Dedication: These rules are dedicated to my good friend Dave Chandler, a fellow member of the Naval Wargames Society, who helped rescue the society in the late 1970s when it looked like it would fail. He sadly passed away in April 2015.

# SERIES INTRODUCTION

This book of rules is one of a series of rules that allow simulation of a global war in the World War Two period.

The series consists of GlobWar2, a set of rules detailing how to design and populate the world, the resources available and how to acquire them, the army and air force elements and how to select or design the ships that will form your navy. The rules also include detailed descriptions of the towns and ports so that they can be attacked. If the ships are selected instead of designed then up to six players may take part. If ships are designed then between 2 and an infinite number of players can be catered for on one map, and players may be added at any time, including players that have already lost their Nation in the campaign. The Self Designed Ships rules have been moved to a separate book – SelfDes2 due to the size of GlobWar2.

If players decide to use the selected fleets option, then SelfDes2 may be used to design new ships after the start of hostilities, but I would not recommend mixing selected fleets with a fleet that has been completely designed – I suspect that the self-designed ships may have slightly more bang for their buck than the real ships, though Minor Navies in the self-designed rules might have a fairer time against selected fleets.

FleWar2 is a set of rules detailing how you can engage your enemy, it is primarily designed for a quick and easy game for Fleet sized actions but it has enough detail that it should also work for a small number of ships. Of primary importance in the period 1860 to 1945 is how and when your guns can defeat your enemies armour, this is usually ignored in most Naval rules but is included in this set covering the latter end of that period despite the rules being simplified.

The best defence against your enemy's guns is to sink them before they get into range, for this reason the aircraft became the decisive weapon in this period. The rules AAA2 cover air to air combat, air to surface and surface to air.

Finally to allow the invasion of your enemy's lands and towns and ports, a set of army combat rules called CLeW2 details the makeup of your and your enemy's divisions at various periods during the war. Infantry, Panzer Grenadiers and Armour units are described and the divisions broken down to the Company Level which is the smallest element involved in the combat, however those companies will form into Brigades which are the smallest forces that can engage each other. The combat and re-supply rules are also included as well as invasion, both on uncontested beaches and later in the war as a full amphibious engagement.

The sets of rules are integrated, for example Brigades out of supply will retreat, or surrender if they can't retreat. Squadrons of aircraft cannot attack or defend without supplies. The supplies are delivered by the merchant ships escorted by your navy and its carrier aircraft and attacked by your enemies’ submarines, aircraft and commerce raiders or maybe even a full scale battle fleet. The warships anti-aircraft guns will engage the enemy's aircraft launched from land or carrier. Armies will march into ports allowing their victorious ships to also enter the port. Hence the budding megalomaniac will truly have to fight a Global War.

All the hard work, of research and development of the rules, has been done for you. All that now remains is for you to show your art of aggrandisement as you design your forces and wield them to become the King of All Kings. The next war starts on the first of January 1940, will you be leading it or standing on the by-lines watching?

# INTRODUCTION

Two options are presented for the navies in the GlobWar2 rules. Either to use real ships but joined together in fictional fleets, or to design your own ships. This document contains a simple set of rules to do the latter. A much better set of rules which took into account ship length, breadth and stability were available in the 1970s (entitled Early Twentieth Century Naval Battles or ETCNB for short), I don't know if these are still available. If those rules are still available then they could be used to produce the fleets too (using the tonnages produced from ETCNB instead of my rules) but following the guidelines described below for the mix of forces and design concepts.

Each fleet, regardless of the method of determining the ships, consists of a set of WW1 ships (from three different periods of that war). The fleet also contains a few more ships that were completed between the Washington and London Treaties and a few ships that have been laid down post the London Treaty and not yet completed. It will be up to each player to determine how to use their steel that they accumulate to complete their shiny new ships.

Throughout these rules certain words have been used for very specific meanings:

**shall** – this is a compulsory rule, it has to be obeyed, it can only be broken with the agreement of all players and the referee if there is one.

**should** – this shows a preference but other options are acceptable, eg the speed should be medium but one step either side is acceptable.

**may** – the player has complete choice as to whether to accept or ignore the rule, but it is a suggestion.

**up to** – the player shall use any number up to and including the number specified. eg "up to 4 twin DP mounts a side" – the player can use none, 1, 2, 3 or 4 twin DP mounts on each side of their design as they see fit.

“a list” – if a list is included in a rule then the rules apply to only those items within the list. Eg a list of Nations that can do something or are excepted from a rule.

**Player –** with a capital P implies an active player within the campaign, when discussing Solo play (a separate rule book) the term Non-Player meaning another Nation controlled by Solo rules but assisted by the Player will be used and “player” means either a Player or a Non-Player.

**XXXX check for can, will and must**

XXXX need a Map section to describe rules for Nations containing multiple countries - only 6 ports and 1 capital between them – ADL !!! = 10 nations or was that PSI? Put this in the main rules with the other map info?

# FICTIONAL SHIPS

An alternative to using real ships on each side would be to allow each player to design their own ships within a set of rules. It is after all a fictional campaign so why not use fictional ships as well. I would suggest though that each player should select a theme, eg Britain, USA, Japan etc and stick to the sort of ships that country might well have built.

This allows more nations to be selected and gets around the issue that most nations have no decent ships after the First World War. In reality only Britain, America and Japan have a decent selection of designs by the Second World War, but it would be a shame to limit the nations to just these three.

I have introduced five Options for Britain, America, Japan and Germany and called these Albion and Hibernian or Caledonian (all ancient names for parts of the British Isles), Confederacy, Nipon and Prussia respectively. These are completely different Nations, designs for Britain and Albion can’t be mixed in a single fleet for example. You can of course call your own Nation whatever you like – Benland for example or Davumbria. Hibernian is a variation on Albion or the main British theme and follows all the gun layout rules for Britain/Albion until the EW1 period when they switch to quad main turrets but have the option of using either British or Albion guns (not both).

Note when building any ship, you shall only add armour in multiples of a quarter of an inch. For example a 12.5" belt and a 12.75" belt are acceptable but a 12.6" belt is not.

## Eras

To force each side to have a balanced selection of ships over all eras leading up to the Second World War period, they must each design ships from 7 different eras. A small number of Semi-Dreadnoughts and Armoured Cruisers may still exist from the SDr era of the Pre-War1 period (PW1), primarily because they use Coal which is available in the player islands whereas Oil has to be imported. The eras between the SDr and the WW1 period I have called the Dr period (Dreadnought) with eras EDr, MDr and LDr (though ships of the latter era were considered lost in the fighting that took place in WW1 or scrapped as part of one of the many treaties following the war or given to the Neutrals. Four of the older EDr and four of the MDr ships are mothballed and available after Start of Hostilities to be demothballed and put into service. Early WW1 (EW1), Mid WW1 (MW1), Late WW1 (LW1), all 3 combined are classified as W1. In between Treaties (IT) (which can be split between EIT and LIT respectively Early and Late IT eras, the break between these two is approximately the 5th month of 1929) and Post London Treaty era (PLT), this is really the Second London treaty in 1935 which was not a huge success. The latter ships are all still being built at the start of hostilities. The Second World War, being simulated here, is of course different eras too (W2 split into EW2, MW2, LW2 and maybe PW2 – Post War 2 or possibly the EMi, MMi, LMi – early, mid and late Missile eras and even EMo etc Early Modern if I ever get around to writing the rules) as the player gets to spend their hard fought steel as they wish.

## Superimposed Mounts

One of the major changes in the early years of the 20th Century was the introduction of “Dreadnought” type ships. The Americans are correct that mounting two turrets in a superimposed way forward and aft meant that a ship could fire the equivalent of a full Pre-Dreadnought broadside while closing with an enemy or running away from them. By superimposed, I mean that one turret is mounted higher than the other and has its gun barrels hanging over the lower turret.

This has the advantages of bringing more guns to bear in the direction that the lower turret could fire into and also made the ship shorter than would be the case if the turrets were not superimposed (the length of the barrels on some 12” guns could be as long as 50 feet and obviously larger guns would be even longer). The latter meant that ships could be built cheaper – in the Dreadnought case where the turrets are in what I would call AP~TX if T were a superposed Y then the ship would be at least 45 feet shorter and would require less power to achieve the same speed – though a shorter stockier design would negate some of this. It also has the advantage in wargaming that the guns are mounted closer to the enemy because we generally use rules that have the ship model scale being much larger than the ground scale. In my rules, I would expect a line of Battleship models to be placed exactly one behind the other to represent the standard distance between the real ships which I believe is 2000 feet. This brings a larger number of guns into range of the enemy than would be the case with Pre-Dreadnoughts.

America had one superb advantage in this area as their Gun Captain’s sighting hoods were placed at the rear of the turret – when the upper turret fired there was no danger that the blast from the guns would enter the lower turret via these sighting hoods. I know in the case of the French and British that their sighting hoods were at the front of the turret, I am unsure about other Navies. The French undertook an experiment where they fired the guns of a Pre-Dreadnought over the turret of the Coastal Battery Henri IV (which was much lower in the water) after placing a large number of sheep in the lower turret. I read that the men dined well on Mutton that evening – already pre-cooked from the blast. Note Henri IV was the first ship ever to be fitted with a superimposed gun – a single 5.5” in the Y position over the X turret and it was recorded that it caused problems when firing it to the men in the turret below.

As a result Britain and France chose not to use superimposed turrets with their early Dreadnought designs. Only American Using Nations may build ships in the EDr period with superposed turrets in B and Y position. Most other Nations get to add a Y superposed position in the MDr (not Russia for example, who never had a superposed main gun and German/Prussian Using Nations mounting 12Long guns, though one BC could be built with AweYXTw11Long in the MDr period). Note Molke is really a LDr period ship, but I have allowed one to be bought forwards to the MDr period as it is required for Turkey. All Nations may add a superposed B position in the LDr (except Russia and minor Nations which have designated turret layouts) and most will also add Q or similar (Z in the American case) either in the MDr or LDr. Germany will use AweYXTw12Long in the LDr period if these ships are considered.

Note the British doctrine was to always close with the enemy and the recommended rate of closure was 14 degrees – with their 3 knot speed advantage the British ships could turn towards the enemy to open their off-wing turret to fire then turn back on to the normal course without dropping back. Hence Britain could theoretically bring 6 guns to bear when closing with the enemy. A great idea but they obviously never considered that everyone else would start to build 21 knot ships once they got the idea from Britain. Britain kept this 6 gun ahead fire concept going until the Orions were built (LDr in my rules), maybe they decided that it wasn’t going to work with all ships having the same speed or maybe the ship would have been too wide when mounting 13.5” on the wings?

Note my EDr Italian designs are the Cuniberti ones – AXTw12 with Q~R~S~Si12 (probably in shields) with R superposed above the other two guns – again allowing a theoretical 6 gun forward broadside but only 7 to the side. In this case the drawings that I have seen show the R gun to be mounted slight inboard of the other two with the barrel hanging well over the lower shields so the lower shields shouldn’t have been affected by the blast.

## New and Improved Technologies

There is very little change in Technologies between WW1 and WW2, true most technology improved but not by a huge margin. Armour was pretty much the same as was the main guns and turret designs. Submarines nearly defeated Britain in the Second World War but they nearly did that in the First World War too. Turrets for smaller guns was a huge improvement over casemates, but a lot of the smaller guns were in shields which left them open to shrapnel damage from nearby explosions.

The two really new technologies are RADAR and ASDIC the former replacing ranging and the latter helping find submarines before they attack. These are catered for and discussed below.

The only other major change was the threat to ships from aircraft and the resultant change of secondary guns to Dual-Purpose (DP) ie able to fire at both surface and air targets, and the addition of numerous small anti-aircraft guns (AAA) as the war progresses, these are also discussed below.

## RADAR

In this campaign, either everyone will have access to RADAR, or nobody will – the choice is up to the players. No one country will get access to this technology before any other. RADAR has the advantage of improving the ranging when trying to target a new ship and is almost vital at night. It has the disadvantage of increasing the “Top Weight” and lowering the stability, both of which were already a problem and hence the need to add ballast to counteract it which in turn increases the sinkage of the ship. In my rules if extra “Top Weight” is added then it increases the chance that the ship will list due to damage and also increases the chance that the ship will sink earlier than it would have done without the “Top Weight”.

There are various improvements to RADAR after it was first introduced, all require the ship to be docked to be refitted. See FleWar2 XXXX for details.

## ASDIC

There are four types of ASDIC, these are fully described in my Fictional Naval Campaign Rules and rules governing their use are in my XXXX WW2 Combat Rules.

## DP Guns

Another technology, which hugely increased the “top weight” of the ships, was anti-aircraft guns. In the W1 period these were almost non-existent. During the EIT period a few more specifically AA only guns were added to ships but none of them carried many – four single 4” AA and an octuple pompom was the average British fit on the Cruisers in this period.

During the LIT and PLT periods most nations fitted nothing but Dual Purpose (DP) guns to their ships as secondaries, and most Destroyer main guns were DP as well. No DP guns are available during the EIT period except for Japan which has single 4.7DP for their early EIT DS and DM, and single or twin 5DP for the later ships in that period.

British Using Nations had massive problems building DP guns so are severely restricted in the number and type available. Britain did however see the need for AA and started to convert or build AA specific ships a lot earlier than any other nation. In these rules to include a level of fairness, all Nations may convert some of their CA1 or CL1 to AA ships during the LIT period but only British and German Using Nations (not Albion) may start to build 3 CAA during the PLT period. Hibernia follows the rules for the nation whose guns they are using. Each British or German Using Nation may build 3 CAA, so Nations with multiple countries such as ABC or The Mediterranean or Scandinavia may only build one for each applicable country. So Brazil, Chile, Turkey, Sweden and The Netherlands may each build a single CAA. Denmark and Norway may build a single CLA each instead and Britain and any of the other countries named in the previous sentence may replace one CAA with 2 CLA – Turkey for example could build one British CLA and one German CLA. If no Argentinian ships are built then Brazil and Chile may build one CAA and one CLA each. XXXX

I have split the DP guns into three groups, Heavy (guns larger than 5.1”) which are called XS or HS in my combat rules, Medium (4.5” up to and including 5.1”) which are called SS in my combat rules and Light (guns smaller than 4.5”) which are called MS in my combat rules and LS for 3.4” and smaller guns. No ship, no matter how large (unless specified as an exception) may mount more than 14 Light DP or AA guns capable of firing into a single broadside. The ship may mount more than 14 guns but can only mount them to fire a maximum of 14 to one broadside and both broadsides must be the same. Similarly no ship may mount more than 12 Medium or Heavy DP or AA guns firing to a single broadside. This specifically allows the American Worcester XXXX class with 6Tw6DP on the centreline in the late war period. For ships started after the Start of Hostilities, these restrictions on the number of DP or AA guns able to fire into one broadside may be ignored. However, serious thought should be given before doing this as the rule was added to stop too greater weight on the wings which could cause the ship to capsize. A W2 ship that only has DP in the centreline turrets could probably have 4 barrels mounted on each wing as well, allowing up to 12 barrels per side for Albion or Austria with AXTr5.5DP+BYTw5.5DP+Q~S~Si5.5DP. The German Using Nations CLA has 14 barrels per side with Tw105mmAA and the American Atlanta is not far of it with their wing turrets. An agreement by the majority of players shall be made before the 12/12/14 max barrel rule can be overridden.

Battlewagons or Cruisers built during the LIT period shall not mount DP or AA guns on the centreline unless specifically allowed (eg the Chinese may mount them in A and Y with the main guns en-echelon in PQ or QR). Ships upgraded during the LIT period are not covered by these rules. Thus in general DP and AA guns may only be mounted on the wings during the LIT period. If budget is bought forward from the PLT period to build up to two BC and/or one PB (see below) then the BC cannot fit centerline DP or AA but the PB can as it is actually built within the PLT period but completed before the Start of Hostilities whereas the BC are actually bought forward to the LIT period.

During the PLT period, Battlewagons and Cruisers may mount up to one DP or AA mount above the main armament at the fore end and at the aft end, eg in BCZ or Y locations. Certain ships that have no rear mounted main armament may mount DP or AA in XY. An American CAS would mount DP in C and Y above the Tr8 turrets, Albion and Austria may mount Tw5.5DP in BY (and Russia may mount them in QS) above Tr7.5 or Tw7.5 or Tr5.5QF or Tw5.5QF, but may not mount DP in A or X until after Start of Hostilities, though incomplete ships whose design is recast during the WW2 period may take advantage of DP in AX. In the case of the ABC South American and Turkish ships, any DP mounted on the centerline must be in BR or Y positions, reducing the number of main guns on those ships. There is no requirement that any centreline DP be mounted in any or all of these locations.

In all cases if a gun or mount is available in a specified period then it may also be used in a later period. The following DP types are available during the LIT and later periods, note carefully that some of these mounts are proper turrets and some are Shields (no back or bottom, whose armour weighs 2/3 the weight of an equivalent turret). Japan has DP mounts in the EIT period for Destroyers – the only Nation to do so. See below for rules on the number of each type of mount that each Nation can produce:

