Statistically Harmonised Indexed Points System [S.H.I.P.S.]

For **Victory at Sea**
By **Enoch** - Version 1.2.0

Instruction Manual

Introduction

This modification to the Victory at Sea system is meant to rebalance the points values of the ships **for competitive play**, through the mathematical expression of each ship's combat capabilities. It is meant to complement the VaS rulebook Fleet Lists and is **not** in any way shape or form official or endorsed by Warlord Games. That said, I am hoping that this Statistically Harmonised Indexed Points System (henceforth SHIPS) will be accepted by the community for e.g. tournament play, given the mathematics-based approach adopted; and I am therefore releasing this PDF for use by any Victory at Sea gamer, under the following license:

Please be advised that SHIPS is an **ongoing project** and has by no means achieved 'perfect balance'. The importance of individual ship traits, weapon characteristics and other ship stats is likely to change, as new tactics are discovered and implemented; and individual ship stats may change as Warlord Games rebalances their ships / corrects errata etc. This **will** affect SHIPS costs.

SHIPS is using the Warlord Games ship statistics as they are printed in version 1.0 of the main rulebook; I have only corrected stats where there are clear (to my mind) indications of typographical errors and **not** where there are doubts about historical accuracy. For this version, this includes:

1.0.0 Stats changes 1. All changes and corrections indicated in the Warlord FAQ document have been implemented.
0.9.0 Stats changes 1. All Type 93 Japanese torpedoes have been given the 'Wakeless' trait. 2. Kent-class cruisers (RN) have been given a 3+ armor belt
0.8.5 Stats changes 1. The AP values of the IJN Ise-class BBs: they are now +1 in both versions of the ship 2. The stats of the Kuma / Kitakami class cruiser: they are rationalized based on their historical loadouts and un-jumbled

These corrections may be reversed or added to, pending the release of Warlord Games' FAQ / Errata list.

SHIPS has yet to publish ship refits. Refit documents will be published incrementally. However, with the release of 1.0.0, I have also made available an .xlsx spreadsheet that will allow players to stat their own ship cards (and thus implement refits on a case-by-case basis). Note that this .xlsx file **requires Office 365** to function properly (because of specific functions) and is **still experimental;** any feedback the users can provide will improve its useability in future versions. For the time being, it only allows you to create ships, not MTBs or planes.

Under the Hood

SHIPS works by assuming that each ship contributes to the battle by adding its own HP to the allied HP 'pool' and using its weapons to subtract from the enemy HP 'pool'. The sum of these two contributions serves as the core of the new values, modified extensively by ship and weapon characteristics that influence ship survivability or weapon destructiveness. I would like to note that part of the system of

how weapons scores are calculated (namely some trait modifiers) was inspired by similar work by user **Pyrrhus** on the ⚓ [Community] Victory at Sea ⚓ Discord server.

Yes – this means that SHIPS **can** be used to generate custom ship designs, and those ship designs **will** be point-balanced to the rest of the Fleet Lists. The .xlsx file provided with SHIPS 1.0.5 onwards (and updated to the latest version) allows users to generate their own designs. However, I will note once more that this is an experimental feature and urge the users to report any problems, bugs or exploits they discover.

How to Use

For surface combat ships, SHIPS does not change *how fleet points work* in any meaningful way – all it does is propose an alternative cost value.

For Carriers, the system changes significantly:

The flight complement of the carrier is no longer part of the base carrier cost. Instead, the player must buy the flight complement separately: any number and type of carrier-capable flights, up to the maximum number of flights that can be carried by the flattop in question.

You will note that, in the aircraft lists, two values are given: 'Carrier-Based' (if the flight can operate from a carrier) and 'Land-Based' (for all aircraft). If you are buying aircraft as part of a carrier's flight group, please use the 'Carrier-Based' cost. Add all the values of the flights to the base cost of the carrier and round (up or down) to the nearest 5.

Each carrier has a **'Hangar Cost'** which is equal to **[Flight capacity] x 5 points**. *If the total value of the flight group selected is less than the Hangar Cost of the carrier, pay the hangar cost instead.* Think of the Hangar Cost as a rebate on purchased planes, or as the minimum cost of planes you need to bring in the battle.

Examples:

1. *IJN Chitose* has a base ship cost of 100 points and may carry up to 7 flights. Her Hangar Cost is 7 x 5 = 35 points. The IJN player wishes to bring her to battle as a CAP carrier, with a heavy fighter complement, to defend their fleet.

