, they are generally easier to hit and the main ship can get in range to destroy the enemy, since using beam weapons saves on "consumable" points like Damage Control for the reloading of the fighter's supplies or the loss of the fighters due to combat.

Some might wish to compare them to the various other specialty designs, and in general this is how they compare ("this design" refers to the design concept of this document):

Against Sensor Gods. For those of equal point costs, the Sensor Gods will find it very difficult to actually hurt this design. The Sensor Gods will have to try to get close enough to prevent the Sensor Drone Layers from laying out the sensor drone counters, since once all the sensor drone counters are laid out then this design will often have a total Sensor Rating greater than most Sensor Gods and will be ripped to pieces. Likewise, a concentrated attack by this design's fighters simultaneously in a wave will often overwhelm the weapons of the Sensor Gods due to the "one weapon against one ship" rule.

Against No See-ums. No See-ums will initially have an advantage against this design for the small cruiser type, until it can get its Sensor Drone net up. The fighters themselves

are not able to harm No See-ums directly. After that point, the No See-ums will have to run away and abandon any others with them or they will be destroyed by beam weapon fire from the main ships. The Size 11 design could blow away No See-ums with virtual impunity.

Against the Swarm. The mines of this design is designed to stop all suicidal swarms, while the defenses and defense arrays and weapons will hopefully keep out any weapons they are carrying, as well as destroying them before they enter the same sector. Note that the Fighters of this design will simultaneously be attacking the carrier groups that are carrying the Swarm, so if the carrier group is blasted to space debris then the enemy Swarm will not have any carrier left to take them off the field of battle and will be eventually be completely destroyed by the main ships of this design.

Against the Space Brick. Most Space Bricks will be comparable to this design and might initially have better weapons, higher sensor ratings, or more weapons, but they need to get close enough to this design to be able to use them. The waves of Missile type Fighters for this design can rip through even the toughest armor if they hit enough times, after which the remainder can be vulnerable to penetration to the main weapons of the main ships of this design.