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| --- | --- |
| Type and Mount | Comments |
| Triple 6”DP Turret | Freely available to French Using ships only in the PLT period – a maximum of 3 turrets can be fitted to a PLT Battlewagon. They can be mounted superposed in B (not C) or Y or could be fitted in X, X~ or Z~ all at the level of X. After Start of Hostilities France may build a CAA with AYXTr6DP using Tr57mmDP as secondaries and Si57mmDP as Heavy AAA and 20mm as LightAAA. The Gun is a Radical design and the mount is a Double Radical design. After Start of Hostilities a Double mount could be designed obeying all the normal Radical rules. In the LW2 period a fourth turret can be mounted on a Battlewagon or CAA. |
| 5.5” Twin DP Turret or Shield | Freely available in the LIT period to the Italian, Austrian and Spanish Nations. Albion only has this design from the PLT period onwards and have 56 twin 5.5”DP in the PLT period for arming its Battlewagons and cruisers. Albion designed a 5.5”DP single in the PLT period for rearming its old cruisers and as mounts on the wings of their PLT designs, two can replace a twin. From 1940.i.1 Albion can build mounts with three guns per month between them, this could be a triple when developed or a twin and a single. If no singles are required before 1940.xi.1 then Albion can get a twin on odd numbered months and two twins on even numbered months. From 1941.i.1 XXXX earlier elsewhere? Albion can build mounts with a total of four barrels per month between them, this could either be a triple and a single if the triple has been developed or two twins. Again if no singles are needed then the extra barrel can be saved up to be added to the build programme for a later month. Eg a third twin in 1941.ii or a second triple in 1941.iii. XXXX 5 barrels a month a year later? The Japanese Nation has 5.5” QF armed cruisers in the LW1 period and then 6” (or 6.1”) armed cruisers from the LIT period (the EIT Cruisers are armed with 8”). Then can choose to stick with 5.5” QF in the LIT period for their Self Designed ships instead of the 6” and they then have access to the 5.5” Twin DP in the PLT period as Albion does. If Japan choses to do this, then they can never develop a 6” gun and note the Tr5.5 mount is too small to be replaced by a Tw8 as the Tr6.1 mounts were in reality. If Spain builds Tr5.5DP then they can only build 4Auto and not 3Auto – check fictional rules too XXXX. Does Spain have 5.5”? and note this is fictional rules |
| 5.3” Twin or Single DP Turret or Shield | Freely available in the PLT period to the Italian and Austrian Navies. No Triple is ever available. |
| 5.25” Twin Turret | 38 of these mounts are available in the PLT period for the British Using Nations only (not Albion) and one turret will be built in every even numbered month of each year after Start of Hostilities, though this can be replaced with 4.5” Twin DP if preferred. No single turret is available, it could be developed using the rules to develop the 105mm DP mount starting on 1940.i.1 for British Using Nations. Each Nation would have to develop the single independently, though Brazil and Chile form part of the same Nation. Two singles could replace a twin in the build sequence once the design is ready. The single can only be placed in wing positions on Cruisers, a twin would be too large in that location. Turkey and the ABC Nations will have a proportion of this number depending on the proportion of British Using to other Countries in their Nation. Turkey would be 2/9ths of these numbers for example and Brazil/Chile 1/3rd rounded down each. |
| 5.1” QuadDP turret | Freely available to France and ADL only in the PLT period – up to three may be mounted on a PLT Battlewagon, which may be mounted superposed in B (not C) or Y, or could be fitted in X, X~ or Z~ all at the level of X. After Start of Hostilities France may build a CAA with AXQu5.1DP using Tw5.1DP or Singles as secondaries. The Gun is a Normal design and the mount is a Double Radical design. In the LW2 period a fourth turret can be mounted on a Battlewagon or a third on a CAA in Y position. One turret may be mounted in a BBM or BCM in B or in A on a CAAM until LW2 when a second can be mounted. |
| 5.1” Twin or Single mount | Freely available to France and ADL only from the PLT period in either Twin or Single Turrets or Shields. They can be mounted on any ship even when Quads are also mounted. |
| 5” Twin or Single DP Turret or Shield | Freely available to all nations with a 5”DP mount in their list, starting in the LIT period. XXXX except for Britain, Albion, France, Germany, Prussia, Turkey, Chile, Brazil, The Colonies, The Scandinavians and The Netherlands, France and ADL. Argentina can only use them on their 6 single mount DD designs. Japan has this mount available in the EIT period, for Destroyers only, once sufficient DD have been built with 4.7”DP XXXX. |
| 4.7” SDP Twin Shield | Freely available for British using Nations (excluding Albion) for Destroyers from the LIT period onwards. Note while it is a Semi-Dual Purpose mount it can only attack TB, level bombers up to medium height and FF strafing it and skip bombers. It can’t attack DB/HB or RE as it can only elevate to between 40 to 55 degrees depending on the mount. After 1941.i.1 each Naval Factory in a British Using Nation Port can build an extra 1 twin mount per month over and above the number that would normally be built. Two single mounts with shields can replace one twin. Other Non-British Using Nations with access to the 4.7" calibre can use full DP shields or turrets if they desire, which can attack all aircraft. |
| 4.7” DP Twin Shield | Freely available to all Nations using 4.7” guns except for British Using Nations from the LIT period onwards. These are fully DP and can engage any aircraft but are heavier than the SDP. Japan has this mount available for Destroyers starting in the EIT period, the first 16 EIT DD must be armed with single 4.7DP, then the remaining Destroyers may be armed with single and/or twin 5DP – see below. |
| 4.5” DP Twin Shield | British Using Nations only (not Albion) shall have 35 of these Twin mounts in the PLT period and one twin shield shall be built during every odd numbered month during 1940, one twin shield shall be built every month after that. So, 6 in 1940 and 11 in all following years. Albion, Austria, France, Italy, Russia, German Using Nations, American Using Nations and Japanese Using Nations may never build this calibre. No single shield is available (the VLs have 4”AA or DP mounts), it could be developed using the rules to develop the 105mm DP mount starting on 1940.i.1 for British Using Nations. Two singles could replace a twin in the build sequence once the design is ready. All British Carriers larger than a VL will be rearmed with the Tw4.5DP mount before the start of hostilities and sufficient more of these mounts will be built to arm any large PLT carriers still being built at Start of Hostilities – this is likely to be only 1 VB if the British Carrier Option 1 is chosen. The 35 mounts described above are for the BB/BC rearmaments in the PLT period and one AA cruiser being built in the same period. None need to be held back for the Carriers still completing. Albion VB will be armed with 5Twin4DP. XXXX & minor nations. More in later years XXXX |
| 105mm Twin AA Mount | Classified as 4”, freely available to all German and Prussian Using Nations from the start of the EIT period. Note AA only, this is not a DP mount. 2 singles can replace a twin. This mount is more accurate than any other AA or DP mount (except for the 88mm AA gun), it has a bonus to hit under my rules, but cannot be fired at surface targets. If a surface capability is required then a mix of QF and AA mounts must be fitted. |
| 4” DP Twin Shield | Freely available to All Nations except to American, German or Japanese Using Nations, check others XXXX |
| 4” DP Single Shield | Freely available to all Nations except to American, German or Japanese Using Nations, 2 single shields can replace one twin shield a month. Check there are no more Nations with no access to 4DP XXXX |
| 3.9” Twin or Single mount | Freely available for France only from the EIT period as an AA Turret or Shield. Freely available for France only from the LIT period as a DP Turret or Shield. France may use any of these mounts on ships that also have other calibres of DP or AA regardless of any rules to the contrary. The Battlewagons completing at the start of WW2 actually had Tw3.9AA mounts. Japan may design the Twin version of the DP from Start of Hostilities. XXXX check ADL |
| 88mm Twin or Single AA Mount | Freely available to all German and Prussian Using Nations from the start of the EIT period, unarmoured. Two singles can replace a twin. This mount is more accurate than any other AA or DP mount, it has a bonus to hit under my rules (larger than the 105mm bonus). Older designs (pre-WW1 and WW1) have a less accurate single 88mm AA gun, but this can be freely replaced during the LIT period with this design, but only with the more modern single mount. |
| 3” Twin or Single DP Shield | Freely available to all Nations except American and German Using Nations (unless specifically noted). Any twin mount can be replaced by two equivalent single mounts. XXXX USA has old 3/23 AA and a newer 3/50 AA?DP used for older BB and merchantmen? And can use the 3”SAAA mount described below. Check others – Argentina can use 3DP from Start of Hostilities for rearming demothballed ships. |

## Post Start of Hostilities Gun and Mount Designs

### Spying and Copying other Nations Designs

All designs below that are described for “a Nation only” cannot be copied until 2 months after the first ship mounting the mount has been commissioned. By that, I mean no work can be started on the design of the mount. If a successful spying mission occurs before the first ship is commissioned then work can start on the design 2 months after the spying success.

In the period from six months before the original Nation starts to design the mount up to the point where the design is complete, this is a spying success only one less than the highest XXXX. In the period from the start of the prototype to the end of the test, this level drops by one. In the period when the mount is started to be built up to when it is first fitted, it drops by one level again, and it drops again once the first mount has been fitted.

Where a mount is allowed to a group of Nations, such as “German Using” or “American Using”, all Nations described in the same way can start to design the mount at the same time. If a Nation has no access to that calibre of gun, then it can never build that mount-other calibres will be available. For example Albion can never build an 8” or a 6”, they would instead build a 7.5” or 5.5”, and the Colonies can never build a DP or AA gun with a larger calibre than 4”. XXXX can they build DP?

### General DP Designs

Most Nations get a reasonable number of DP designs during the LIT period and some larger mounts (larger than 5”) during the PLT period, however there are some holes in the list. Germany for example didn’t design a DP until the war started and as far as I can discover no ships were ever completed during the war carrying a DP mount, although work was carried out to produce DP mounts for destroyers and some were laid down.

Nearly all of the guns listed here can be designed starting on 1940.i.1, they all have known guns and only need the mount to be designed and they will all be Normal builds except for American Using Nations’ 6” DP and German Using Nations’ 150mmDP which will be radical. The first German/Prussian Using DP designed will also be Radical XXXX.

German Using Nations may design 88mm DP, 105mm DP and 127mm DP in both single and twin mounts in any order that they desire all of which are Normal except for the first that they start. Note, if a German or Prussian Using Nation starts to design more than one DP in the same month then all of the mounts started in that month will be Radical. They may also start to design a 150mm DP at the same time as the American Using Nations start to design a 6DP- 1942.ii.1, and it will also be Radical.

British Using Nations may design a single version of its 5.25” (for wing mounting on Cruisers only) and single 4.5” for any type of ship both of which are Normal.

Albion, Austria and Russia can only mount four mounts on its centrelines, so their CAA and CLA (Albion cannot build CAA or CLA) would mount less guns than other nations. Albion and Austria may design Triple versions of their 5.5DP (they already have twin and singles) and Russia may design Triple 5DP. All these mounts may be used in non-superposed positions on Cruisers and Carriers (VC, VG and VH only), and in superposed centreline positions on Battlewagons. In the LW2 period they can also be used in wing positions on Battlewagons and superposed positions on VC, VG and VH and in non-superposed positions on VA, VB, VM and VF.

Albion, Austria, the Colonies, Italy XXXX Spain? and Russia may also design Triple versions of their 4DP for any CLA, though the mount could also be used on Battlewagons (superposed or on the wing) or Carriers (not in a superposed position until LW2). They are too large for the wing mounts on any cruiser until the LW2 period. Note if 4DP are carried in wing mounts then the only DP that can be mounted on the centreline of any ship would be more 4DP.

Barbary Coast may design DP versions of their twin and single 4AA. XXXX

China may design a twin and or single 5DP. XXXX got 4.7”DP? Can’t build 4.7SADP! Think they already have 5”. They don’t = got 4” tho XXXX.

Hibernian/Caledonian has a choice (they make the decision at the start of the EW1 period but must follow either the British or Albion route up until then XXXX), they can either choose the British Using Nation route – 5.25DP and 4.5DP, or the Albion route – 5.5DP and 4DP with all the constraints of those two Nations. They can only follow the options of their chosen Nation for new DP.

The Hybrid Nation uses Long guns, so they can only follow the rules of a Nation with Long guns – probably the Prussian Using Nation.

Italy may design a 3DP for DE.

Japan may design a twin 3.9DP for all ships (single later) starting on 1940.i.1.

PSI may design Tr4.5DP and/or Tr4DP for its non-superposed positions (A?) on CAA and CLA. XXXX. CAAM, CLAM?

The American Using Nations liked their excellent medium DP – the 5”, but by the end of 1941 realised that ships armed only with that gun were unable to face conventional cruisers, though they were great against aircraft and destroyers, because there was no AP shell developed for 5” and if one was developed it wouldn’t have as good a penetration as the 6” that most other cruisers were armed with. Albion had the same problem with the 5.5” but it could at least fire AP shells. From 1942.ii.1, American Using Nations may start to design a Tw6DP for cruisers (ABCZYX on CA and ABYX on CL). A single could be designed for the wing mounts on Battlewagons larger than 50,000 tons but would be too large for any other ships. Twins could also be used on the centreline of Battlewagons larger than 40,000 tons. The Tw6DP is a Radical design for both the gun and mount, the Si6DP is Normal once the twin has been designed. They also felt the need for a Tw3DP for DE as the small number of Si5DP mounted on those ships put them at a disadvantage. This can be designed from the same date as the 6DP, and is also a normal design for both the gun and mount. Argentina (but not any other American Using Nations) may design a Tw3DP then a Si3DP from the Start of Hostilies both of which are Normal – this is to reflect the fact that Argentinian Destroyers and Mothballed ships must mount 6 turrets, they will also be needed for the rearmed WW1 Battleships otherwise these ships will only have 2 or possibly 3x5DP barrels a side. If German and Prussian Using Nations design the Tw150DP then they follow the same rules as the American Using Nations Tw6DP. Ships mounting 6DP or 150mmDP may also mount a smaller DP as an exception to the rule that states no ship may mount two calibres of DP, eg Worcester with Tw5DP wing mounts.

### Semi-Automatic Designs

Starting in 1942.vi.1, all Nations may start to design a Semi-Automatic version of their 6DP, 150mmDP, 5.5DP, 4.5DP, 4DP and 3DP mounts. No Nation who builds a 6DP or 150mmDP or 4.5DP may design a 5.5SADP or 4SADP mount (including Turkey for their British designs, nor the 105mmSADP for their German designs). The DP mount must have completed their design phase before the SADP gun can be designed and must have gone operational before the SADP gun can go operational. That is, at least one ship must have been commissioned mounting the DP gun before the first ship carrying the SADP gun may be commissioned. Either or both Twin and Single versions may be designed, and for those Nations that have a Triple DP mount, a Triple version of the SADP mount may be designed after the Twin version has been designed. All Twin SADP turrets require both the gun and the mount to be designed and both will be Radical unless otherwise stated – none will be available as shields. Singles, and Triples if built after a Twin will be Normal mount if the Radical problems have been fixed operationally otherwise they too will be Radical and be one month late. Singles may be designed at the same time as the Twin but will be a Radical mount in that case.

American Using Nations may start to design a Triple 8” SA on 1941.xi.1, which can only be mounted on the centreline of a (large) CA (or a PB or a small BC). The gun is Radical and the mount is Double Radical. This can never be a DP mount.

Nations who cannot build DP mounts for any reason, also can’t design SADP or AutoDP mounts but they may design SAAA and AutoAA XXXX are there any AutoAA mounts?Colonies/ShipOfTheLine?) mounts at the appropriate time – see below. There are three cases for the DP mounts depending on which calibres a Nation has access too:

If the Nation has access to 4.5”DP, such as British Using Nations, then the only SADP that they can build is a 4.5SADP XXXX and/or a 3SADP. They may build this in either Single or Twin mounts in any order that they desire, the gun is a Normal design and the first Mount a Radical design, the second one completed is a Normal design. If desired both may be built at the same time if there are enough design paths but both mounts will be Radical. The characteristics are the same as the DP except that they fire at three times the rate. British Using Nations will need to build the Tw4.5SADP so that they can build both their Tw6AutoDP and their Tw3AutoDP, they do not need to build the 3SADP though if they don’t want to.

Those Nations that only have access to 5.5DP mounts, such as Albion, but don’t have access to 6DP may build SADP mounts in either or both of 5.5” calibre or 4” calibre in any order that they desire. The first SADP mount in a calibre must be a Twin which will be Radical, all subsequent designs for the same calibre will be Normal. Si5.5SADP is the largest mount that may be fitted to the largest Destroyer type (DH), up to 4 may be fitted XXXX check.

If the Nation already has a Tr5.5DP designed then they may also design a Tr5.5SADP but it must be after the Twin. Nations who may design a 5.5SADP mount may also design a Tw4SADP and after that a Si4SADP and a Triple if they already have a Tr4DP, in either order. A 4”SADP gun is a Normal design and the Twin mount in that calibre is a Radical design with others following as Normal designs. Tw4SADP may be mounted on either of the two largest Destroyer types XXXX DH (Heavy-4 turrets) and DS(Standard-3 turrets), and as Singles on the 2 smaller Destroyer types DM (Medium-4 turrets), DL (Light-3 turrets) and DE (Escort-3 turrets).

If there are enough design paths a Single may be designed during the time that a Twin is being designed but if so it will also be Radical. A Triple if one can be designed must start to be designed after the Twin has been designed.

Those Nations who have no 4.5DP and no 5.5DP, but do have a 6QF or DP may design a Tw6SADP. In either case the gun is Radical, if the Nation has designed a 6DP mount then the SADP mount will be Radical otherwise Double Radical. Nations who build a Tw6SADP may build a Si6SADP, for use on the wings of Battlewagons, later and may also design a Tw3SADP and after that a Si3SADP. The 3”SADP gun is Normal and the Twin mount Radical with a Normal Single mount later. Tw6SADP may be fitted in any centreline location on a Cruiser, and on the centreline of a Battlewagon, or on the non-superposed positions of VC, VG or VH (with Si6SADP in the superposed and wing positions). Si6SADP may be mounted in all locations on a smaller carrier except for VL or smaller. Tw3SADP may be mounted on either of the two largest Destroyer types XXXX DH (5 turrets) and DS(Standard-4 turrets), and as Singles on the 2 smaller Destroyer types DM (5 turrets), DL and DE (4 turrets).

German and Prussian Using Nations may design a Tw150SADP if they have already designed a Tw127DP or Tw150DP. This is Double Radical unless a Tw150DP was developed first in which case it will be Radical. Once the Tw150SADP has been designed, German (and Prussian) Using Nations may design a Tw88mmSADP mount. If they have already designed a Tw88mmDP then the SADP gun is Normal and the mount Radical, otherwise they add one level of Radical to each.

If a Nation has both a 5.5DP mount and a 6QF or 6DP then they may choose which route to follow – either 6+3 or 5.5+4, but cannot change their mind once they have started to design their first SADP mount.

France and ADL may start to design a Tw8SA (not DP) on 1941.xi.1 after fixing the radical problems with the Tr6DP. The gun may only be mounted on a CA or larger ship. The gun is Radical and the mount is Double Radical. Neither of these Nations may design a Qu5.1SADP, but they may design a Tw6SADP which will be Normal for both gun and mount after the Tr6DP Radical problem is solved, otherwise the mount will be Radical if it is not.

All SA guns fire at triple the rate of a normal gun and must include three times as much ammunition for each gun in the mount. All standard mounts come with 15 moves worth of ammunition per gun, so a twin would need 2(=guns)\*2(3-1=higher rate of fire)\*15(=moves) extra moves of ammunition or 20 batches of ammunition as that comes in 3 move batches. The weight of this extra ammunition is included in the values in my spreadsheet to design the ships. Note when firing a SADP gun, count each barrel as 3 guns, do not triple the amount of damage that they do when they hit.

SADP mounts may be mounted anywhere that the normal DP mount could be placed, except that SADP mounts greater in calibre than 105mm (4.1”) may only be mounted as Singles on ships of the largest Destroyer size. No 6SADP mount may be fitted to anything smaller than a Cruiser. No Triple SADP may be mounted on anything smaller than a CLA.

The Mediterranean Consortium is a particular conundrum in this area as they have four different gun concepts. I suggest that a Tw6SADP is designed and the barrel can be rebored to 150mm for the Turkish German designs. These guns could be used by all three countries, including in German designs for Turkey. Note though that British designs for Turkey use the 4.5SADP and not a 6SADP mount. The 88mm (3.4”) for Turkey shall be a separate design from the 3SADP.

SADP may be mounted on Battlewagons and Cruisers in the same number that DP can be mounted, eg 12 medium or large SADP per side on either of these ship types. Micro ships (BBM, CLM, etc) should mount half these figures as normal. However DH XXXX should be limited to 4 Heavy Single SADP or 5 Medium Single SADP, with DS having one less mount or 3Tw4SADP or 4Tw3SADP. If LW2 ships mount SADP (instead of Auto guns) then each turret may contain one more gun than the MW2 ship of the same size – this does not mean that they can design the larger turret unless they are already allowed to produce it. For example a LW2 Albion Cruiser could mount Tr5.5SADP in ABYX (normally BY would have to be twins), but could not design a Qu5.5SADP for the AX positions. In theory this rule would allow the same Albion CL to mount Tw5.5SADP on the wings, but I would feel happier mounting 4Si5.5SADP on the wings rather than 2Tw5.5SADP as I feel this would put too much weight on the extremities of the ship. The rule does however allow the 12 Heavy DP per broadside to be broken in the LW2 period without the majority of the players agreeing.

Nations designing Tw6 (150mm) may design Tw3SADP but not Tw4SADP. Nations who do not get the Tw6 or 150mm may design Tw4SADP but not Tw3SADP. XXXX Japanese Using Nations using 5.5SADP may build 3.9SADP (but not 3SADP), but those Japanese Using Nations that choose 6SADP are restricted to 3SADP. France and ADL XXXX have access to 3.9DP but not to 5.5DP so are restricted to 6SADP and 3SADP.

### Fully Automatic Designs

Ships carrying these Auto mounts may not be commissioned until at least one ship carrying the specified SADP mounts has been commissioned.

On 1943.iii.1 British Using Nations may start to design a Tw6AutoDP. The gun is Radical and mount will be Double Radical but see below.

On 1943.vii.1 all Nations that have a 6DP designed may start to design their own Tw6AutoDP turret, and German and Prussian Using ships may design a 150mmAutoDP if they already have the 150mmDP mount designed. The gun is Normal and the mount will be Radical if they have already started prototying the SADP versions (even if they start prototyping on the same day that they start designing this mount), add one level of Radical if they only have the DP, note if British Using Nations have developed the Tw4.5SADP then the Tw6Auto gun/mount will be Normal/Radical respectively.

If a Nation has a Tw5.5SADP but cannot for any reason based on these rules design a Triple SADP mount, then they can start to design a Tw5.5AutoDP on 1943.vii.1. Those Nations that have access to Triple 5.5DP mounts may not design an Auto version of the calibre regardless of whether they actually design the Triple mount or not. The gun is Normal and the mount will be Radical.