   They pay 100 points for the carrier and add 7 A6M2 "Zero" flights to her complement. The A6M2 costs 10 points when operating from a carrier, thus the player pays 7 x 10 = 70 points, rounded to 70. Note that the cost of the flight groups (70) is more than the Hangar Cost (35); therefore, the Hangar Cost is discarded, and the cost of the flight groups is added to the cost of the hull. The total cost for the fully equipped flattop therefore comes to 100+70 = 170 points

2. Assuming they wished to bring a strike-focused package instead, they could select e.g. 4 Kates and 3 Vals. This would bring the complement cost to 4 x 8 = 32 points for the Kates and 3 x 4 = 12 points for the Vals, a total of 44 points rounded to 45. Once again, the cost of the flight group (44) surpasses that of the carrier's Hangar Cost (35), and so the cost of the flight group is added to the hull. The total cost of the carrier with its flight group would be 145 points – cheaper, but with no air superiority units whatsoever.

3. As a final example, assume the player only loads *Chitose* up with cheap Val dive bombers. That would be 7 x 4 = 28 points. The cost of the flight group does **not** exceed the Hangar Cost of the carrier, and so the Hangar Cost is added to the hull cost instead. The total cost of the carrier and its aircraft would therefore be 100+35 = 135 points.

You will note that this system increases carrier costs **significantly** compared to vanilla / Warlord points (especially if you bring fully-stocked flattops) but it does reflect the effectiveness of aircraft on the tabletop, especially in massed strikes, and clearly differentiates the capabilities (and price) of carriers based on their loadout.

1.3.0 Second Carrier Rework, Speed / Agility Tweaks, Weapon Trait Tweaks, Stat Corrections

After player feedback, the 'Hangar Cost' rule was introduced. This prevents players from bringing empty carriers and taking advantage of their reduced cost compared to surface combat ships to engage in equal surface duels against more expensive ships. Now, carriers still need to pay for the capability to carry planes that is inherent in their class, even if they bring no flight group (or the cheapest flight group possible). Carriers are still the focus of balancing efforts and we urge for further feedback.

Mistakes in the speed rebalance (1.1.0) were identified, that led to increased cost of ships with a Flank Speed of 7" or more. These have now been fixed.

After player feedback, some weapon traits (most prominently Fast Track and Twin-Linked) were given an increase in cost, to represent their excellent effectiveness versus fast targets and consistency in damage output.

The IJN Akatsuki-class destroyers had been mistakenly given Type 93 torpedoes in their base loadout. This has now been corrected.

1.2.0: Second AA Rework

After player feedback, a problem in AA Battery costs was identified, where AA Battery dice could be more expensive than equivalent-AD DP batteries and light guns in general. This has now been fixed, with the Weapon score of AA Batteries being reduced accordingly. Small decreases in the price of ships with AA Batteries will be observed.

1.1.0: Release of MTBs, Speed Rebalance and Hotfixes

MTBs have now been released! They utilize a modified aircraft-based algorithm to calculate their points. As there are still differences between aircraft and MTBs, I encourage testing and feedback, to tweak their utility factors…

Speed has been reworked, to emphasize the 6"->7" difference more (given the resulting accuracy impact). This effectively means that 6"-speed ships are slightly less expensive and 7"-8"ships should be slightly more expensive.

I have also noted that the Fubuki-class destroyers were statted wrong (with 3/3/4 torpedo launchers instead of 3/3/3). This has now been fixed, with a corresponding decrease in their value of 5 pts.

1.0.5: Hotfix for USN CAs

USS Northampton and USS Portland had been mistakenly statted with 8 secondary attack dice instead of the correct 6. This has now been fixed, for an equivalent -5 pt drop in their price.

1.0.0: AA Rework, Carrier tweaking

Following feedback in 0.9.0 and testing, AA batteries and Radar have been re-worked to provide flat utility costs per AA AD, where previously they provided percentile cost increases. This meant that

previously, changes in AA of cheap ships could result in a marked increase in capability without a corresponding increase in points value (a DD might get 1-2 additional AA dice for little or no price increase). This is now no longer the case: as a rule of thumb, each AA die (DP, AA Battery or Local) will provide a +5-price increase, allowing for a more precise and granular representation of the spectrum of AA capability. You will note that this has increased the price of late-war ships with particularly heavy AA suites (e.g. USS Baltimore with its 16 (!) AA dice), but this is as intended, given that these ships can provide enough AA fire to cover an entire task force!

As part of this change, and given Warlord's ruling that carriers cannot fire AA when in deep deployment, carrier pricing was further adjusted; now the hull value only provides 50% of an equivalent surface ship's points, to better reflect off-map carrier play. This may be reverted or further adjusted in future versions, depending on playtesting and player feedback.

0.9.0: Carrier Rework

Following feedback in 0.8.5, carriers have been reworked in two ways:

1. **The calculation of the hull values of a carrier has changed**. The hull itself now only provides 80% of the points an equivalent surface ship would provide, as carriers might spend the entire game off-map and never engage the enemy with the actual hull. On the other hand, each carrier now pays an additional point penalty depending on the number of flights they can operate. This penalty increases with significantly diminishing returns as the number of planes carried by the flattop also increases.

This penalty or 'carrier tax' forms a large part of the hull cost of small carriers, but a much smaller part (percentage wise) of a large carrier's hull. This means that small carriers are now significantly less cost-effective than they used to be in comparison to fleet carriers:

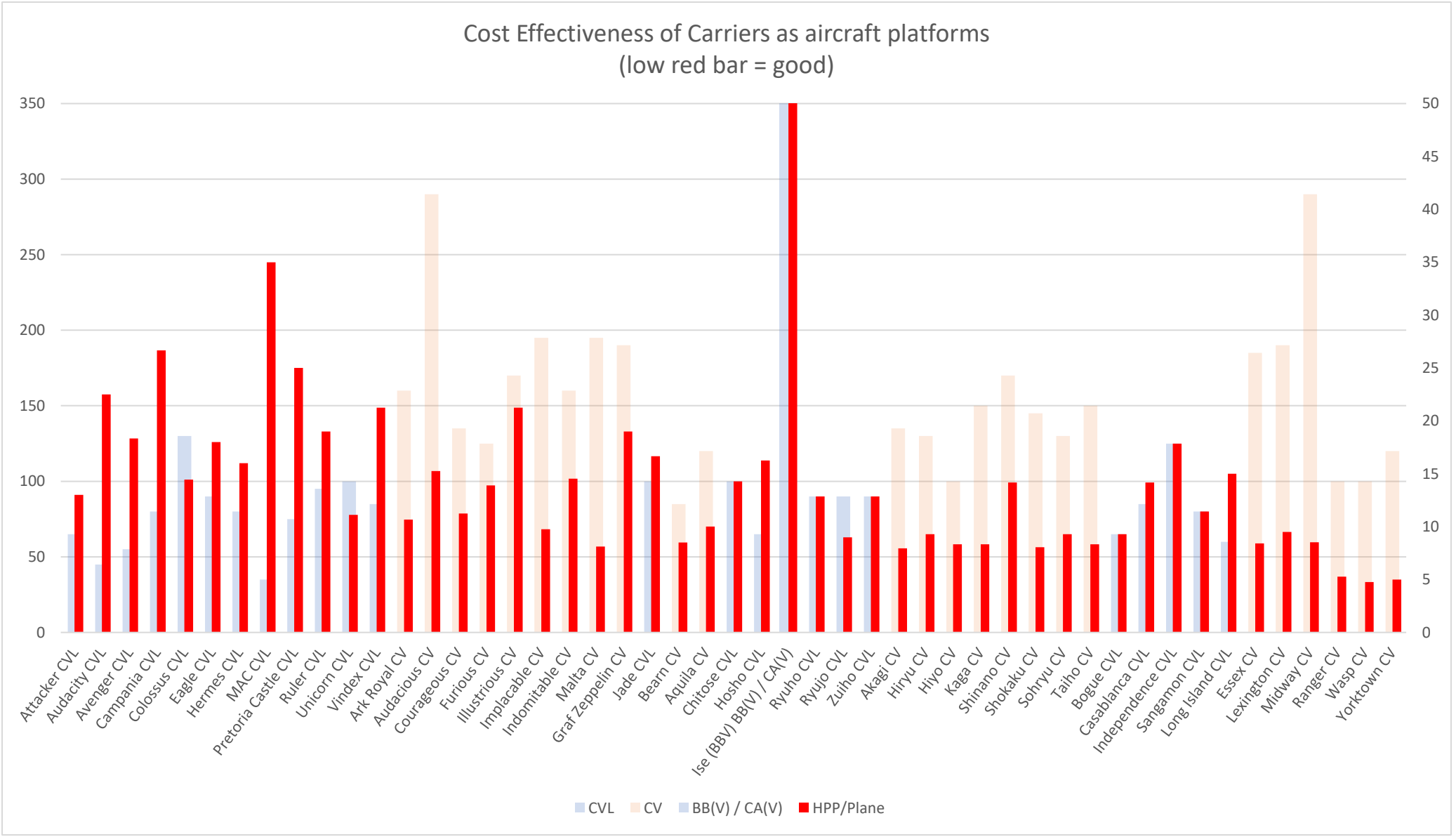

Figure 1: HPpP Chart

[Figure 1] presents us with all carrier-capable ships in the game. The main axis on the left shows the point cost of their hull; the secondary axis on the right is the carriers' Hull Points per Plane score. This latter score is an indication of a carrier's cost-effectiveness as a plane-carrying platform – i.e. how many hull points this particular carrier is 'paying' to bring one flight to the battle. Low HPpP scores are **good.**[1]

You will note that large fleet carriers (beige) are considerably more cost effective (their average HPpP is lower) than the smaller CVLs (light blue). This is because multiple CVLs can launch several planes every turn, bringing their flight complement into the fight faster; in contrast, CVs bring more planes for their hull cost, but require either multiple turns or heavy investment in scouting to launch their entire complement.

Note: the relatively high HPpP cost of the Royal Navy fleet carriers is a result of their pre- / early-war small complements and directly reflects their real-world poor cost-effectiveness as plane haulers. **Once they are refitted to their enlarged hangar configuration, their HPpP drops significantly to 'normal' CV levels**, but they still remain relatively more expensive per-plane than their USN and IJN counterparts, ships that focused on plane capacity over e.g. armor.