If the Radical problems of the SADP mounts haven’t been fixed before the first Auto turrets are commissioned then the Auto mount will add a further level of Radical and will be a month late in commissioning.

All of the above Fully Automatic Large Designs can only be mounted as a Twin in the following locations:

Battlewagons: any centreline location with singles on the wing. This includes PB but the wing mounts must be lighter, eg ABYXTw6Auto/WingTw3Auto.

VC, VG and VH: ABYX arranged around the superstructure with singles elsewhere.

VA, VB, VF: A and X only with singles or smaller DP mounts in BY and/or elsewhere.

CA: A and X only – no superposed mounts or wing mounts, Tw4AutoDP or Tw3AutoDP (see below) may be mounted in superposed positions or on the wings.

CL: Tw4AutoDP or Tw3AutoDP may be mounted in AX only, with singles of the same calibre superposed or on the wings.

In 1943.vii.1, Nations with Tw4SADP or Tw5.5SADP may start to design Tw4AutoDP. They may then go on to design a Single version afterwards if they have a Si4SADP and a triple if they have a Tr4SADP in either order. Triples may only be mounted in non-superposed positions on ships in the range VA/VB/VF and CA, larger ships may mount them anywhere on the centreline. Twins may be mounted anywhere on the centreline on ships larger than DH XXXX and singles anywhere on any ship larger than DE. The gun is Normal and the mount is Radical. Japanese Using Nations which choose 5.5SADP and 3.9SADP may build Tw3.9AutoDP, those that design 6SADP (and possibly 3SADP) must design Tw and Si3AutoDP as below. Whilst France and ADT have Tw3.9DP, they have no access to 5.5DP and cannot build Tw3.9AutoDP and shall instead design Tw and Si3AutoDP as below.

In 1943.vii.1 those Nations who designed 6SADP or 4.5SADP may start to design Tw3AutoDP, and after that a Single. Twins may be mounted anywhere on ships larger than DE and Singles on a DE. No Nation (or Consortium) may have both a 3AutoDP and a 4AutoDP. The gun is Normal and the mount is Radical. American Using Nations, ABC and The Mediterranean Consortium (Greece, Spain and Turkey) may only have the 3AutoDP (88mm for Turkish German designs). XXXX any other multi nations that can be affected by this rule? German and Prussian Using Nations may have a Tw88AutoDP or Si88mmAutoDP if the SADP have been designed, if they only designed the 88mmDP then add one level of Radical to both the gun and mount.

All these Auto DP guns fire at six times the rate of fire of a normal DP, so will require an extra 5 times the normal ammunition capacity and each barrel will be treated as 6 separate guns. It is the ammunition capacity that actually restricts the number of mounts that can be on any vessel, eg HMS Tiger only had 2Tw6Auto and 3Tw3Auto and yet was heavier than a ship carrying 6Tw6.

Ships should mount Auto guns in the same numbers that they can mount SADP, though LW2 ships are larger than the previous periods. The Auto mount is heavier than the SADP so this should produce a heavier ship. At most one extra TwAuto mount may be placed on the broadside of a LW2 ship compared with SADP on a MW2 ship, it is however better to mount singles on the wings with a larger number of mounts.

Once Auto guns are available the rule that restricts a ship to only one calibre of DP or AA is revoked. Any ship may have small Auto DP or AA (4” or 3” as appropriate), as well as one calibre of either Large or Medium Auto or SADP. Note LW2 ships may have up to 16 small (4” or 3”) per side, so if 4 Twin Large or Medium Auto or SADP are mounted firing into either side then 16-8=8 small guns may also be mounted. Eg a British Using cruiser could be built with ABYXTw6AutoDP and 4Tw3AutoDP per side – it would probably be a huge ship though. In addition the ship could mount 3SAAA, 55mmDP, 9pdrDP, 6pdrDP or 3pdrDP as appropriate.

Allowable paths:

If a Nation has access to the Tr5.5DP then the following paths are allowed:

Tw5.5DP---------------------> Tw5.5SADP(R) ---> Tw5.5Auto if no Tr5.5DP allowed

I I

---> Tr5.5DP ---> Tr5.5SADP

I I

---> Si5.5DP ---> Si5.5SADP

If a Nation has no access to the Tr5.5DP such as Japan, then they instead get a Tw5.5Auto.

All 5.5DP users and those Nations that may only use 4DP can also access the following path:

Note, if the Tw5.5SADP is built then there is no need to design the 4SADP in Tw or other layouts.

Tw4DP ---> Tr4DP (N) ---> Tw4SADP (R) ---> Tr4SADP (N) ---> Tw4Auto (R) ---> Si4Auto (N)

I I

---> Si4DP (N) ---> Si4SADP

If a Nation has access to 4.5DP then the following paths are allowed:

Tw4.5DP ---> Tw4.5SADP (R) ---> Tw6Auto (R) ---> Si6Auto (N)

I I

---> Si4.5DP (N) ---> Si4.5SADP (N)

If a Nation has no access to the above mounts then the following paths are allowed:

Tw6DP ---> Tw6SADP (R) ---> Tw6Auto (R) ---> Si6Auto (N)

I I

---> Si6DP (N) ---> Si6SADP (N)

France and ADL have a special path and may not use any other path:

Tr6DP (R) ---> Tr6SADP (R) ---> Tw6Auto (R)

XXXX shud this b Tw6SADP?

If any Nation has access to Tw6Auto then they may also use the following path once the Tw6Auto has been designed:

Tw6Auto ---> Tw3Auto (R) ---> Si3Auto (N)

### Large Calibre Designs

Prussian Using Nations may design Qu8.2, Qu5.9 and Qu6.7 if they haven’t already designed these mounts, the gun is already known but all of these mounts are Radical Designs if done after Start of Hostilities.

Albion may design Qu9.2 or Qu7.5 if they haven’t already designed these mounts, the gun is already Known (7.5) or Previously Known (9.2), but the mount is a Radical design – any ship carrying this mount that was completed in the LIT period with PLT budget has not had the Radical problems fixed yet.

American Using and Japanese Using Nations may design a Tr12 if they haven’t already designed this mount. The gun is a Known design for both Nations and the mount is a Normal design.

All Nations may design a Tw18 mount starting on 1940.i.1, both the gun and mount are Radical designs if they already have a 16” mount with the same number of guns. If they want to design a mount with one more gun, then the mount will be Double Radical. If they don’t have a 16” mount then the gun will be Double Radical. Note, Japan already has a Tr18 being built which has a XXXX Radical gun and Radical mount. Also British Using Nations and Albion/Hibernian/Caledonian already have a Known design for a Si18 gun so only the mounts have to be designed, a Tw18 would be a Normal mount design instead of the usual Radical design. German Using Nations started to design a Tw18 (Prussia a Tw16Long) on 1939.i.1 so the design only requires another year to complete.

Nations may design a Tr18 after the design for the Tw18 is complete, this will be a Normal design for the mount (Known for the gun).

Note also that a 16Long is equivalent to an 18” and a 15Long is equivalent to a 16 and a 14Long is equivalent to a 15.

All Nations may start to design a Tw20 (or Tw18Long) mount two years after they started their first 18” (16Long) mount. Japan can start their design on 1940.i.1, German Using Nations on 1941.i.1 and most others on 1942.i.1. Again both the gun and mount are Radical if they have an operational 18” mount with the same number of guns. Again they become Double Radical if they never built their 18” mount or the mount has 1 more gun than the 18” mount. If Japan builds their 20” mount as a Twin (in this case both gun and mount would be Normal) then they may replace their Tr18 with the Tw20 on existing ships. If the ship mounting the 18” mount has not had its Radical problem fixed by the time the 20” ship is commissioned then the 20” gun and mount become one level of Radical higher and the ships will be a month late in being ready.

When designing Mounts, if the Nation already has a mount with a calibre that is within 2” of the new calibre, and they have a mount of the new calibre that is one different from the new mount, then reduce the level of the “radicalness” by one (Radical becomes Normal for example). For example British Using Nations and Albion/Hibernian etc. already have a single 18” mount so can build a Tw18 as a Normal mount. Note, they can’t build a Tr18 as a normal – it would be radical, as that is 2 guns away from the single.

Note also that British Using Nations also have a paper design for Tw20 from Jackie Fisher’s HMS Incomparable design, but as far as I can find, no effort was ever put into it to fully design or build it. As a result they cannot claim that the 20” gun is a Known design, or that a Tw20 is a Known mount.

Two years after a design is started, another can be started that is 2” larger (22” and 24”), but the rules don’t allow any calibre larger than 24”, missiles replaced guns before 26” guns could be designed.

### AA Designs

All Nations may start to design 3SAAA on 1943.ii.1, generally replacing any mount that weighs at least 2 tons. They weigh 1.25 times the normal weight of a 3”AA plus 2\*12 moves worth of extra ammunition per barrel. The Twin mounts are compatible with all mounts weighing 4 tons, which can be removed and replaced by a Tw3SAAA in 7 weeks and 2 days XXXX assuming that all mounts on a ship can be replaced at the same time using multiple completion docks' worth of labourers XXXX. Two Single mounts can replace a twin in the build programme (once it has been designed), and can also replace any mount weighing 2 tons, such as a triple 25mm, twin 40/37mm or quad PomPom, but can’t replace a quad 20mm. These mounts, including the single, are Heavy AAA and are not considered when deciding if a ship has more than one AA or DP mount calibre. Japan is unlikely to design the twin mount though it could do so for new builds.

On 1943.ii.1 a new design team becomes available that can only design this mount or smaller. The team can design the gun and one mount at the same time – the other mount (Single or Double) will have to be designed afterwards.

Nations who cannot build DP mounts for any reason may design this mount at the same time as other Nations can design their first SADP mount if they have a 3AA mount. They may also start to design any larger SAAA mount at the same time if they have the appropriate AA mount in any order they choose. In this case they can’t replace an AAA mount until 1943.ii.1 but could be fitted to any new ship as a normal AA mount in the appropriate locations. 3SAAA guns and mounts are Normal, larger guns and mounts are Radical though if a DP gun has already been made of the same calibre then it is Known and if a SADP mount of the same calibre has been designed then it is Normal. Singles designed after Twins are Normal (or Known).

### Other Mount Design Rules

Any work on one mount or gun may be interrupted for an indefinite period of time while work on another mount or gun is carried out, and then resumed later.

XXXX ABC only has access to the 5.25DP, 4.7SDP, 4.5DP, 4DP and 3DP and PomPom (plus 20mm and 40mm at the appropriate time), but can use US 5” DP turrets on their Argentinian 6 turret designs. Unlike America, Argentina may mount Si3DP on some off their designs.

Turkey shall use German AA guns on their German based designs (one out of every three) but otherwise must use 5.25DP, 4.7SDP, 4.5DP, 4DP or 3DP and PomPom on their British designs, (two out of every three). XXXX Because of the large number of potential mounts that need to be designed (American, British, German and Spanish). The Mediterranean Nation will get an extra DP mount design team when compared with other Nations.

Similarly with the need to build SADP guns in 5”, 4.5” and 4” calibre as well as potentially a 6DP and 6SADP, the South American Consortium (ABC) will get an extra design team when they can first design a SADP mount.

XXXX The German Using Nations can only use the German AA guns until the 88mm, 105mm, 127mm or 150mm DP design are ready to build.

Only Japan can fit DP guns to Destroyers in the EIT period. The first sixteen Japanese Destroyers may be fitted with up to 4 single 4.7 DP guns (not the British 4.7 SDP) XXXX disagrees with this in Destroyer rules below. The first eight of which can have up to six 21” TT (2 or 3Tw or 2Tr), and the other eight can have up to six 24” Long Lance TT (2Tr or 2Tw). Any further EIT destroyers may be armed with 5 or 6x5” DP and up to 3 Tr24” Long Lance TT without reloads. LIT destroyers may have reloads for their Quad Long Lance TT. Japan has 25mm and 13.2mm in the PLT XXXX or LIT period, the 25mm can be Tr/Tw or Si, the 13.2mm can be Tw or Si. These EIT destroyers can’t have the Single 3” AA gun allowed to other Nations as it would break the rule of mixed DP and AA – instead they can have one HAC (fitted during the LIT period) and up to 5 tons of AAA – this equates to, for example, a Tr25 in B position (or similar), 2Si25mm per side and one Si13.2mm per side.

Most nations except Albion, British Using and Japanese Using Nations have a small number of 40mm, 37mm, 13.2mm and 8mm in the PLT period. British Using Nations get access to full length 40mm and 20mm on 1941.i.1 and all other nations (except Albion, and the Japanese Using Nations) get access to 20mm for new builds in 1940.i.1. 20mm can be retrofitted to older ships according to the AAA upgrade rules below XXXX. Albion shall only ever use PomPoms until the Tw3SAAA and the “pdr” guns are developed. Japanese Using Nations only have access to 25mm or 13.2mm until the same time. American Using Nations get 40mm, 1.1” (effectively 25mm) and 0.5” (effectively 13.2mm) in Qu/Tw or Single mounts in the PLT period, and 20mm in the same mounts on 1940.i.1.

XXXX Mounts are only specifically required for Battlewagons, Cruisers, Merchantmen and Destroyer Escorts during the PLT period and all ships during the war. The mounts for PLT period Carriers and Destroyers will automatically be built ready for when they are needed. They don’t need to be provided for out of the Factory Naval (FN) build rates. Note, no Nation may build ships with the 4.5DP mount given for British Using Nations Carriers (and rearmed BB or CAA).

Note if a Nation only requires Single Mounts then the rule that says a Twin mount has to be designed first followed by the single is cancelled, that Nation may build Singles first at the same amount of time that the Twin would take, however the Nation may not change their mind later and still build a Twin (or a Triple where appropriate)

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## Using Other Nations Guns

Nations can use other Nation’s guns as follows:

* The Brazil and Chile confederation shall use all British guns in their 7 turret and 5 turret designs.
* Argentina may build a third design of each type with 6 turrets using American Guns only. This design must be the third one in any group of three to be built though (the group of 3 have to be of the same type but not the same design, eg 3 Battlewagons or 3 Heavy Cruisers). They can only do this once the two British designs have been built in the appropriate period. So if they build four Battleships in the EW1 period, then they may have 1 ship with 5, one ship with 7 turrets, 1 with 6 turrets and the fourth must be either 5 or 7 turrets. They would have to build six ships in any one period of one type to be able to build a second 6 turret design with American Guns. ABC have both British and American 12” and 14” guns as well as British 13.5”, 15” and 16” guns. There is no requirement for ABC to build any 6 turret ships, they could be just Brazil and Chile for example. If they do build American designs then they may also build up to two cruisers and eight destroyers in the same period using American guns for every Battlewagon built. Note there are no Cruisers or Destroyers in the EW1 and MW1 period – SDr and AC can be built in the PreWar period though with 3 wing turrets for Chile, 4 for Argentina and 5 for Brazil giving 5/6 and 7 turrets facing in a single direction. If at least one Argentinian ship is built in each of the EW1, MW1 and LW1 period then they can build 2 American Cruisers in each of the LW1 (CA1A and/or CL1A), EIT (CA only) and LIT (CL only) periods and 8 American MB in the LW1 period and 8 American Destroyers in the EIT and the LIT periods.
* Turkey can use British guns on two out of every three ships of the same type (BB/CA, etc). Turkey may opt to build all ships with German guns after the EW1 XXXX Goeben is a MDr period ship period but arrived in Turkey in the EW1 period, but if they do then they cannot revert to British guns later. Turkey may start to design German DP guns regardless of which decision they take, or rebore a Greek (American) 5DP to 127mmDP (no design time required).
* Turkey may build a third design for each type using only German guns. In the case of WW1 designs these will all be Battlecruisers with no Battleships (unless they opt to build all ships with German Guns) but they may build Battleships in the PLT and WW2 periods. Turkey may opt to build all ships with German guns after the EW1 period, XXXX but if they do then they cannot revert to British guns or rules later.
* The Scandinavian Countries and The Netherlands shall all use German or Prussian guns and are considered to be a German or Prussian Using Nation. Note, all countries within this consortium must use the same guns, so all German or all Prussian.
* Greece shall use all American guns, and is considered to be an American Using Nation.
* Spain has her own Gun Industry but uses the same calibres as Austria and Italy to ease the spreadsheet – the differences were marginal though she could use 13.5” instead of 13.4” if desired.
* The African Defense League uses some of the guns from France, namely 13.4”, 12”, 9.4”QF, 7.6”QF, 6.7”QF, 5.1”, 5.1”DP (not available until the PLT period), 3.9”, 3.9”DP, 3.9”AA. They also build their own 15”, 16”, 18”, 20” and 24” XXXX or 22”.
* All other nations are assumed to have their own Gun industries capable of building their own gun types.
* America has 16”, 14”, 12”, 10”, 8”, 6”, 5”, 5” DP, 4”, 4” AA, 3”, 3” AA, note, America cannot build any **4” or 3” DP XXXX.** The Build the Limit (Confederate) option for America also has access to Tr18 instead of Tr16.
* Austria and Italy have the same guns and alsoSpain. This wasn’t exactly the case but it simplifies the spreadsheet and doesn’t make a lot of difference: 16”, 15”, 13.4”, 12” (12.7"), 9.4QF, 8”, 7.5QF, 6”, 5.5", 5.5" DP, 5.3”, 5.3” DP (not available until the PLT period), 4.7”, 4.7” DP, 4”, 4”AA, 4”DP, 3”, 3” AA, note the 4.7” DP is not height restricted like the British SDP. If Italy and/or Spain select 6” instead of 5.5” for their Cruiser designs then they can only build 6Auto and 3Auto. Austria can either build 8” and 6” cruisers and 6DP, 3SADP, 6Auto and 3Auto or can build 7.5”QF and 5.5” cruisers (and can design Tr5.5DP) and 5.5SADP, 4SADP and 4Auto.
* Barbary Coast has 4”, 4” AA, they also have a 20” and 10” dynamite gun that are air powered. Builds 4SADP and 4AutoDP
* Britain has 16”, 15”, 14", 13.5”, 12”(12.7" if the gun is a WW1 version), 9.2QF, 8”, 7.5QF (Singles only in the SDr or LW1 periods), 6”, 5.5” (LW1 period only), 5.25” DP (not available until the PLT period), 4.7” SDP, 4.7”, 4.5” DP, 4” DP, 4”, 4”AA, 3” DP, 3”, 3”AA.
* Albion has 16", 15”, 13”, 11”, 9.2 (possibly Qu9.2QF for PB in PLT period), 7.5”QF(maybe Qu7.5QF instead of 9.2), 5.5”DP, 5.5”QF, 4”DP, 4”QF, 4”AA, 3”DP, 3”QF, 3”AA guns. They can develop a Twin and Triple 7.5” QF for their CA in the EIT period, and shall use 5.5” in single, twin and triple mounts instead of 6” in their CL. Albion’s SDr and EDr/MDr and LDr BB/BC had Twin 11” and the EW1 design could have Twin 11 or 13” guns. Albion also has access to quad 9.2”QF or quad 7.5”QF turrets (but not both) for Battlecruisers or Pocket Battleships built during the LIT or PLT periods. If they don’t build the Quad BC in the LIT or PLT periods then they will have to develop the mount(s) in the W2 period – either way, this will be Radical see XXXX. They use 4”DP instead of the British 4.5”DP. There are no restrictions on the 4”DP like there are on the 4.5”DP. After the Start of Hostilities, Albion may start to develop a triple 5.5”DP (it may only be fitted in non-superposed centreline positions on cruisers and superposed centreline positions on battlewagons). Albion may also start to develop a Tr4DP, this mount can only be fitted in non-superposed positions on a CL until the LW2 period when it can also be mounted on Battlewagons as DP, or on the non-superposed positions of a DH. The Colonies can start to build this mount at the same time as Albion and Other Nations with 4DP (ie not America or Japan) can build ships using this mount once they have discovered its existence XXXX and designed it. Once Japan have completed their Tw3.9DP and discovered the existence of this mount they could design a triple version of their 3.9DP mount.
* China has 15"Long, 13.5"Long, 12"Long (12.7 if WW1 but loses its Long status), 10QF for its SDr or AC, 8"Long, 6"Long (as main guns on Cruisers) and 6”QF (as secondaries on Battlewagons), 4.7”, 4.7” DP, 4”, 4” DP, 4”AA, 3”, 3” DP, 3”AA, note the 4.7” DP is not height restricted like the British SDP. All the guns of 6” and larger are Long Guns unless otherwise noted, that is, all the guns that have to fire cross deck from the wing positions. There is also a Long version of the 4.7”QF but not the DP version, for use in Destroyers. When Nations can build SADP and AutoDP, China can design a 6” and a 3” but none of these will be Long guns. The cruiser carrying them would have the 6” en-echelon and the 3” calibre at the bow and stern.
* France has 16”, 15”, 13.4”, 13", 12”(12.7 if WW1), 9.4"QF, 8”, 7.6QF, 6.7QF, 6”, Tr6DP, Qu5.1DP, 5.1” DP (the last three become available at the start of the PLT period) , 5.1”, 3.9”, 3.9” DP, 3.9”AA, 3”, 3”DP and 3”AA. France’s Auto gun is developed from the 3” and the larger gun from the 6”.
* Germany has 16”, 15”, 12”Long, 11”Long, 9.4”QF, 8.2Long, 8”, 6.7Long, 150mm, 127mm, 105mm, 105mm AA, 88mm, 88mm AA. DP guns can be developed after Start of Hostilities. Historically the 127mmQF was only used on the EIT period DD in single mounts, though work was done on a 127mmDP during the war as well as a 105mmDP.
* Prussia is pretty much the same as Germany but may not use the 8" gun, instead they have a 16” Long in the EW2 period, a 18” Long in the MW2 period, and a 14”Long in the MW1 period for BC designs. Prussia is more likely to use 8.2”Long and 6.7”Long in Twin or Triple mounts after the W1 period. They can build a BC (The Kaiser’s Design) with one Quad 8.2QF in Q position and 4 Quad 150mm (in A/B/Y and X, or maybe just A and X) in the MW1 period, if they do then they can use these mounts in CAs and CLs later on, optionally with the Long barrels. If they don’t build the experimental design in the MW1 period, then they can still build Twin or Triple 8.2”Long mounts in the IT period and later. Triple or Twin 6.7”Long may also be used on CLs.
* Hybrid uses Prussian guns.
* Japan has 18”(Tr only), 16”(Tw only), 14”(Tw only), 12”(12.7 if WW1)(Tw only), 10”QF, 8”, 7.5QF, 6”, 5.5” (up to the LW1 period, may optionally be used later instead of 6” in which case 7.5 replaces 8 as well), 5”, 5” DP, 4.7”, 4.7” DP, 4”, 4”AA, 3”, 3” DP, 3”AA, note the 4.7” DP is not height restricted like the British SDP. They may design a 3.9”DP at the start of the war, up until that time they have no 4”DP. If they use 5.5 instead of 6 right through the periods they may have a 5.5DP in the PLT period but may not build a triple. In this case the SADP will be 5.5 and 3.9. XXXX check this, otherwise the SADP will be developed from a 6DP and the 3DP.
* PSI has 24”, 20”, 18”, 16”, 15”, 14”, 13.5”, 12”(12.7 if WW1), 10.5”, 10”, 9”, 8”, 7.5”, 6”, 4.5”, 4.5”DP, 4”, 4”AA, 4”DP, 3”, 3”DP, are these XXXX Short?
* Russia has 16”, 14”, 12”(12.7" if WW1), 10”QF, 8”QF, 7”, 6”, 5”, 5” DP, 4”, 4” DP, 4”AA, 3”, 3” DP, 3”AA. In the EIT period they use Twin and Triple 7” instead of 8”.
* Ships of the Line has 12”, 10”, 8”, 6”, 5”, 5”AA (in the LW2 period), 4”, 4”AA, 3”, 3”AA, no DP designs can ever be built or used by this Nation.