Thus, in a small game, a player might choose to limit themselves to land-based air. Alternatively, if they desire a heavier air wing, they might purchase a CVL, which will provide them with reduced cost-efficiency overall (since the price of the carrier will need to be paid in addition to that of the planes), but will allow additional planes to be brought in, in addition to its own flight group. In a larger game, a player might bring one or more fleet carriers (supported by a fleet of scouting ships and aircraft), or a flotilla of smaller CVLs, that will launch their planes quickly and without necessitating extensive scouting.

This leads us to the second change that has taken place:

2. **Carrier-based planes are now significantly cheaper than their land-based counterparts.** To be precise, carrier-based aircraft (CBA) are now worth 50% the price of their land-based aircraft (LBA) equivalents. This does not mean that a fully stocked carrier is always cheaper than buying the equivalent planes as LBA, as the carriers themselves also represent a significant investment. On the other hand, this system *greatly* rewards purchasing the most expensive and most capable aircraft for your flattops, as the point reduction for CBA quickly snowballs.

Thus, whereas CVLs will always be less cost-effective than LBA (since they can typically have their entire complement in the air by turn 4, while *also* enabling further LBA reinforcements) because of their small air group size, large CVs will be significantly more cost-effective, especially if equipped with late-war, top-of-the-line aircraft. A British CV filled with Barracuda DBs, or a USN Midway loaded up with Hellcats and Dauntlesses or Helldivers ***can*** be cheaper than directly purchasing the flights themselves, while *also* enabling further LBA reinforcements. Of course, such ships will also require a substantial investment in scouting to get their money's worth out of their flight group; do not deploy a CV without a capable supporting task force!

[1] Note that HPpP *only* represents the carrier's cost-effectiveness *in carrying aircraft.* It does NOT under *any* circumstances indicate all aspects of the carrier's capability as a warship (i.e. how fast it is, how tough it is, how heavy its AA armament is etc), and should *not* be interpreted as the sum total of a carrier's combat capability. It simply one of many yardsticks you can use to decide what your ship selection will be.