## Design Philosophies

Some countries couldn’t seem to make a firm decision on what was the best way to lay out the guns on their ships, others seem to stick to the same concepts.

I have split the possible different themes into two groups (Major and Minor). Major Nations should be able to combat any other Major Nations, they all have advantages and disadvantages but these should cancel out. Minor Nations have some major disadvantages and will give more of a challenge when faced with a Major Nation. I have also included a “Slow Fleet” (limited to 21 knots for most Battlewagons) which can be combined with any Major Nation (or Consortium), and the concept of a consortium of more than one Nation taking a portion of the budget in each period which again can be combined with the “Slow Fleet” if desired. These themes are in (a) separate document(s) as they cover too many pages to include here.

The letters in brackets after each Nation are my suggestions for an abbreviation for that Nation that can be used with a ship name such as CA1J for a Japanese 1st World War heavy cruiser.

The Major Nations are (alphabetically) Albion(AL), America(A), Austria-Hungary(H), Britain(B), France(F), Germany(G), Italy(I), Japan(J), Nippon(Ni), Prussia(Pr), Russia(R) and The Confederacy (Build the Limit)(BL).

In addition the South American consortium (Brazil(Br), Chile(Ch) and maybe Argentina(Ar) – ABC), the Mediteranean Consortium (Greece(Gr), Spain(E) and Turkey(T)), and the Scandinavian and The Netherlands Consortium (Sweden(S), The Netherlands(N), Denmark(D) and Norway(No)) could almost be thought of as being as powerful as the Major Navies.

The Minor Navies are (alphabetically) African Defense League (AD), Barbary Pirates(BP), China(C), Dwarven(W), Elven(EL), Elven Option(EO), Hybrid(Hy), Pacific Sphere of Influence(P), Ships of the Line(SL) and The Colonies(Co). Check others XXXX

Though note that if The Colonies reach the Early Missile Period (1946) then they have a great advantage as they are the only Nation with Surface to Surface Missiles.

I suggest that players should follow the concepts below for BB and BC:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Country | EW1 | MW1 | LW1 | EIT | LIT | PL | WW2 |
| Britain | 5Tw13.5  4Tw13.5 | 4Tw15 | 2-4Tw15 | (3Tr16R) (3Tr16M) | {BC3Tw15} {BCQ&Tw14S} | Q&Tw14 3Tr16 | 4Tw15 3Tr16 |
| Albion | 5Tw13.5  4Tw13.5 | Ten13.5 4-5Tw15 | Ten15 4Tw16 | None | {BCTrTw16S} {BCTrTw15S} | Ten15 Ten16 | Ten15 Ten16 |
| Colonies | 4-5Tw13.5 Con13 | 4Tw15 Con13 | 4-5Tw15 Con13 | None | {BC2-3Tw15} Con13 | 4-5Tw15 Con13 | 4-5Tw15 Con13 |
| USA | 6Tw12 5Tw14 | 5Tw14 Ten14 | 4Tr14 4Tw16 | None | {BC3Tr12} | 3Tr16 | 3Tr16 Ten16 |
| Japan | BC3-4Tw14 | 6Tw14 | 6Tw14 4Tw16 | None | {BC3Tr12} | 3Tr18 3Tr12 | 3Tr12 3Tw20 |
| Germany | 5Tw12 4Tw12 | 4Tw15 | 2-4Tw15 2-4Tw16 | None | (BC3Tr11) (BC3Tw15) | 4Tw15 4Tw16 | 4Tw16 4Tw20\* |
| Prussia | 5Tw12 4Tw12 | 4Tw15 | Ten15 2-4Tw16 | None | {BCTrTw15} | Ten16 | Ten18\* |
| France | 5Tw13.5 | 2Q13.5S | 3Q13.5M 4Q13.5 | None | (BC2Q13S) | 2Q15S 4Q15 3Q16M | 2Q16S 3Q16M |
| Italy | 5Tw12 13x12 | 13x12 | 4Tw15 4Tw16 | None | {BC3Tw15} | 3Tr15 4Tw16 | Ten16 4Tr16 |
| Austria | 4Tr12 | 4Tr12 Ten13.4 | 4Tw15 4Tw16 | None | {BC3Tw15} | 4Tw16 Ten16 | Ten16 4Tr16 |
| Russia | 4Tr12 | 4Tr14 | 4Tr14 4Tw16 | None | {BC4Tw12} {BC4Tr10} | 4Tr16 | 4Tr16 |
| ABC | 5Tw14 7Tw12 6Tw14 | 5Tw14 7Tw12 6Tw14 | 5Tw15 7Tw14 6Tw14 | None | {BC5Tw12} {BC7Tw9.2} {BC6Tw10} | 5Tw16 7Tw15 6Tw16 | 5Tw16 7Tw16 6Tw16 |
| Sweden | 2S11Lo | 2Tw11Lo | 2Tr11Lo | None | {PB2Tw14Lo} | 2Tw15Lo | 2Tr15Lo |
| Norway Denmark | 2S9.4 | 2S8.2Lo | 2S11Lo or 2Tw8.2Lo | None | {PB2Tw11Lo} | 2Tw11Lo | 2Tr11Lo |
| Holland | BC4Tw14Lo | BC4Tw14Lo | BC4Tw15Lo | None | (BC3Tr11Lo) or (BC4Tw14Lo) | BC3Tr14Lo | BC3Tr16Lo |
| Greece | 4Tw12 | 4Tw14 | 4Tw16 | None | {BC3Tw14} | 4Tw16 | 4Tw16 |
| Turkey | 7Tw12 5Tw13.5 BC5Tw11W | 7Tw12 5Tw13.5 BC4Tw12 | 7Tw13.5 5Tw15 BC4Tw15 | None | {BC3Tw13.5} {BC3Tw12} {BC3Tw15} | 4Tw16 | 5Tw16 |
| Spain | 4Tw12W | 4Tw14W | 4Tw16W | None | {BC4Tw14W} | 4Tw16W | 4Tw16W |
| China | 2Tr12W | 2Tw13.5W | 2Tw15W 2Tr13.5W | None | {BC2Tw13.5W} | 2Tr15W 2Q12W | 2Tw16W 2Q13.5W |

Notes

Ten means a Triple in A and X locations with a Twin in B and Y superposed above them.

Q&Tw means a ship with Quad Turret in A and X with a Twin in B and/or Y superposed above them. This may be a single Twin Turret as in King George V, or 2 as in the original design for that ship. The LIT BC design is Quad in A and Twin in B. Note the Quad turret is a Radical Mount (see XXXX). The 14" is a Normal Gun even though it is new to Britain - there is nothing difficult about making it.

Tw means Twin Turret

Tr means Triple Turret

W means Wing, it only applies to Spain, Turkey and China in the list above, two of the turrets are on the wings close to, but behind, the bridge. If the ship has a target within 15 degrees of the bow or stern, then it can “wiggle” in its course to bring both wing turrets to bear in the same move and thus will always have 3 turrets facing any target (the Chinese Ships only have two main turrets per ship). Wiggling in this manner means that the ship will lose 6 knots of forward movement - but it is still considered to be travelling at full speed for aiming purposes. If the Wing guns are en-echelon as in some Nations, then they can fire the offside wing turret cross-deck but over very restricted angles. This will mean that the design will have a shorter length as there is one less turret on the centreline than would be normal for a ship carrying that many guns and will hence be lighter. In the case of China, the only two turrets are en-echelon. They can fire over 180 degrees on their own side. If the ship wiggles as above then they can also fire up to 15 degrees to the opposite side when firing forward or aft. Also the off side turret can be turned to fire cross deck. This takes one combat round to do (and to return the turret to its normal side) - the off side turret can fire at a target within 15 degrees either side of the beam. If they wiggle as above the angle increases to 30 degrees either side of the beam. British EDr BC with en-echelon guns may only fire 5 degrees forward of the beam and 10 degrees aft of the beam. If the en-echelon guns are Long as in the case of the Chinese/German and Prussian Nations then they do no damage to themselves. If the guns are not Long as in the case of Britain and the Colonies then they cause one tenth of the non-penetrating damage to their own ship for every gun fired cross deck per move. For Long guns, the range and belt penetration is as for the next type of gun UP and the deck penetration is as the next type of gun DOWN. They do their own type of gun damage though. For example a 13.5" Long gun has the range and belt penetration of a 15", the deck penetration of a 12" and the damage of a 13.5".

If an option is surrounded with parenthesis () then it is an option that the player may make and that option cannot be vetoed by the other players. This applies to the British and French EIT option and to the German, French and Dutch LIT BCs. In the British and French case the tonnage is moved from the LW1 period and in the case of the BCs it is moved from the PLT period.

If an option is surrounded by curly braces {} then it is an option that has to be agreed by the majority of the players. If the option is not agreed then no player may take that option. If the option is agreed then no player may be forced to take that option. Note that Germany, France and The Netherlands LIT BC are in parenthesis, not in curly braces so they can take that option if they desire.

In the case of Russia the 4 Turrets will all be at the same level (Turret A is actually 1 level higher due to the Forecastle) with the middle two turrets between the fore superstructure and the aft superstructure firing only to the side. Their firing arcs are restricted but they get more guns and the ships don’t cost more in Tonnage as they should without the superposed turrets - the ships should be longer than will be calculated.

USA shall build at least two of each design (6Tw12/5Tw14/Ten14/4Tr14/4Tw16), of course by other rules, only two of the 16” designs can be built in the LW1 period.

France's and Hibernians Quad turrets are all considered Normal Mounts provided that the calibre is within 2" of a previously built Quad Mount. They are considered to be a radical design (like all other Nations Quad Mounts) if their calibre is greater than 2" from a previous Mount on an operational ship. eg they have an operational ship with quad 15" to and want to build a quad 18".

In the ABC and Turkish designs the 7 turret option has two superposed forward, three aft with the middle turret (Y) superposed over the other two (X and Z) and two more turrets amidships (Q&R) at the same levels as X and Y. The 5 turret option shall have ABQYX. A third design could also be made (the other two designs have to be built first) with either ABQRYX or ABQZYX. It is not possible to mount a DP turret superposed above Y in the PLT period where there is a Z main gun mount (7 turret and second 6 turret design), but one could be mounted above Y on the other designs. All three designs can have a DP mount superposed above the B turret in the PLT period or later. ABC should build their ships in pairs – one 5 turret design and one 7 turret design, but can opt to build them in threes with the third being the 6 turret design. In the ABC case the first two use British guns and the third uses USA guns. The Turks shall build their ships in threes with the first two as ABC and the third is a German Battlecruiser design. They can opt to go for all German guns from the start of the MW1 period, in which case they no longer have access to British guns and may build both BB and BC using German guns.

Austria’s designs are all ABYX with B and Y superposed above A and X respectively.

In the case of Britain and France, they can use the XXXX Short Belt option (marked S) where both Turrets are before the Bridge, Albion’s LIT BC option shall be AQ instead of AB. Britain has a Restricted option (marked R) where all 3 turrets are before the bridge as in Nelson which further reduces the armour cost XXXX. These concepts can be used in the later periods too if so desired. XXXX

Where there are two options for a Nation, for example Britain and Albion, then designs from the two options cannot be intermixed, all designs have to be from one option only. Albion is a totally separate Nation from Britain, and is what might have been the standard if Britain hadn’t gone so experimental – if this option is chosen then 5Tw may be used instead of Ten on some of the designs if this is felt more likely by that player, but the intention is that Albion will always be restricted to four turrets or less from the EW1 period onwards (their earlier designs will feature more turrets when triple turrets were not possible). Prussia is what might have happened had the First World War finished earlier in a stalemate, and Germany had been able to continue building ships. Note I have deliberately restricted Prussia to a maximum of 15”Long (16” XXXX) guns (they were planning 16.5”) to stop an early arms race in gun size.

The navies of Sweden/Norway/Denmark and The Netherlands form a single confederation. The Norwegian and Danish navies can each be built from between 1/6th and 1/8th of the total tonnage in each category. The Swedish and Dutch navies should be roughly half of the remaining tonnage each – the Swedish navy may have up to one more ship in each category (one flotilla in the case of DD and so on) more than the Dutch navy. If the Scandinavian ships are built at 15 to 18 knots then use the Semi-dreadnought (SDr) rules including that the ships cost half tonnage. If the gun in each turret weighs no more than 2x11”Lo and the speed is between 21 and 24 knots then they are built with the Armoured Cruiser (ACr) rules. The wing turrets are limited to a maximum of 2/3 or 4 150mm in single shields or turrets with at least 3” of armour respectively for the EW1/MW1/LW1 periods and no casemates. Sweden may have one more wing 150mm than the Norwegian and Danish ships. If they are built at 24 knots or higher then use the Pocket Battleship (PB) rules if the turrets are too heavy for AC. From the PLT period onwards, all Scandinavian SDr, AC and PB may mount a superposed twin 150mm or twin AA/DP above their main turrets, this includes those ships built in place of cruisers. EIT and later ships can replace some or all of the 150mm secondary mounts with a twin 105mmAA on all ships of this confederation. The Netherlands can build up to half of their Battleship budget as Battleships, the rest should be Battlecruisers to better protect their Island possessions. The Netherlands home island should either be placed as the Northernmost or Southernmost home island and already controls the two nearest small islands to it (and have placed at least half an army division in each port on those islands) – see Map section XXXX. This confederation is an almost historical viewpoint, if the Consortium player is say Danish or Norwegian then they may replace Sweden in these rules with their own Nation.

The navies of Greece, Turkey and Spain form another “Mediterranean” confederation. Each navy should have approximately one third of the tonnage for each fleet similar to the Scandinavian and Low country confederation above. Historically all of these ships were of speed 21 knots but the ruler of this confederation is not limited to that speed. Turkey may optionally have BC in the EW1 period with 5 twin 11”Long German guns with two of the turrets en-echelon. Any number of Battlecruisers may be built in the later periods for the German ship (1 out of every 3 Battlewagons built). Her other ships all use British guns with the same limits as Brazil and Chile. Turkey should build ships in threes with one of each of the British designs (5 and 7 turret designs) and one of the German designs. She does have the option though at the start of MW1 XXXX to build only ships with German guns, in which case they could be BB as well as BC. If she does this then she can't revert to British Guns later. The order the ships are built in are up to the player, but they can’t for example build two German BC then one British Ship (eg Erin). The groups of 3 extend over the periods, so If Turkey were to be built as a Solo Nation then the EW1 must have one of each design and a second of one of them. The MW1 period will then have the other two designs and two more and the LW1 period will have the third design, another group of three designs and probably some more too. If all three countries are used for the Consortium then the situation gets much more complicated as any one of the three countries would have the fourth ship.

China has her two turrets mounted en-echelon on the Upper Deck in Q position (ie either PQ or QR), her ships also have light guns on a raised forecastle and aft deck, but not many. On Semi-Dreadnoughts a twin turret containing up to 9.4" may be mounted fore and aft, on Armoured Cruisers, this is up to 8". On BB and BC up to 2 single 6" may be mounted superposed fore and aft or two twin 4" DP from the LIT period. Also in the W1 periods, up to 5 single 3" can be mounted on either side of the funnels, later periods replace these with AAA using the Cruiser rules depending on displacement. On ships of less than XXXX tons halve the number of guns for a ship of double the displacement. XXXX

Barbary Coast is an oddball Nation, apart from the merchant fleet (which includes VE and some DE), all fighting vessels are submersible. They have no real carriers (except for the VE). They have twice the number of true submarines allocated to all other nations (and 2% of their steel may be added to the Normal Submersible Pool). The weight of these extra true submarines comes out of the appropriate Carrier Pool. The other naval ships whilst they are submersible are not classified as Normal Submarines. Hence the Barbary Coast has double the number of Normal Submarines than any other Nation, and most of the other ships are submersible but do not have any torpedo tubes that can be fired from underwater. They take 3 moves, 15 minutes XXXX, to get their above water diesels working after surfacing (travel at underwater speeds while this is happening), and 15 minutes to close them down before diving (again travel at underwater speeds). SBB have a quad 20” Pneumatic Dynamite mounting forward of the conning tower with a twin 4” AA (DP after the EIT Period) above it. Aft of the conning tower are two twin 4” AA (DP after the EIT Period) superposed. On either side of the conning tower is one twin 20mm. From the Late WW1 period (LW1) a larger SBB can be built that has two quad 20” Pneumatic Dynamite mountings forward. Only 8 of these can be built in the LW1 period, any number can be built in any later period that allows Battlewagons to be built. SCA Cruisers have a quad 10” Pneumatic Dynamite mounting forward of the conning tower with a twin 20mm superposed over it. Aft and beside the conning tower is as per the Battleships. SDD Destroyers have two twin 4” AA (DP after the EIT Period) superposed before the conning tower, one twin 20mm aft of the conning tower and one single 20mm each side. All three types also have a trainable quintruple 21” Torpedo Tube right aft. This pops up out of the hull (one move), may be pulled down again after firing (one move) and reloaded (one move per tube loaded). Battleships carry 3 reloads, Cruisers 2 reloads and Destroyers 1 reload. The original design concept for the trainable TT was to keep enemy destroyers at bay while the ships get up to speed and prepare the pneumatic guns. None of these guns or torpedoes can fire for one combat round after surfacing except for the AAA. They also have a Low Angle Controller (LAC) and in the LIT period onwards a High Angle Controller (HAC). I can't see that a Radar fit is appropriate for these ships, but the players may vote on it or the Umpire may direct this decision. Displacements are in the section on Submarines XXXX. They also have a light “carrier” submersible SVL, but instead of aircraft, they carry up to 18 MTB1. Each has a hanger covering most of the top of the submarine (with a conning tower aft). The MTBs are stored in three columns of six with a narrow platform between them. They take one move to surface, flooding the hanger at the same time, but take three moves to pump the hanger out before diving. If they crash dive without pumping out the hanger there is a 30% chance (1-3 on a ten-sided dice) that the ship will sink. MTB will be launched six per move (two rows not 1 column) and can only attack in groups of 3 or less (though several groups can attack the same target from different angles) in the same way that aircraft attack. Both groups of three will be travelling at 6 knots, for the first move, but the second group will have only travelled half the move. MTB1 weigh 50 tons and have two 21” torpedo tubes, a twin 20mm forward, and 1 single 20mm each side. From Start of Hostilities a heavier MTB2 can be built, weighing 60 tons, with four 21” torpedo tubes, a 6pdr forward, twin 20mm on each side and aft. Because these are longer (60 feet), only 15 can be housed in one SVL. From 1942.i.1, or three months after this nation is engaged with a 6pdr armed DE (details below), whichever happens first, MTB3 can be built. These weigh 70 tons and have a twin 6pdr forward and aft and two twin 20mm each side as well as the four 21” torpedo tubes like the MTB2. They are 75 feet long and only 12 of them can be housed in a SVL, in three columns of four. MTB attack, like and obey all the rules of, Swordfish Torpedo Bombers including the enemies upgrading AA and AAA. In addition any enemy attacked by MTB can start to lay down, three months later, a DE that has a pair of single 6pdr mounted en-echelon both forward and aft, two more 6pdr singles each side and 3 twin 20mm each side, one forward, one aft and one amidships. XXXX blind spots in firing arcs. No other nation can lay down such a ship until they are attacked by MTB. The SVL has a 6pdr mounted on the top of the hanger forward and another aft of the conning tower, there is also a twin 20mm either side of the conning tower and another on each side of the hanger forward of the conning tower. MTB torpedo tubes can be reloaded at the rate of one reload per row of 3 MTBs per move, so it takes 6 moves to reload all three MTBs – all rows can be reloaded at the same time. After the Start of Hostilities any older SVL can be upgraded with a second overhead crane so that the after torpedo tubes can be reloaded on the new MTBs. This allows two tubes to be reloaded on a group of three MTBs per move, and will take one month in a completion dock to make this upgrade. Newer SVL completed after the Start of Hostilities will have this upgrade when it is completed. All three MTB types can travel at 60 knots for six moves. By giving up one 60 knot move they can travel at 6 knots for 24 moves, by giving up one of the 6 knot moves they can remain stationary, ready to sprint after their prey for four moves XXXX. The Barbary Pirates have developed an underwater communications system, which allows submersibles relatively close to each other (half a mile) to communicate with each other. Only simple instructions can be sent, such as location of the sending ship, course and speed, or instructions to other ships to move to a location or take a set course and speed, or attack a specific target, eg third battleship in the lead division. Up to half the tonnage of each destroyer period can be standard non-submersible escorts for the merchantmen. These can have 4 to 6 4” AA (or QF in the EIT period or DP later) in single or twin mounts. XXXX number of each type of ship – up to half the tonnage !

In the case of designs with 3 turrets, then Britain, USA and Japan will historically have the superposed turret at the fore end in position B, Germany and Italy will have it supposed aft in position Y, though they could also have it mounted at the fore end. See for example the Light Cruisers and Scharnhorst. If there are two turrets aft on a three-turret design then the Hull Weight of the ship can be reduced by 10%.

Historically only Britain started building Battleships in the EIT period (and completed them), at Britain’s (not Albion) choice they may push 1 or 2 (no more) ships from the LW1 period to the EIT period. These are the only British ships built before the PLT period that may mount 16” guns. These ships may not exceed 35,000 tons and will have 6” twin turrets on the upper deck. No more than 6 of the 6” may fire to any one side – this can be achieved by mounting turrets in X, Y and 1 each side or 3 each side for example. No other Nation can veto this change. Nations with Quad turrets such as France and Hibernian may also move the same tonnage to the EIT period to build up to two ships each with 2Qu16 according to their standard build rules and the rules relating to Britain in this paragraph.

Historically only Germany and France built Battlecruisers during the LIT period and The Netherlands planned to build some. These two (3) Nations can at their option pull enough tonnage from the PLT period forward to the LIT period to build 1 or 2 Battlecruisers (not Battleships) of up to 30,000 tons each. They are restricted to a main gun armament weighing no more than 3,700 tons per ship including the armour for the turret, and will have a secondary armament weight of no more than 650 tons including High Angle Controller(s) and a tonnage of XXXX for AAA. These ships will be complete before Start of Hostilities. The possible designs are shown in Parenthesis in the table above.

Optionally with a majority vote of all players all nations can build Battlecruisers in the LIT period using the same rules – the possible options are shown in curly braces in the table above. In this case, the Albion designs are a Triple in A with a Twin above it using the short belt rules XXXX. All of the other options should be obvious. In some of these cases there will be very little weight for armour, in the case of the ABC countries for example, singles could replace the superposed twins, to reduce the weight and allow for more armour. Both of the turrets in British, Albion or French ships may be forward using the Short Belt rules XXXX – all other nations will have one forward in A and one aft in X. Even if the majority of players agree to allow BC to be built during the LIT period, no player can be forced to actually do this.

No Nation can build ships with a total of more than sixteen 16” guns in the LW1 and EIT periods combined, unless specifically stated in the section describing that nation (Britain is allowed 18 in the EIT period for example). This means Sweden can build 4 ships with 2 twins each. Greece and Spain can build one each, or Greece could build two and Spain could build an earlier design, or vice versa. China can only build ships with a maximum calibre of 15" Long in these periods to a maximum of sixteen guns between them.

Some Nations in the above table do not get a 16” gunned design before the PLT period, they are mostly compensated by having access to more 16” guns per ship in the PLT or W2 periods. With the agreement of the majority of players, those nations (except China) may push up to two ships to the EIT period with 4Tw16 turrets using the same rules as for Britain. These may have single 5” BL shields on the Upper Deck for the secondaries where appropriate. If this is done then no Nation can build a ship with more than 10 16” guns on it in any period. Russia for example would build a ten gun ship with the twins amidships for example.

Japan has the option to build ships with 3Tw20 after the Start of Hostilities, or may replace the Tr18 with a Tw20 if the design is ready in time to build it.

\* XXXX Germany can start to build ships with 4 twin 20” on 1943.i.1 but are unlikely to complete them, they can build a 5 Twin version a year later with the extra turret in the Q position. Prussia can start to build ships with 4 Twin 18" Long on 1943.i.1 and Ten gun versions of the same gun a year later in the normal triple and twin configuration.

All nations can start to build ships with either 3 triple or 4 twin 18” on 1942.i.1 (Germany in 1941.i.1) and ships with the same layout but 20” guns on 1944.i.1. XXXX

With the agreement of the majority of the players, these dates for 18” and 20” can be bought forwards one year, including the Japanese 20”. If this is done then any Japanese 18” PLT designs complete 6 months earlier than they would otherwise, and Japan can lay down the 20” design six months before Start of Hostilities – the tonnage placed into them must be accounted for in the PLT build.

If Battleships or Battlecruisers have DP mounts (LIT onwards) then they may only be mounted in Single or Twin Turrets or shields. DP mounts (or 6” Twin or Triple Turrets) may only be superposed above the main armament during the PLT and later periods, they cannot be mounted in those positions during the LIT period if Battlecruisers are built. If the remaining PLT tonnage is used to build a PB it will complete in the LIT period but it is still classified as a PLT design so may have DP (or 6” Twin or Triple) turrets superposed above the main guns.

Cruisers can either follow the standard designs (3 or 4 Twin or Triple 8”/7.5"/6”/5.5” as appropriate or Ten8 or Ten7.5 or Ten6 or Ten5.5), or follow the gun layouts described above for BB/BC.

So for example Russia may have 4 Triple turrets laid out as APRX with the two centre turrets at the same level as the rear turret mounted on the centreline.

The ABC countries (Argentina/Brazil/Chile) might have a Cruiser with 7 Twin 6” or 8”. They could also build a 5 Turret ship with a Twin forward and aft, each with a Single above it and a further Single or Twin Midships – they could also build 5 Twin Turrets if they chose.

For Albion, they should build eight or Ten gun cruisers (a Triple in AX with a Twin superposed above them in BY) but not 9 or 12 gun Cruisers.

If Cruisers have DP mounts (LIT onwards) then they may only be mounted in Single or Twin Turrets or shields. Only Light DP may be mounted on the wings in twins until EW2 XXXX when medium twins may also be wing mounted, heavy DP can only be twin mounted on the wings in the LW2 period and later.

The Scandinavian countries may build Pocket Battleships instead of cruisers. If they are built at 21knots with 2S11” Long or 2Tw8.2”Long then they may be built with the Armoured Cruiser Rules. If they are built at 15 knot) up to 21 knots with 2Tw11”Long then they shall be built with the Semi-dreadnought (SDr) rules. This includes the usual half tonnage cost rules. If the Scandinavian Countries build true cruiser with speeds of greater than 21 knots, then they may use either Single or Twin 8” or 6”. They shall mount between 5 and 8 such guns on their cruisers. Sweden (and only Sweden, not the other members of the confederation) may build CLG (Gotland) during the LIT and later periods (see Cruisers XXXX). The Netherlands shall only build true cruisers with their EIT and later Cruiser Pools and shall not build Armoured Cruisers with their CA1 budget. They will probably build either or both of the CA1G designs, and the CL1C/D or E designs (with 150mm guns) for their CL1 Budget. They could also mount 7.5” like their historical cruisers in the CA1 Budget. In the LIT period they may mount triple 150mm in three or four turret designs.

Greece and Spain may have 3 or 4 Twin 8” and Turkey may have 3 or 4 Twin 7.5” or 8”. Light cruisers for the confederations may be up to 10 single or 3 or 4 twin 6” (or 150mm).

Spain may at their option mount 4 Twin turrets in their Wing configuration.

Prussia XXXX or Germany could build cruisers using the two quad turrets on which some design-work was done during the First World War, but it is unlikely that they could be built under 10,000 tons. The Kaiser designed an armoured cruiser over dinner one night with some of the Naval Dignitaries and asked for some design work to be done on it. The suggestion was for a ship of circa 14,000 tons with a quad 5.9” turret in A and X positions and a quad 8.2” in P position plus several other 5.9” in casemates. The armour would have made it immune to 6” fire. It would have died valiantly against a BC of course but could have taken out a whole squadron of CL. A PB built using two quad 8.2” could be possible, but it would largely be an overkill if it met any cruisers. Graf Spee’s problem was that its 11” shells were passing straight through the paper thin British Cruisers before the fuze set the explosive off. If she had enough HE shells left when she encountered them, then the result may have been considerably different. It is possible that this design work eventually resulted in the Pocket Battleship concept. If a German Using Nation does build the Kaiser’s design as a Battlecruiser during the W1 period then they can use either of the Quad turrets on Cruiser or Pocket Battleship designs from the EIT period onwards.

Chinese cruisers can be two twin 8" or 2 triple 6" with two twin 4" QF/AA or DP turrets fore and aft as appropriate. AA/AAA armament is half what you would find in a normal cruiser of double that size. So if the cruiser was 5,000 tons then multiply by 2 to find the AA/AAA/HAC and halve the amount of each since in general these ships will have half the guns of the normal sized cruisers. If you use their actual weight then they would have far too little in the way of AAA armament.

Barbary Coast Cruisers are described under the Battleship section.

All Chinese and Barbary Coast cruiser designs have one HAC in the LIT period onwards.

For Destroyers, similar layouts can be chosen with twin turrets or single turrets or shields for ABC ships, a Twin and Single mix could be chosen by countries using “Ten gun” designs but only up to 8 guns can be mounted on a Destroyers. The Lighter Destroyers are likely to be single turrets or shields only, but no more than 4 guns of 5” or larger calibre (the Japanese Destroyers may have a fifth 5”). The 5 and 7 turret ABC designs will have to use 4” (possibly with some in twin turrets in the case of the 5 turret design), no more than 8 guns of 4” may be mounted in this case.

The Scandinavian Destroyers should mount their guns in two twin turrets (1 fore, 1 aft) and the Spanish Destroyers may mount their turrets in the Wing configuration. Half of the Netherlands Destroyers in each period shall be at least three knots faster than her BC of the same period and shall have extra fuel to give them a greater range to allow them to stay at sea longer.

The Chinese Destroyer design is two twin 4.7" QF (LIT onwards 4.7"DP) in their normal layout, and a twin 3" QF/AA (LIT 3"DP) forward and aft, but a DH design could have 4.7 in all locations.

Chinese Lighter Destroyers may be two twin 4" QF on the wings and a twin 3" QF/AA fore/aft in the EIT period or four twin 4"DP in the LIT period or later. All Chinese Destroyer designs have one HAC in the LIT period onwards.

XXXX Barbary Coast Destroyers are described in the Battleship section above, and will have one HAC in the LIT period onwards.

## Fictional Battleships

### The Infernal Triangle

Most Project Planners will tell you about the Infernal Triangle in any Project – Time, Cost and Effort. These also apply to Naval Design but there is a second Infernal Triangle as well – Speed, Armour and Gun Power. Albion is the ultimate example of this, they have 3 knots extra speed when compared with Britain in most (though not all) periods. However they have to give up one of these items (Speed, Armour or Gun Power) on every Battlewagon or Cruiser. It may differ from one class to the next – for example an EW1 BC could give up Armour or Gun Power while a BB from the same period could give up Speed or Gun Power. On the Gun Table for Albion, the heavier Gun Power has RAS in front of it, indicating that if you want to take that Gun Power then you need to “Reduce the Armour or Speed”.

### Reduction of Speed

In the case of Battlewagons, if this option is taken, this will always be a reduction of 3 knots for maximum speed compared with the speed quoted against the lower Gun Power option. For example the Albion LW1 BC Gun Table shows (Ten13 or ABX XXXX or Y or Q?-Tw15)-30Kt so if it is decided to reduce the speed to 27 knots then the player may select the heavier gun armament of (AYX-Tw15).

In the case of Cruisers, this will always be a reduction of 6 knots for maximum speed compared with the speed quoted against the lower Gun Power option. This will reduce the ship to 33 knots as all Albion Low Gun Power cruisers are capable of 39 knots, but see the Reduction of Armour section on Cruisers.

### Reduction of Armour

In the case of Battlewagons, if this option is taken, this will always be a reduction of 3” to the sum of the Belt and Deck armour compared with the armour quoted against the lower Gun Power option. For example the LW1 BC Armour Table shows 15” for this type of ship for all Nations other than Britain, America, Japan and Germany. A Reduction in Armour would allow 12” if the player selects the heavier gun armament of (ABYX-Tw15 or ABX-Tw16). Note to calculate the sum for the armour, add the thickness of the Belt to the Deck doubled – 12” sum would allow a Belt of 8” and a Deck of 2” for example.

In the case of Cruisers, this will always be a reduction of 6” from the maximum thickness of the sum of the armour compared against the lower Gun Power option. XXXX the sum for all CA and CL is 12” at a maximum XXXX table in Summary says 8.75 for this – note the minimum armour sum for CA is 4 (2 and 1) and for CL is 2 (1 and 0.5), so this reduction would leave the ship with 6” which could be 3” Belt and 1.5” Deck. For Cruisers only, another option would be to reduce the speed by 3 knots and armour by 3”, giving for example a speed of 36 and a maximum armour sum of 9”. XXXX note that 7.5” gunned ships are restricted to 33 knots?

### Reduction of Gun Power

In the case of Battlewagons and Cruisers, the description will be RAS followed by the Heavier Gun Power options, then a description of the Lower Gun Power Options. If it is decided for a class of ships not to reduce either the speed or the armour, then Albion must take the Lower Gun Power description.

### Other Nations

In the case of Battlewagons and Cruisers, Other Nations may increase the speed by 3 knots if they reduce the Armour Sum by 3”. Speed may not exceed that given for Albion in the same period and for the same type of ship – Albion already has 3 knots added to their speed compared with other Nations, except that any other Nation may have 24 knot BB XXXX BC in the EDr period and a 30knot BC in the EW1 period. XXXX compare with Britain? Not all Albion periods are 3kn higher than Britain.

### Nations with 15” and 16” Guns

XXXX In the case of Nations with both 15” and 16” guns in the MW1 and LW1/EIT periods, they may choose to reduce the calibre to their Intermediate calibre and 15” respectively and add 3 knots to the speed of the ships. This decision is made across the designs of all ships – if it is made then no 16” guns may be mounted in the LW1 period and the limit for that calibre is moved to 15” – no more than 16 guns of 15” calibre may be mounted in the LW1 period and none may be mounted in the MW1 period. However on the ships mounting the Intermediate guns, the number of turrets mounted on the ship is increased by one from the number of 15” turrets previously mounted. If the calibre of the Intermediate is between 13.4” and 14” inclusive then that extra Q turret will be a twin. If the calibre is smaller than 13.4” then the new Q turret may be a triple. An Intermediate gun is one that is greater than 12” (including 12” Long and 12.7) but not larger than 14”. A 14” Long is considered to be a 15”, and a 15” Long is considered to be a 16”. If Britain chooses this option then their 15” gunned ships will be Hood equivalents in the LW1 era rather than Nelson equivalents in the EIT era.

## The Slow Fleet

### Introduction

This fleet design was originally considered as an option for the American Navy, but I see no problem in it being taken by any of the major Navies (known as the Host Nation). The minor navies all have specific gun layouts and are not suitable to take this option.

For all ships built or started before Start of Hostilities, the maximum speeds for the following ship types shall be:

All SDr and first two EDr BB = 18 knots (see below)

Other BB, AC, VA, VB, VF, VL, VS, DE, MB = 21 knots

German and Prussian EIT PB, BC before MW1 = 24 knots

CA1, CL1, LIT PB, PLT PB, MW1 to PL BC = 27 knots

CA, CL, CA6, CL6 = 30 knots

Destroyers = 33 knots

Note, only one PB can be built in the PLT period to use up otherwise unused tonnage (German and Prussian Using Nations can build as many PB in the PLT period that they want but the extra ones will not be complete by Start of Hostilities), it completes in the LIT period but may not be armed with any gun larger than a 12” except for France (13”). Note though that German and Prussian Using Nations could build PB in the EIT period but they would be limited to 24 knots and mount up to AXTr11Long.