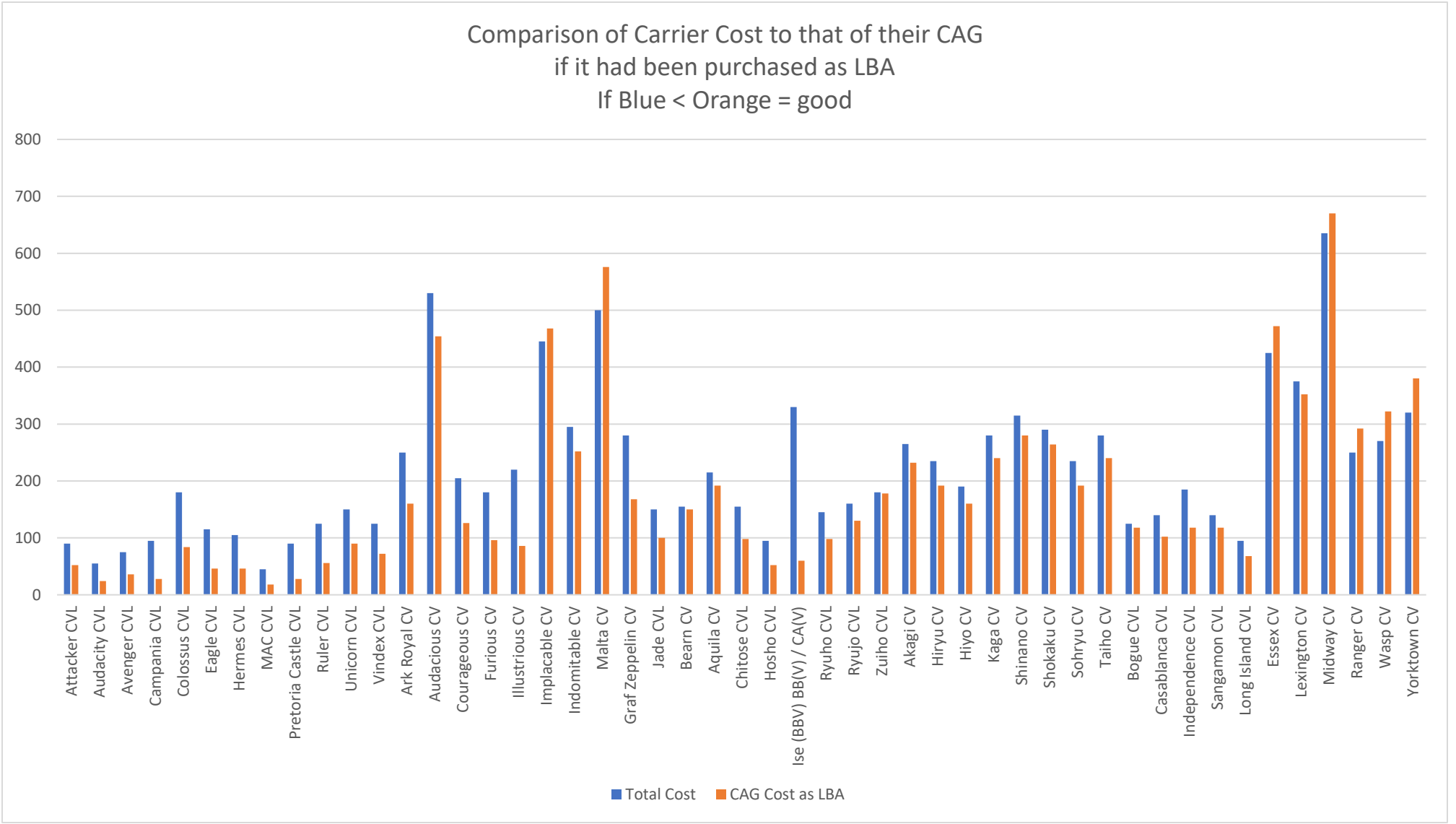

Figure 2: Comparison of the cost of Carriers to their equivalent CAG in LBA
(note: CAGs as indicated in the provided fleet lists. More expensive CAGs result in more cost-effective carriers).

[Figure 2] shows us this relation between total carrier cost and its CAG cost as LBA. If the orange bar is higher than the blue one, it is more cost effective to buy the carrier instead of purchasing the flights as individual LBA. Note that the point values are calculated based on the sample CAGs offered with the points lists, and different CAGs can be more or less cost-effective; **the more expensive planes you put on a flattop, the more cost-effective you make your flight group.**

Also, please note that the Royal Navy mid-war carriers are, once again, hampered in this chart because of a) their considerably more rugged construction involving armor decks and heavy Local AA that drives their hull cost up; b) their smaller hangars during the early war. Once these hangars are expanded with their latewar (1943/1944) refits, they become considerably more cost-effective. In addition, many of the provided CAGs bring cheap, outdated Swordfish; replace those with e.g. Barracuda torpedo or dive bombers in 1943 for a more cost-effective loadout.

Testing

Some characteristics are easy to balance through hard math; for instance, a gun that inflicts 3 damage dice is worth 1.5 as much as an otherwise identical gun that inflicts 2 damage dice. Other characteristics are **not** as easy to balance. I am constantly fine-tuning the modifiers applied by weapon and ship traits and would love your feedback. The more you fine people play based on this system, and the more you let me know how the battles went, the better SHIPS will become – so, please, provide as much feedback with your tabletop experiences as you can, and stand by for future SHIPS releases.