If a Player selects the Slow Fleet Option for their fleet then they get extra 16” guns or 15Long for their LW1 ships. The exact number depends on the Nation and the speeds allowed for their ships. Some countries such as America cannot build Battleships faster than 21 knots until the PLT period. If they accept the Slow Fleet restrictions then they cannot start battleships faster than 21 knots until after Start of Hostilities but can build one more 16” armed Battleship in the LW1 period. Other countries can have faster battleships in the MW1 and LW1 eras such as Britain, if they give up this extra speed until after Start of Hostilities then they can add two more 16” armed Battleships (4 in total) in the LW1 era.

Only two BC can be built by the Slow Fleet across all eras up to the EIT era - in the LW1 period they may have more if they are armed with only 2 or 3 Tw16” – for example two with 6 guns and one with 4 guns. Up to two BC may be bought forwards from the PL era to the LIT era with the agreement of all players (all players get that option if the agreement passes), but in this case they may not be armed with any gun larger than a 12” except France who may mount 13” (not Albion). Note France, Germany, Prussia and The Netherlands do not need permission to build these LIT BC. Note also that Nippon may build one Type 13 with ABYXTw18 instead of two ships with 16” guns, but this is limited to 27 knots. In a Slow Fleet because they can build ships with 24 knots in the MW1 and LW1 era, they may add a second Type 13 at 27 knots or two Nagato types at 21 knots. In a normal British Using Nations Fleet, they may build two G3 type ships with ABPTr16 at up to 27 knots in the EIT era, in a Slow fleet they could have four of these at up to 21 knots

Since The Netherlands fleet is all BC there can never be a Slow Scandinavian or Netherlands fleet.

PLT ships may be armed with Twin and/or Triple 16” (8, 9 or 10 guns per ship). Japan may still build ABXTr18 which are still Radical. Nippon may build 8 or 9 gun ships (ABYXTw18 or AXTr18/BTw18 or ABXTr18) but all mounts are Normal instead of Radical (the Tw18 is actually Known). The Confederacy (Build the Limit) may build 16” gunned ships as per the other Nations or build more of their Build the Limit design – the Tr18 won’t be Radical in this case as the problems will be sorted during the EIT period. The South American fleet may build 16” guns on their Argentinian or Chilian designs or 7Tw15 on their Brazilian design (the only slow fleet to mount this calibre, Brazil may not mount 16” until the EW2 era). Note that all PLT Battleships are still limited to 21 knots in the Slow Fleet.

New ships laid down after the Start of Hostilities are not restricted in Speed or the number of guns that they mount providing that they have access to the gun and mount.

### Options

Any of the following Nations may use the Slow Fleet rule, specific rules for specific Nations are included below.

A Slow Nippon may have two Type 13s (BCs at 27 knots) or one Type 13 and two 21 knot ships with 4Tw18.

A Slow Confederacy (Build the Limit) may build one 18” and one 16” ship. XXXX can they build ships faster than 21knots or should this be 2x16.

The following Nations may build 4 ships with 16” guns:

Albion, Austria, Britain, Germany, Italy, Japan, Prussia, South America, and

the following may build 3 ships with 16” guns:

America, France, Mediterranean XXXX or should this be 4 ships, Russia XXXX check.

### Map

There are no non-standard items relating to the Map for this Option.

### Battlewagons

Battlewagons have three calibres that they can be armed with, Light (11 or 12”), an intermediate calibre and Heavy (16”). The Intermediate calibre (designated Int on the lists below) is 13” for Albion (France may use this calibre on LIT BC or PL ships), 13.4” for the French and Austrians, 13.5” for the British, Italians and Spanish and 14” for the US and the Confederacy, Chile, Argenitina, the Germans, the Japanese, and the Russians. The Prussians use the 12Long as their intermediate gun, and the Germans may do so as well, although all designs using Int guns would have to use that calibre and not a 14”. German Using Nations may not mix 14” and 12Long in their fleet. If they make the choice to go for 12Long, then their earliest ships shall be armed with 11Long instead of 12 too. Note 15” cannot be selected by any Nation for the purposes of the Slow Fleet only (except Brazil, see specifics). The Mediterranean or South American Consortia could be selected for this concept – the Spanish use Italian/Austrian guns, Greece and Argentina use American guns, Brazil, Chile and Turkey uses British guns and Turkey also uses German or Prussian guns. In the case of Turkey, the German or Prussian ships will have to be BC under their standard rules. Note, Brazil may use 13.5” British guns if they wish or the 14” gun on the Chilean Battleships to maintain the same calibre across all countries.

The maximum possible Battlewagons are:

SDr era - standard 18 knot SDr, except Italy may have ships with AXSi12+WingSi/Tw7.5” or 8” (or singles that are lighter than a Tw8), at 21 knots. Britain’s SDr period Dreadnought shall also be 18knot.

EDr era - The first two ships in this era in the Slow Fleet shall be 18 knots (including Britain and Albion) and will have the gun layout of the host Nation, the second two may be 21 knot on the same layout.

MDr era - all Slow Fleet MDr ships may be up to 21 knots and will follow the host Nation rules but no Nation may mount Int guns except for America which may mount ABZYXTw14 in the last two of their ships in this era. XXXX US gets 14” in EW1 not MDr

LDr era - unlikely that any Nation will have these but they will be X or XII 12” guns if they exist or X14” for American Using Nations, XXXX Orions !

EW1 era - Austria and Italy may have 2 BB@XII-XIII12”, 2 BB@X-Int, and Russia may have 4BB@AQSXTr12”, other Nations may have 4BB@ABQYXInt though America’s third mount would be in Z not Q with Y superposed above Z & X. XXXX Albion may only have ABYXTwInt?

MW1 era - America and Japan may have 2 BB@XInt, 2 BB@XII-Int, and Russia will be 4BB@AQSXTrInt as before, other Nations would have 4 BB@XInt

LW1 era - up to two BC with 4Tw16 (three if 2 or 3Tw16 per ship) at 27 knots and up to a further one or two ships as per the lists above using Tw16 (2BB@3Tr16 for British Using Nations or 2BB@5Tw16 + (2BC@4Tw16 at 27knots or 2BB@7Tw15 at 21 knots) for the South American Consortium. Note Nippon shall have ABYXTw18 on their BC (Type 13) at 27 knots with either a second Type 13 or two ships armed with 4Tw16 at 21 knots.

LIT up to 2 BC (if allowed) and up to 1 PB with maximum of 12” calibre (11Long for German or Prussian Using Nations or 13 for France only)

PLT any number of BB (no BC) with 2, 3 or 4Tw16 or Ten16 or 3Tr16 or 4Tr16 (Russia only), but are still limited to 21 knots. Nippon may build AXTr18/BTw18 or ABXTr18 or ABYXTw18. The Confederacy may build their Build the Limit design or ABXTr16.

Of course less well armed ships could be built - Austria could build 4 EW1 BB with ABYXTr12, and 4 MW1 BB with X-Int for example.

In the lists above a single X on its own signifies ten guns on the ship, the player selects whether this is 5 twins (eg America/Britain/France/Japan) or 2 triple and 2 twins (America/Albion/Austria all ABYX or Russia AQSX XXXX).

In the lists above XII means 12 guns – usually 4 Triple but possibly 2 Triple and 3 Twin or even 6 Twin as in Ise or 7 Twin in Argentinian designs.

XIII means 13 guns with Triples in AQX and Twins in BY as in the Italian ships.

### Cruisers and Smaller Ships

All other ships are as per their normal Nation’s designs except they are limited to the speeds described above. All other ships are as the host Nation and are converted as per the host Nation if appropriate.

### Mothballed Destroyers

Note however that 21 knot MB are not LRE, to convert an MB to DAA or LRE it is necessary to remove the old inefficient 21 knot engines and replace them with more modern 21 knot efficient engines.

### Carriers

The Carrier Fleet is 3 EVF, 2 EVL, 3 LVF and 2 PVF, but all carriers are limited to 21 knots. When they have aircraft on their decks ready to take off (or aircraft in the air ready to land), they can speed up to 30 knots, launch all the aircraft that are to be launched (or land the aircraft waiting to land) then slow down to 21 knots again on the first move in which no aircraft are launched or landed. They cannot use this extra speed to limit their damage if they are under attack – they will always be considered to be 21 knots for any attacker. If there are aircraft waiting to be launched or landed, they must be launched or landed at the maximum rate. Each catapult may launch two aircraft per move and each lift may prepare one aircraft per move. Prepared aircraft may be parked in the area behind the catapults (depending on the carrier type) and between the lifts.

In a three Country Nation the carriers will follow the rotation of the Countries, for example in the South America navy (ABC), the first two carriers in each era follow the British rules, the third the American rules, 4th and 5th the British rules etc. This means that the two PVF may have angled flight decks and deck parks fitted while they are completing. The first carrier started after the Start of Hostilities will be a British design again as it is a new era. If desired the British ships may be of the armoured variety instead of VF, including one heavy armoured carrier in the EIT era. If this option is chosen then all the British carriers must be armoured throughout each era right through to the end of the campaign.

### Submarines

Submarines are built according to the rules for the Host Nation(s).

### Completion

There are no Special rules relating to completion of PLT designs other than that described under Carriers.

The rules relating to Speed do not apply to new designs started after the Start of Hostilities. Any number of fast BB or BC may be started after Start of Hostilities.

### SADP and Auto Guns

The SADP and Auto Guns are the same as those of the Host Nation. For example the South American Nation would have 4.5SADP, 6Auto and 3Auto for the British ships and 5SADP and 6DP, 6Auto and 3Auto for the Argentinian ships

## Consortiums

In the lists above I have included some Consortiums where a Nation contains multiple “Countries”, examples are the Scandinavian and Low Countries Consortium, the Mediterranean Consortium and South American Consortium (ABC). There are also Minor Navy Consortium such as the ADL XXXX and PSI. This section relates to the Player designing a Consortium of two or more of the Major Nations introduced above (or Consortium could include 1 or 2 Minor Nations). The tonnages allowed for each Nation apply to the whole Consortium and not to each Country.

The Consortium may also take advantage of the Slow Fleet Rules above, but those rules apply to the whole Consortium and the extra barrels of 16” or 18” allowed for a Slow Fleet apply to the whole Consortium, the Countries of the Consortium must share the allowed heavy guns between them. An example of a Slow Fleet Consortium could be Britain and Nippon with 2x18knot Aki, 1x18knot Dreadnought in the SDr period, 2 Dreadnought and 2 Kashima XXXX one of each at 18knot and 1 at 21knot in the EDr period, 2 Bellerophon and two ABQYXTw12 for Japan in the MDr period, 2 Iron Duke and 2 Japanese ships with 5Tw14” (one could be a Kongo as Slow fleets are allowed 2xBC) in the EW1 period, 2 more Iron Duke (21 knot, remember no 15” in slow fleet) and 2 Fuso (21 knot) in the MW1 era, 2 G3 at 21 knots + 1 Type 13 at 27 knots in the LW1 era. Plus of course other 14”/13.5” armed ships to fill out the budget.

Suggested Consortium would be (the numbers after the suggestions show the fraction for each Country) Napoleonic (France ½ and Spain ½), Entente Cordial (France ½ and Russia ½), Triple Entente (Britain 1/3, France 1/3 and Russia 1/3 or ½, 1/4 and 1/4 respectively), Early Axis WW1 (Germany 1/3, Austria 1/3 and Italy 1/3 or ½, 1/4 and 1/4), Late Axis WW1 (replace Italy with German Turkish designs), Late Allied WW1 (Britain ½, France 1/6, Russia 1/6 and Italy 1/6). Another Consortium suggested by Lord Brassey and other authors in the late 1880s and 1890s before Germany passed the disastrous Naval Act (from the point of view of such a Consortium) would be Britain ½ and Germany ½ (or 2/3 and 1/3).

Any Consortium that has a Country with access to 6Auto may not include a Country with access to 4SADP (this explicitly prohibits a British Using Nation from being joined with an Albion Using Nation or The Colonies). Also American and Confederate (Build the Limit) cannot be paired, or German and Prussian Using Nations, or Japan and Nippon Using Nations. Also the Dwarven navy should never be paired with any Elven navy.

One of the biggest issues for a Consortium will be the Carrier Force, Consortia with 1/6 proportions especially will have problems, I suggest following the Scandinavian concept where most carriers are VL and add the DAAHS using the same rules. Share the aircraft across the Countries within the Consortium according to the proportions chosen as closely as possible.

If two nations form a Consortium where at least one of them has two options for their secondary and DP armament then the option will be taken that allows them to be aligned into the future. An example would be Albion and Nippon where Nippon can either use 5.5” & 7.5” or 6” and 8”, in this case Nippon will have to choose the 5.5/7.5 option. Nippon will be able to use 5.5DP but cannot use Tr5.5DP on any of their designs but can use 5 and 5DP if they wish.

If you have already run at least one campaign and want a bigger challenge then you could decree that each player must include at least one Minor Nation as described above. But note, this could be hard, for example if you have say Britain with the Scandinavian/Low Country Consortium then Norway and Denmark would only have 1/12 of the budget – probably enough for 1 or 2 ships in each country – it might be better to pair Britain (1/2) with Sweden (1/4) and The Netherlands (1/4) if that is acceptable to the other players and/or the referee. Similarly if the Mediteranean Corsortium is paired with America or Britain then Turkey’s German portion will only be 1/18th of the budget.

## Battleship Design Specifics

Designs where there is a greater weight of main armament aft of the aft superstructure than there is before the bridge means that the centre of gravity is lower and the ship does not have to be so wide – forward turrets are at levels 4 and 5, the aft turrets are at levels 3 and 4 so the weight is mounted lower. Reduce the Hull Weight (not the armour) by 10%.

### SDr Period Specifics

None or up to four SDr Battleships may be included in the WW1 budget, at half the normal weight of the designed ship (ie 4 would weigh the same as 2 other Battleships of the same weight). These may have been demothballed as they use Coal which is plentiful in an Oil poor environment. If the player chooses not to demothball them until after the Start of Hostilities then there is no cost for these ships but no more than four may be included in the navy.

Similarly up to four AC (Armoured Cruisers) may be built, those that have been demothballed cost half their weight and those that haven’t are free.

There could be more than one design in each type, eg Nelson and King Edward VII but all must be semi-dreadnoughts with turreted secondary mounts on the wings.

### EDr Period Specifics

Up to four EDr Battleships or Battlecruisers may be built but all are mothballed and cost nothing. All are Oil fired.

### MDr Period Specifics

Similarly up to four MDr Battleships or Battlecruisers may be built but are all mothballed and cost nothing, they are also Oil fired.

### LDr Period Specifics

By default there are no ships from this period, they were either all sunk during WW1 or scrapped as part of one of the Treaties. If more ships are desired, up to six of these can be built at no cost and they would also be mothballed and Oil fired.

### EW1 Period Specifics

Four EW1 period ships must be built, they cost their full weight out of the W1 battlewagon budget. In the case of America, at least two of the 12” gunned ships in the EW1 period must be built.

Most EW1 ships use their Nation’s Intermediate gun, ie 13” to 14”, there are exceptions such as Brazil’s Agincourt design.

All W1 period ships (not just EW1) shall have two 21" TT per side under water in fixed mounts (at no cost) capable of firing at exactly 90 degrees to the path of the ship unless removed by an upgrade.

Any country can build a ship that follows the design principles of the previous period, eg Austria could build two Tegetoffs in the EW1 period and more in the MW1 period. See the IT Period Specifics XXXX for information on AA guns.

### MW1 Period Specifics

Again four MW1 era Battlewagons must be built, they cost their full weight out of the W1 battlewagon budget.

American Using Nations, including the Build the Limit option may use the “All or Nothing” Armour concept – the belt ends are not armoured (the deck ends are). This reduces their armour weight but may cause issues in combat.

Some Nations get access to 15” guns in this era but the majority still use their Intermediate gun.

### LW1 Period Specifics

The remainder of the W1 battlewagon budget after removing any SDr designs that have been demothballed, the four EW1 ships and the four MW1 ships can be used to build LW1 era designs. My estimate is that up to eight full sized LW1 era battlewagons may be built, but some Nations using the Slow Fleet rules may be able to build more and some Nations – principly the South American Consortium – may only get 7 due to the weight of their larger ships. Of course the larger ships also carry more guns so should do the same amount of damage though they are just as easy to sink as the smaller ships.

All Nations may use the “All or Nothing Armour concept as described in the MW1 era for American Using Nations.

Most Nations get access to some 16” or 15Lo guns but the number is generally limited to 16 such guns per Nation though there are exceptions to this. The other ships in this period use the same gun that they had in the MW1 era but they may mount 2 more of those guns per ship to a maximum of 12 (except for the Agincourt design which may mount 7Tw13.5 or 7Tw14 guns, it could also mount 7Tw15 to replace one of the 16” gunned South American 16” ships).

### IT Period Specifics

Only Britain (the Historical Option) started to build battleships during the EIT period. Up to two ships may be built by the Historical British Option in this period by pushing the tonnage for them from the LW1 period. Up to 35,000 tons may be spent on each of them and they may be armed with up to 3Tr16. Their secondary armament should be twin 6” turrets on the upper deck but single 5.5” may be carried as in Hood if preferred. No more than 6 six inch may fire to either broadside. This could be 5 or even 4 turrets in total in a Nelson type design if one or two turrets were mounted on the centreline aft in Y and X positions). Note, converting Turrets to DP during the war takes considerably longer than converting either Casemates or Shields.

The Build the Limit and Nippon variants of America and Japan respectively, can also move steel from the W1 battlewagon budget to build one “Build the Limit” battleship and one Type 13 type BC respectively. These two Nations and all other nation that are allowed to build Battlewagons in the EIT period may use secondaries in Casemates, shields on the Upper Deck (5.5” or 5”) or Twin 6” turrets as they see fit.

Only Germany and France completed Battlecruisers during the LIT period (before Start of Hostilities), and The Netherlands planned to build some, design options for these are shown in parentheses on the XXXX table. No Nation can veto these builds but a maximum of two such ships can be completed by these three nations. Take the tonnage required from the PLT Battleship Pool (up to 30,000 tons per ship). These ships will be counted against the PLT Completion Dates so will have the effect of slowing down other Battleships being built. As stated before, the ships are limited to a main armament weight (including armour) of 3,700 tons which may have the effect of limiting the armour that can be applied to the turrets. For the purposes of AA/DP and AAA they will be treated as large Cruisers, qv. XXXX

Optionally with a majority vote, all nations can build up to 2 LIT Period BC as per their Design Philosophies shown in curly braces in the table in the individual design philosophies. XXXX. Regardless of the vote, no country can be forced to build these LIT BC.

All IT period battlewagons shall be fitted with a single catapult and 3 floatplanes at no cost to the design. They won't mount any torpedoes though.

If any ships are built in the LIT period they may be fitted with DP mounts instead of AA mounts (except for German and Prussian Using nations and other Nations not allowed DP guns), using the appropriate limits for that type of mount. XXXX put table in here. They may also fit High Angle Controllers (HAC) using the tonnage limit.

All W1 and EIT BB and BC may be fitted with XXXX how many, say to the weight of two 5”AA, single 3”, 4” or 5” AA guns without shields, except for America which only has 5”AA. During the LIT Period these may be replaced with twin DP or AA mounts of the same calibre in turrets or without shields, but note that this will start to add to the Topweight and Ballast for the ship. XXXX

### 1.13.9 PLT Period Specifics

The Second London Treaty limited all Battlewagon production to a maximum of 35,000 tons, the British and Albion Using Nations attempted to stick to this as they had proposed it, but slipped in the calculations a bit, they are allowed to build ships in this era up to 37500 tons. Germany and Prussia ignored the limit (but still claimed that they met it and can build ships up to 50,000 tons. Japan claimed that they were within the limit with ships mounting 3Tr14, increased the size of the buildings around the yard to make the ships look relatively smaller and built something close to the Yamato design. The Confederacy (USA Option) just repeated their Build the Limit ship and ignored everyone else. The remaining major Nations all built their Battlewagons up to a limit of 45,000 tons. Some Nations have only small PLT Battlewagons (BBM or BCM, see below), such as the Scandinavian, Chinese, ADL, PSI Nations. Nations building BBM and BCM are limited to 50% of the limits specified in this paragraph, German and Prussian Using Nations building BBM or BCM would be limited to 25,000 tons and others to 22,500 tons. There isn’t a British or Albion Using Nation that has access to the BBM or BCM designs.

All ships in the PLT and W2 periods may have DP secondary armament with a weight up to a XXXX or AAA up to the weight of XXXX. Twin DP turrets can be reduced on a one for one basis and replaced by 6" turrets (singles in the case of replacing a Tw4DP or Tw105mmAA). Any nation could replace two twin DP turrets with a triple 6" if they desire – to allow the as built Yamato design. The PLT and later ships may also have one DP or 6" turret (either twin or triple) superposed above the main armament if there are less than 3 main mounts at that end, ie one at each end – see Yamato as built for example. Seven turret Brazilian and Turkish designs may have a DP turret superposed at the bow but not at the stern. Ships with no X turret – eg some of the French designs with two main turrets in A and B, may have two superposed twin DP or two superposed 6” turrets (or one of each with the DP in Y) in X and Y.

When fitting DP turrets on the wings of a PLT period BB, only two of them per side may be superposed, the fifth (and possibly 6th in the German case) will be at the same level as the foremost and rearmost DP turrets and will only be able to fire to the side. The American designs with three turrets superposed and two low still only allows two turrets to be fired forward or aft unless the aircraft are at High level – this would be the same if two turrets were superposed and the other three were low.

All PLT period ships shall be fitted with a single catapult and 3 floatplanes at no cost to the design. They won't mount any torpedoes though.

A French PLT period ship with 3 or 4 quad turrets is possible. In the case of the 3 turret design, the third turret could be between the bridge and the boiler rooms in a similar manner to the British IT designs G3 and N3. The French showed in this period that they agreed with the British idea of shortening the belt and hence making it thicker over the guns. If a fourth turret is fitted on a French ship it will always be in X position, in this case the third may be in Q or Y.

### 1.13.10 W2 Period Specifics

Germany, Japan and USA Build the Limit option in the EW2 period have no limit on the size of their Battlewagons, Brazilian and Turkish 7 turret designs are limited to 60,000 tons and other Nations are limited to 50,000 tons in the EW2 period. All Nations can start to build ships without limit from the MW2 period onwards.

Ships may be designed using the equipment appropriate for the date that the first ship is to be laid down, bearing in mind all rules such as maximum DP/AA of medium or heavy type up to 12 per broadside. Also, armour, speed etc must be up to the maximum allowed for that date. At any point in the build up to one month (XXXX check) before the ship is due to be launched any of the equipment may be replaced by other equipment that could be used at that date as long as it obeys the following rules:

The length of the replacing equipment may not be longer than the equipment it is replacing. In the case of two mounts adjacent to each other where one is superposed over the other (or 3 or 4 mounts eg Japanese Tone), the length of the pair (3/4) of new equipment must not exceed the length of the pair of the old equipment so for example a Tr16 plus a DP mount superposed could replace 2Tw16 mounts. In all cases (except the Japanese navy may mount a Si6 below a Tw6, plus any other historical examples that the player can show the referee) the lighter mount shall be the superposed one.

The overall weight of the ship has not changed nor has its length – to allow this Oil fuel bunkerage may be reduced or some of the DP/AA may be removed or Depth Charges, Catapults, Floatplanes, Cranes may be removed.

Speed and Armour may not change, though they could be reduced to produce a lighter ship.

The number of DP/AA or AAA may not be increased above the allowed limits.

The number of turrets of the largest calibre on the ship is unchanged though it is ok to replace a superposed turret with a DP/AA mount if one is reduced from both broadsides assuming they were already at the limit.

Brazil and Turkey may use single main gun mounts in B, R or Y on their seven turret designs, and Argentina may use single main gun mounts in B and/or Y on its six turret designs. Note however that the only single gun main mount available is the British Using Nations Si18 unless another Nation used one in its PL designs which obviously cannot be larger than 18” for Japan/Nippon and Build the Limit. Other Nations could use Si16 or S15 in the PLT period but I think such a mount is unrealistic. XXXX can Nippon/Build the Limit use 20” guns in the PLT period?

## 1.14 Battleship Types

BB - Standard Battleships of the WW1 and later periods, tend to be slower and more heavily armed and armoured than the BC. The Main Gun will be of at least 11" calibre. EW1 and MW1 period designs must have at least 5 guns per side of 3" to 6" calibre in a casemate of at least 3” thickness. LW1 period designs can mount up to fourteen 5.5”QF (or smaller) in single shields on the upper deck or they can mount Casemates as in earlier ships. EIT period designs will either mount up to fourteen 5.5” in single shield or twin 6" turrets with up to 6 guns firing per side. PLT period designs will almost certainly have 5"DP or 5.25”DP or 5.5" DP guns instead of 6" but may have those as well. German Using Nations are restricted to 105mm AA, so may have 5.9” as well. This type can be built using the appropriate BB Pool and costs its full weight.

BC - This is a faster and generally lighter armoured ship than the standard Battleships. They are mostly built during the WW1 period but Scharnhorst and Dunkerque fall into this category during the LIT period, and Alaska, The Netherlands design and B64 during WW2. Main and secondary guns will be the same as for BB designs but guns down to 8.2Lo may be mounted when specified. This type can be built using the appropriate BB Pool and costs its full weight. With the exception of the USA and Germany, BC with 16” guns are not available until the LIT or PLT period (depending on whether nations are allowed to build BC in the LIT period). The USA may build its two LW1 ships with 16” guns as BC, but if they do then they cannot also build BB with 16” guns. Germany may build 16” armed BC during the LW1 period but may not mount more than 6 in any ship – they could for example build 2 with 6 guns and 1 with 4 guns or 4 with 4 guns as in their GK series. Every nation is limited to a maximum of sixteen 16” guns mounted on Battlewagons by the end of the EIT era (eighteen guns for Britain using the option to move two ships to the EIT era and twenty for Chile, also see the Slow Fleet Option).Nippon – Type 13 XXXX, Build the Limit.

SDr - A pre-Dreadnought designed Semi-Dreadnought Battleship, see also Other Mothballed Ships XXXX. Most shall have only two turrets, A and X, that shall have either one or two guns of either 11" or 12" calibre. Albion, Prussia and Turkish German designs may have a third turret in Q position each with up to two 11” guns (none of them can be Long as the ships are too old). These designs are all the hybrid late period designs and shall have at least 4 (2 a side) and at most 10 (five a side) turrets on the wings. These may contain either one or two guns from 5.9" to 10" or 1 gun of either 11" or 12" calibre. The large calibre option (11” or 12”) is only available if 2 or 3 wing turrets are mounted per side, so at most 7 large calibre guns per side (8x11” in the case of Albion and Prussia as the centre twin replaces the mid singles on the wings). No SDr can mix 11” and 12” guns on the same design. German and Prussian Using Nations cannot use 12” on this design as that gun was first deployed in the MDr period. Sweden may use 12” but all other Scandinavian and Dutch SDr are limited 11” main guns and to a maximum of 150mm in the wing turrets and no more than three per side. Germany should either use 5.9 (150mm), 6.7” or 8.2” or Si11 in the wing turrets. All SDr, except Scandinavian, may also have up to 5 guns a side in a casemate of between 3" and 7" in calibre. Speed should be 18 knots up to 21 knots but 24 knots is possible on lightly armed and armoured designs (like Roma). Armour shall be at least 9" Belt, 1.5" Deck, 8" main turrets, 6" wing turrets and 3" casemates (if fitted). Roma style designs with two Si12 and Tw8 or Si8 on the wings must have armour of at least 6” Belt and on the main guns with 4” on the secondary guns. All SDr that have already been demothballed cost half their tonnage and this is all counted against the W1 period tonnage pool. SDr that have not been demothballed are free – a maximum of 4 may be included in any one Navy some of which may be demothballed and some may not be. All of their casemate guns and some or all of their wing turrets may be removed to add DP guns after the Start of Hostilities for use as convoy escorts. See the Upgrade Between the Wars rules XXXX. If built with 12" guns, these cannot be re-bored to 12.7" as the BB and BC 12" gunned ships can. South America and Turkey should either have no ships of this type or at least two different designs, one with 3 wing turrets and one with 5 wing turrets per side. Turkey can also have a third design based upon the German designs (up to five wing turrets per side) and Argentina could have a third design based upon USA designs but with four wing turrets per side. No 18 knot SDr may be built with an armament heavier (ignoring armour on the turrets) than two twin 12” and 6 twin 10” plus casemates (the Japanese Aki class). No 24 knot SDr shall be built with twins in the main turrets, and the weight of their wing turrets shall not exceed 6 twin 8” turrets (the Italian Roma). However a smaller number (maximum 3 per side) of heavier guns (up to 12”) may be mounted in the side turrets within the restrictions above. In the individual Nation descriptions, it suggests SDr may be from different eras (Early SDr, Mid SDr and Late SDr), though not all Nations get access to all eras.

|  |  |  |
| --- | --- | --- |
| Era | Total weight of all guns onboard | Nations (number in brackets is max number) |
| ESDr | <2700 | Albion(2),Austria(2),Germany(4),Italy(2),Japan(2),Prussia(2),Russia(2),Spain(1),Turkey(1-Germany or Prussia) |
| MSDr | <3200 | Albion(2),America(4),Austria(2),British(2),Greece(1-USA),Italy(2),Prussia(2),Russia(2),Turkey(1-British) |
| LSDr | <3900 | Japan/Nippon Only in EDr era |

Note, Britain gets only 2 MSDr but also gets the orignal Dreadnought design (with 3” in the casemate) in the SDr period. Dreadnought counts as 2 ships and no other British Using Nation, including Albion may select her. Britain will probably only have 10 secondary guns on the SDr ships compared to a probable 16 on most other Nations, so I suggest that Britain also gets one operational Old AC (OAC), see Armoured Cruisers under the Fictional Cruisers chapter (XXXX).

For the Mediteranean Consortium, they must select one Greek American MSDr, one Spanish ESDr, One Turkish ESDr (the British one could be a MSDr) and one extra ship from any of the three Nations. Turkey doesn’t have to select 1 ESDr and one MSDr it could be one or the other.

For the South American Consortium, they must select one Chilean MSDr with 3 wing turrets, one Brazilian MSDr with 5 wing turrets, one Argentinian MSDr with 4 wing turrets, and either a second Chilean or Brazilian ship.

Prussia has to make a choice of whether they want to follow the Albion route with AQXTw11 (not Long, emulating an improved Worth) with two wing turrets per side, or the German route, the decision must apply to both the SDr ships and the AC ships. Note the German ACs are effectively Scharnhorst, Gniesenau and Blucher with one Old AC like Prinz Adalbert XXXX check spelling.

PB - A Pocket Battleship is a cross between a Battlecruiser and a Heavy Cruiser, historically built by German Using Nations with AXTr11Lo in the EIT period. They may be built by German Using Nations with the historical turrets in the EIT or LIT periods with the following rules. They may also be built by Prussian Using Nations in the same periods using the same turrets or AXQu8.2Lo if they built at least one ship in the MW1 period to the Kaiser’s design (QQu8.2Lo/ABYXQu150). All IT PB must be built at 27 knots and have no heavier than a Tw150 in Y and up to 4 Si150 per side – the actual secondaries may be any mix of 150mm, 105mmAA or 88mmAA. If a Nation builds PB in either IT period, that Nation does not have to obey the rules relating to the minimum number of 8”. The Scandinavians may build PB in the IT period using tonnage from their Battlewagon budget or their Cruiser budget, all other German and Prussian Using Nations can only use their Cruiser budget in that period. In the PLT period any Nation may build one PB from the Battlewagon budget to soak up otherwise unused tonnage, this ship could also be built at 30 knots and may add an additional B Turret (containing guns up to 120 tons) and has an additional turret per side – all side mounted secondaries may contain guns up to 60 tons. The AX turrets for other Nations can be any of the following – Qu7 for Russia, Qu7.5 for Albion, Austria, Italy, Tw8 for Britain, Qu8 for France (if France has built BC with Qu13 bought forward to the LIT period they may also use Qu10.5 or Tr13), Qu9.2 for Albion, Austria, Italy, Tr11 for Albion, Tr12 for American Using Nations, Austria, British Using Nations, Italy, Japanese Using Nations, Russia, Tr13 for Albion, France, Tw13.4 for Austria, France, Tw13.5 for British Using Nations, Italy, Spain, Tw14 for American Using Nations, British Using Nations, Japanese Using Nations, Russia. No Nation may build turrets of the same size as their currently largest gun of the period or the next one down (German Using Nations and Prussian Using Nations may build Tw12Lo in the PLT period, but not 15, 14Lo or 16 for example). From the EW2 period onwards, Germany may build a Tw15 turret and replace the Tr11Lo (they are designed to fit the same barbette), similarly Prussian Using Nations may build a Tw14Lo. All Nations may build new PB from EW2 onwards with Twin of the size below their current maximum if they desire, speeds may be 21, 24 (as Convoy Escorts) or 33 in addition to previous speeds. All PB shall have at least 3.25" Belt and Deck and they are built using the BC rules on a BB slip (and using the BB building rates), PLT and later PB shall have belts of less than 10” thickness and decks of less than 5” thickness though the AX turrets may be lighter. Earlier PB are limited to less than 8” belt and 4” deck.

BBM - XXXX Some Nations may only build Mini versions of Battlewagons or Cruisers – the Scandinavian Countries may opt to use these rules instead of building SDr and PB. If they do make that decision then they may only build BBM and BCM and CAM and CLM and not standard SDr, PB, AC, CA, CL and their variants. Note, Sweden may always build their excellent little Gotland design regardless of which option they choose. The Netherlands always build standard BC and Cruisers and cannot build Mini versions at all, but could still build SDr and AC even if the rest of the Scandinavian Nation choose to follow the Mini route. A Mini version of a Battlewagon is limited to half the tonnage of an equivalent full sized BB (and may of course build twice the number). They may be of the same speed as their larger brethren and are limited to half the number of main guns – two Triples, three Twins or two Twins and a Single are the maximum that they can carry. Secondary armament is limited to the weight of 6x6”QF plus 2x4”AA per side. Norway and Denmark are limited to 2/3rds the gun weight of Sweden – so Twins instead of Triples or a lighter calibre – this is for both main and secondary armament. No BBM may have casemates except where explicitly described for their country. When designing Mini ships in the PLT period, an additional twin DP or AA of the appropriate calibre may be mounted in B and/or Y (X and Y if the Nation has two turrets forward), which is not included in the limit on the secondary armament. No more than 16x16” (or 15”Long) may be built in any Nation regardless of how they are laid out. For example the Scandinavian Navy could have two Swedish BBM with 2Tw16 and one Netherlands BC with 4Tw16. Alternatively one of the Swedish BBM could have a Tw and a Si and the Netherlands BC could have 3Tr16. Singles may always be placed on Mini ships where most other Nations would fit a Twin as a minimum. XXXX DP maxes are done differently – halve the weight of a ship weighing twice as much.

BCM - XXXX See BBM – all rules specified there apply to BCM as well. Additional rules may be described in the section on the Nations designs.

## 1.15 Build Weight

In the real world Nations had different Seas to contend with. For example the North Sea required much tougher ships than any other area of the world except maybe the Bay of Biscay and the Magellan Straights. The Mediterranean was much calmer than most other regions. Hence there are four levels of toughness for Build Weight – Heavy, Standard, Medium and Light. Each Nation can build ships using one of these Build Weights (lighter ships take the next level down).

Heavy – Britain, Albion, German, Prussian, Russian, Scandinavia, The Netherlands, Ships of the Line.

Standard – American, The Confederacy, Japan, Nippon, France, Spain, African Defense League, Argentina, Brazil, Chile, Hybrid, Dwarven, Elven, Elven Option, The Colonies, Pacific Sphere of Influence.

Medium – France, Italy, Austria, Turkey, Greece, Russia (Black Sea), Barbary Pirates.

All major warships of each Nation should be built at the specified level. CA6, all CL of all types and all Destroyers of all types should be built at the next level down. For example Turkish CL1 shall be built at Light Level. Destroyer Escorts and DT shall be built at 2 levels down except for those Nations that build their ships at Medium level, in which case they are built at Light level. Heavy MB are built at the same level as Light Cruisers, Light MB at Light level and Medium MB at one level below Light Cruisers (if the Light Cruisers are built at Light level then so are the Medium MB – eg Turkey).

The higher the Build Weight, the heavier the ship, using more of your precious tonnage. However a higher build weight ship will be less effected by weather – a Heavy ship will treat the weather as if it were 1 step lighter and a Light ship will treat the weather as if it were two steps higher (unless it is Calm). Also a higher Build Weight can take more damage in each Damage Block before moving on to the next block, and a lower build weight can take less.

If ships are not built at the correct build weight according to the list above, then there will be a penalty. For example if Britain builds a BB using Standard Weight then it will actually cost 120% of the normal Standard weight making the ship a bit heavier than an equivalent American BB built at Standard weight.

Some Nations can over-ride the specified Build Weight. France or Spain could build their ships in the Mediterranean at Medium Weight. Russia could also build her ships in the Black Sea also at Medium Weight, The Netherlands in the Pacific at Standard Weight. If this option is chosen, all ships have to be built in the same regi----on, France can’t build some in the Atlantic and some in the Mediterranean for example. XXXX

## 1.16 Battleship Build Rules

The calculations are complex, a spreadsheet has been produced which will be available to all purchasers of the rules which will do the calculations for them. A standalone programme written in Python is being produced to replace this which will help in running the campaign for both the referee and the players.

In the case of Battleships and Battlecruisers, the length of the ship has a huge impact on the weight of that ship – the Armour Belt and Deck has to be much longer and hence heavier, and also the hull structure will also be a lot heavier in a longer ship.

## Fictional Carriers

### Carrier Periods

Carriers are built in three periods, Early IT, Late IT and PL, although the latter won't be complete before the start of hostilities.

### Carrier Armament

Carriers have up to four of their main AA/DP mounts on the superstructure, 2 superposed forward and 1 or 2 aft. If there is a 5th turret then it is mounted forwards below the flight deck firing only into the forward arc and both side arcs. A 6th turret would be mounted aft with the similar restrictions and any extra turrets will be mounted on the side without the superstructure below the flight deck. The latter can only fire into the 180-degree arc on their side. Note the 105mmAA is considerably lighter than any of the DP guns so there could be 7Tw105mm for the same weight as 4Tw5DP. XXXX

As built, there are very few AAA mounted on Carriers, what there is fitted is described in the first column of the table in XXXX. As time goes on more AAA is added as also described in the same table. The forward and aft mounts described in that table have the same restrictions as mentioned for the AA/DP in those locations. All bar the fore/aft mounts are at flight deck level and may fire cross deck at all attackers except for torpedo and skip bombers (and accompanying fighters). AAA can only engage torpedo and skip bombers on the side that they are mounted in a 180-degree angle.

### Carrier Types

The following Carrier types are defined (the PLT and later designs are the same as the Late IT designs):

VA - An Attack carrier, which is larger than the EVF design and can carry more aircraft (60 before Deck Parks and 90 after). The owner will need to build those extra aircraft though when Deck Parks are introduced, the aircraft do not come free. All VA have a speed of 30 knots (unless specified otherwise) and have XXXX weight of AA – check other designs too 3 twin 5" AA turrets or 4 twin 105mm AA turrets for German Using Nations or 3 twin 4.5” DP turrets for British Using Nations or 4 twin 4”DP for some others on one side covering both sides. With the exception of Japan, this is the only occasion that DP turrets can be fitted to EIT Period ships. These are built in a Battleship Yard (YB), usually on the smaller slips.

VB - A British Option1 only Armoured carrier, although Japan built at least one during the war (Taiho). The Armoured Carriers have a 3" armoured deck, which makes them more difficult to sink, but they carry less aircraft. The Armoured Carriers all carry 45 aircraft as built but this can be increased to 75 after Deck Parks are introduced in 1942.i.1. The EIT design (EVB), one of which can be built in the Early IT period by any British Using Nation taking the British Carrier Option, is larger than the EVF design and can carry more aircraft (60 before Deck Parks and 90 after), and has a 3.5” armoured deck. The owner will need to build those extra aircraft though when Deck Parks are introduced, the aircraft do not come free. All VB have speed of 30 knots and have 3 twin 4.5” DP turrets for British Using Nations or 4 twin 4” DP turrets for Albion on one side covering both sides XXXX AA Weight. With the exception of Japan, this is the only occasion that DP turrets can be fitted to EIT Period ships. These are built in a Battleship Yard (YB), usually on the smaller slips. I have found one quote in the Norman Friedman book “Naval Anti-Aircraft Guns and Gunnery” that suggests that the British believed that they would be unable to direct fighters on to any attackers so there was no need for any fighters on such a ship so the restricted number would all be attack craft, either TB or DB. The Player does not need to follow this suggestion – I have seen no indication that they ever sent a carrier to sea without fighters and I know for a fact that the first Sea Hurricanes were tested on one of these ships and then carried around to the Indian Ocean and was just south of the attacking Japanese carriers when they hit what was then Ceylon, having read the ship’s history.

VC - A Colossal Carrier, designed for Jet aircraft. It can be laid down 35 months before the first Navalised Jet Aircraft for that Nation can be rolled off the production line. Of course, before then a new slip will have to be built to allow the ship to be built. The carrier has space on the Hanger Deck for four squadrons of Jet Aircraft (classified as large aircraft so only 9 aircraft for each squadron). When built only FFJ will be available (Germany may have FBJ depending on how they were built), but it will certainly be an impressive sight. On the Flight Deck, there is space for two Deck Parks before the superstructure and two aft (3 FFJ with folded wings in each). A Further two Deck Parks are available behind the outermost catapult on the Angled Flight Deck which has two catapults both available to launch aircraft even with a full complement of six squadrons on board. It has three lifts, two on the main Flight Deck and one in the angle of the Angled Flight Deck and the hull. A squadron of 15 small aircraft take up less space than a squadron of 9 large aircraft so some small aircraft could be carried in place of FFJ if desired (TB and DB for example). In theory a squadron space for 9 FFJ could house 24 small aircraft, so two could house 3 squadrons of small aircraft. The ship can be built at 1600 tons a month which will be the equivalent of a double push XXXX for the entire build, so the ship takes just over three years to build. Each Nation will start these ships on different dates depending on when they first get a Navalised Jet aircraft. Jet aircraft cannot be carried or launched from any Carrier except for VC and VG – the other Carriers are not wide enough as Jet aircraft are longer and wider than their predecessors – 4/3rds and double respectively. The variations described under VF could be used for FFJ but only one catapult would be available to launch them and the landing area might be a bit short. VH if built could of course house FFJ with no problem. AA and AAA is 1.5 times that for a VA.

VF - A Fleet Carrier, can be built by all nations in the Early IT period. The Early IT Period carriers all have 45 aircraft (75 with Deck Parks), and have AA guns as per the Early IT period VA. These are built in a Battleship Yard (YB), usually on the smaller slips. Captain Eric Brown famously landed a Sea Mosquito (FBM in my nomenclature) on HMS Indefatigable – the first modern twin engined plane to be landed on a Carrier. On 1945.ix.1, Britain may convert one of its EVF to allow FBM to be housed in it. A new 4x4 sized lift can be added (3 months to complete) and the corner workroom removed (1 month to complete, which can be performed at the same time as the lift by a different work crew). The rearmost six flight areas on the hanger form three four x six unit large aircraft “squares”, with an inboard two unit wide corridor to get the large aircraft to the new lift near the bow (just behind the still existing small plane lift) and space for a single small aircraft against the superstructure. The remaining four flight areas near the bow house most of a squadron of small aircraft (probably TB or DB) with the three remaining aircraft housed against the superstructure. On deck, either the existing two squadrons of small aircraft can be retained or a single FBM squadron can be stationed – four aircraft before the superstructure and four aft with the 9th aircraft behind the catapult on the Angled Flight Deck. One of the catapults on the main flight deck can be converted to handle the FBM (2 months work, which can be carried out at the same time as the lift or workroom by a different crew) – it cannot launch a small aircraft, and small aircraft cannot be launched at the same time from the small catapult alongside it, though they could be launched from the catapult on the angled flight deck. Note that FBM can either be armed as a fighter or as a bomber – but not switched from one role to the other. Using the Deck Park, one squadron armed as fighters and one as bombers could be loaded on to the EVF (the bomber could carry a 21” Torpedo or 4x500lb bombs, or any single bomb up to 4 tons). After the first engagement in which the FBM have been used in action, the player may opt to start work on any of their other Carriers that have at least 45 aircraft in the hanger to the same design. Note the EVB has space for another squadron of small aircraft in the hanger. Other Nations can start work on converting similar Carriers using their own FB Navalised planes. Before work can start they must successfully land a FB on a Carrier (10+ on a d10), they may attempt this once a day starting six months after being attacked by a naval FBM. If the first 10 aircraft crash then pilots will become reluctant to attempt this, add 1 day for each aircraft more than 10. So the 11th plane can attempt to land on the 12th day, the 12th aircraft on the 15th day and so on. Pilots are killed on crashing if the roll is 1-5, injured on 6-9 for 10 minus the dice roll weeks. Conversion of the Carrier may start the day after the first successful landing.

VG - A larger, Gigantic, version of a VC. It has two more squadrons in the hanger (six in total) and space for one more in Deck Parks before the superstructure and another aft. A third Deck Park is on the outside of the Angled Flight Deck, leaving space for aircraft to be spotted on all four catapults and launched. A total of 9 squadrons can be carried for 81 aircraft. It also has four lifts, three on the main Flight Deck and one at the angle of the Angled Flight Deck and the hull. The tonnage includes the weight of the Angled Flight Deck, the ship can be built at 1600 tons a month for its entire build, which is the equivalent of a double push qv XXXX. It will take a minimum of 45 months (just over 4 years) to build and can be started 35 months before that Nation can complete its first Navalised Jet Aircraft. AA and AAA is double that for a VA. If it is intended to carry small aircraft (eg TB or DB), then one catapult will have to be built as a small aircraft catapult - probably on the Angled Flight Deck.

VH - HMS Habbakuk, a design concept by the British for a huge carrier built out of mixture of ice and sawdust called Pykrete after the inventor Geoffrey Pyke. It can only be built close to the Pole countries (within 50 miles of the coast) and will take one year to build at the cost of 10,000 tons of steel. It can house up to 16 squadrons of FB or MB or an equivalent amount of small aircraft – each FB or MB squadron has 9 aircraft whose size in the hanger is 4x2 units. Each small aircraft squadron has 15 aircraft whose size in the hanger is 3x1 units. It has two catapults for large aircraft, none are needed for small aircraft as the flight deck is 1000 meters long. It also has 4 lifts for large aircraft and two near the stern for small aircraft, and four times the AA/AAA armament of a VA. It can travel at speeds up to 6 knots and is impervious to bomb or torpedo hits – any holes can be filled with water and sawdust and the deck can be useable again within two hours. Any British Using Nation, and Albion/Hibernian/Caledonian, can have one ready by 1944.iv.1 and can start another when the first is complete with a third ship building near the other pole. Other Nations can follow suite but their first will be complete on 1945.iv.1. Thereafter one can be built near each pole each year, starting on …iv.2 and finishing the following …iv.1. As long as it stays within 250 miles of the pole coast, it will last three years before melting. With the islands placed where they are on the map, this ship is probably not worth building, but somebody may fancy one.

VL - A Light carrier, built by nearly all the nations. The Early IT Period carriers all have 30 aircraft (45 with Deck Parks), and have three single 5" AA guns or 4 single 4" AA for British Using Nations and 4 single 105mm AA for German Using Nations on one side firing over both sides. The Late IT Period carriers have 30 aircraft (45 with Deck Parks) and have the same number of single DP guns except for 5Si105mmAA. These are built on Cruiser slips and using the Cruiser build rules, but 800 tons can be worked into each in a month instead of the normal cruiser rate which depends on size. A Light Carrier’s aircraft launch rate is half that of VAs, VBs and VFs as they only have one catapult, but they do have two lifts.

VM - A rationalised medium carrier built during the war. It holds three squadrons of aircraft in the Hanger (45 aircraft laid out like a VF or LVB), but only one squadron in the Deck Parks. This allows access to all three catapults at all times and it also has three lifts for flexibility. This design cannot be started before 1941.viii.1 – it is designed to include the Angled Flight Deck from the beginning. The 18,000 ton weight includes the cost of adding the Angled Flight Deck, so is very economical compared with other carriers.

VS - A Floatplane Carrier built only by Japan in the LIT and later periods. It will have one catapult and crane each side to launch the floatplanes and hoist them back out of the water again. They will have one hanger in between holding one squadron of Floatplane Fighters (FPF) and one squadron of Floatplane Torpedo Bombers (FPT). They don’t have any lifts but aircraft can be craned directly out of the hanger on to the catapults, one by each crane. They have a tarpaulin over the two openings that allow the aircraft to be craned up and down. They will have two twin 5” DP mounts superposed forwards in A and B positions and the AAA for a Light Cruiser. Note Floatplanes cannot land or take off from the water in Rainy Conditions or worse. They are built on a Cruiser slip and in a Cruiser Completion Dock, but at half the rate that VL are built (400 tons a month). The launch rate is 1 in each of the first three combat moves and 2 in the fourth, on average 1 every 4 minutes from each catapult. All Nations may start a vessel similar to this as a Cruiser after Start of Hostilities – see CAF, CLF, CAFM and CLFM.

VE - An Escort carrier, these may be built by all the nations but can't be started before the war. They all have 15 small aircraft (and are too small for Deck Parks), and have two single 5" DP guns (Britain 4.7SDP after the end of 1940) or 3 single 4DP or 4 single 105mmAA for German Using Nations on one side firing over both sides. These are built on CS or GS hulls using Merchant Building Rules and on a Merchant Slip and Merchant Completion Dock up to 8,000 tons then moved to a Cruiser Completion Dock for another 1,500 tons at Cruiser Build Rates. They are slightly smaller than a standard Merchant Hull. Escort Carriers may also be converted from Merchantmen (either CS or GS) by removing 1,500 tons in a Merchant Completion Dock and then adding 1,000 tons in a Cruiser Completion Dock using Cruiser Build Rates. Escort Carriers only have one catapult and one lift. AAA is as the table in XXXX. They can either carry one squadron of FFB (Fighter Biplanes) or one squadron of TBB (Torpedo Biplanes). If two VE are operating in the same convoy then 2 flights (6 planes) can be transferred from one VE to the other and both types operated from both ships. If the two ships later split to two convoys, the aircraft will have to be returned to their home ship.

### Carrier Build Rules

All carriers for each nation are identical with the exception of the British, so there is no need to design these ships.

All the British Using Nations and Albion/Hibernian/Caledonian have three choices, they can either build a single EVB in the Early IT period and then LVB from the LIT period onwards, or build carriers exactly as other nations using either Option 2 or 3. If Britain selects options 2 or 3 then they may not build Armoured Carriers at any later stage including during the war (and nor may Japan).

Regardless of which Option is chosen, carriers such as VM, VC, VG or VH can be built at the appropriate time by every Nation.

If the British do build Armoured Carriers then the Japanese have the option to start building them on 1941.i.1.

#### British Unique Carrier Force Option 1

If British or Albion Using Nations choose to build the Armoured Carriers then her fleet is:

Early IT period:

1\*EVB with 60/90 Aircraft and a 3.5" Armoured Deck **and**

2\*EVF with 45/75 Aircraft **and**

3\*EVL with 30/45 Aircraft **and**

4 spare Tw15 turrets and two Si18 turrets that can be used after Start of Hostilities to arm other ships or protect Ports. She cannot use any of these extra turrets on PLT Battlewagons, but can start a Battlewagon, eg Vanguard, after Start of Hostilities to use them.

Late IT period:

3 \* LVB with 45/75 Aircraft and 3" Armoured Deck

PLT period:

1 \* PVB with 45/75 Aircraft and 3" Armoured Deck **and**

2 \* PVL with 30/45 Aircraft each

Wartime:

Can only Build WVB, WVL and VE. British Using, including Albion/etc, Carriers from the PLT period onwards may have the cross deck and deck parks added to the build at half the normal cost to modify the ship, 3,200 tons for a PVB and 1,600 tons for a PVL. This will add at least 3 months to build but will reduce the total cost of building and then converting later. They may also build all the other carrier types (eg VM, VC, etc) at the appropriate time.

#### Other Nations Carrier Forces

If Britain chooses not to build the Attack Carrier and Armoured Carriers (EVB, LVB) then her fleet is identical to all the other fleets and they cannot build VB during the war, nor can Japan.

All of the other Nations have two options.

#### Other Nations Carrier Force Option 2

This is more pro-typical for Japan who did build LVL before the war and it results in more ships, which could be an advantage. All nations have the choice as to which Option to take and no other player can veto that choice.

Early IT period:

2 \* EVA with 60/90 Aircraft **and**

1 \* EVF with 45/75 Aircraft **and**

2 \* EVL with 30/45 Aircraft

Late IT period:

2 \* LVA with 60/90 Aircraft **and**

1 \* LVL with 30/45 Aircraft – this could be replaced by two LVS in the case of Japan

PLT period:

2 \* PVA with 60/90 Aircraft

**Or**

1 \* PVA with 60/90 Aircraft **and**

2 \* PVL with 30/45 Aircraft

Note, if Japan takes the latter option then they can replace either or both PVL with two PVS with 30 Floatplanes each. They must be completed as PVS before being converted to WVL.

Wartime:

Can only Build WVA, WVL, WVS (Japan Only) and VE. If Britain builds LVB then Japan can start to build a WVB (WW2 Period armoured version) on 1941.i.1. All nations (including Japan) can start to build WVB after two carrier battles between that nation and Britain in which all the British VB survived because of their armoured decks. That is, at least one British VB had a bomb hit on the deck and none of the British VB had a bomb penetration through their decks. They may also build all the other carrier types (eg VM, VC, etc) at the appropriate time.

#### Other Nations Carrier Force Option 3

This is more pro-typical for America who only built one EVL, but it results in fewer ships, which could be a disadvantage. In reality the EVL was relegated to training duties by 1942, but there is no need to follow history. All nations have the choice as to which Option to take and no other player can veto that choice.

Early IT period:

2 \* EVA with 60/90 Aircraft **and**

1 \* EVF with 45/75 Aircraft **and**

1 \* EVL with 30/45 Aircraft

Late IT period:

3 \* LVA with 60/90 Aircraft

PLT period:

2 \* PVA with 60/90 Aircraft

Wartime:

Can only Build WVA, WVL and VE. If Britain builds LVB then Japan can start to build a WVB (WW2 Period armoured version) on 1941.i.1. All nations (including Japan) can start to build WVB after two carrier battles between that nation and Britain in which all the British VB survived because of their armoured decks. That is, none of the British VB had a bomb penetration through their decks although at least one bomb hit on a deck must have occurred on a British VB. They may also build all the other carrier types (eg VM, VC, etc) at the appropriate time.

#### Carrier Rich Campaign

For a more Carrier Rich campaign, add extra carriers as follows:

British Unique Option (1):

* one EVB in the Early IT period
* one LVB and LVL in the Late IT period
* one PVB in the PLT period

Other Options (2-3)

* one EVA in the Early IT period
* one LVA in the Late IT Period
* one PVA in the PLT Period.

Also add one more 24,000 ton slip and completion dock to the YB at the West Port to accommodate the extra carrier. XXXX is this necessary? At most 3 PVA are being built. May need more Cruiser slips for Japan tho if they build 4 PVS and 1 PVA.

#### Carrier Poor Campaign

Remove one EVF and one EVL from the EIT period from all Nations – not recommended. Note there is no other period where all Nations have Carriers with the same number of Aircraft so it is hard to balance forces in other periods.

### To Build a Carrier

When building new ships or when using rules that require the tonnage of a ship, carrier types have the following tonnages:

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Type** | **No Park** | **With Park** | **FF** | **TB** | **DB** | **Tonnage** | **Build Rate** | **Catapults** | **Lifts** |
| Early IT Attack Carrier (EVA) | 60 | 90 | 30 | 15 | 15 | 28,000 | 800 | 2 | 2 |
| Early IT Armoured Carrier (EVB) | 60 | 90 | 30 | 15 | 15 | 28,000 | 800 | 2 | 2 |
| Early IT Fleet Carrier (EVF) | 45 | 75 | 15 | 15 | 15 | 21,000 | 800 | 2 | 2 |
| Early IT Light Carrier (EVL) | 30 | 45 | 15 | 15 | 0 | 14,000 | 800 | 1 | 2 |
| Late IT Attack Carrier (LVA) | 60 | 90 | 30 | 15 | 15 | 24,000 | 800 | 2 | 2 |
| Late IT Armoured Carrier (LVB) | 45 | 75 | 15 | 15 | 15 | 24,000 | 800 | 2 | 2 |
| Late IT Light Carrier (LVL) | 30 | 45 | 15 | 15 | 0 | 12,000 | 800 | 1 | 2 |
| Late IT Floatplane Carrier (LVS) | 30 | N/A | 15 | 15 | 0 | 9,500 | 400 | 2 | 2 Cranes |
| Wartime Escort Carrier (WVE) | 15 | N/A | \* | \* | 0 | 8000+  1500 | 460  500 | 1 | 1 |
| Wartime Medium Carrier (WVM) | N/A | 60 | 30 | 15 | 15 | 18,000 | 800 | 3 | 3 |
| Jet Colossal Carrier (WVC) | N/A | 54 FFJ | 54 | 0 | 0 | 56,000 | 1600 | 4 Large | 3 Large |
| Jet Gigantic Carrier (WVG) | N/A | 81 FFJ | 81 | 0 | 0 | 72,000 | 1600 | 4 Large | 4 Large |
| HMS Habbakuk (WVH) | 144 FB/MB | N/A | 0 | 144 | 0 | 10,000# | 1 Year to complete | 2 Large 1 Small | 4 Large 2 Small |

Note, the tonnage for Early IT designs is given for rules that require the tonnage of the ship, these designs cannot be built during the war under any circumstances. They produce a carrier that is far too economical to build and would drastically unbalance the forces, especially for the British if they take the Armoured Carrier option.

\* Most Escort Carriers will carry 15 TB in a scouting and anti-submarine role. If an anti-air role is also needed and two Escort Carriers are assigned to the same convoy then the TB aircraft could be split across the two VE in an 9/6 ratio and the FF aircraft (off the second VE) in a 6/9 ratio. This would allow two fighters (FF) to be launched at the same time, if needed, when under air attack. If the two VE split to two separate forces later on then they must fly their own aircraft back on board, or at least those that have survived the convoy route. No single VE carrier can sail in a convoy with a mixed compliment of aircraft unless one carrier has been sunk and the other has picked up some of those planes that were flying around. In this case, only the type assigned to the ship can be used from then on until the ship is able to fly off the "foreigners".

When building a VE, 6,000 tons is built into the ship using a merchant slip and the hull is moved to a merchant completion dock for a further 2,000 tons to be built into the ship. The ship is then moved to a Cruiser Completion Dock where a further 1,500 tons will be built into the ship. The complement of aircraft will of course have to be flown on to the ship before it can be commissioned. XXXX speed of a VE? May have to restrict to biplanes if not 30 knots

The WVC and WVG Build Rates assume two pushes throughout the build, if this is not done it will take over eight years to build in the case of the WVG.

# HMS Habbakuk is built using special rules – see description above under Carrier Types.

The complements given above are for those ships built during the Early and Late IT period. Once hostilities have commenced the players are free to move any squadron (15 aircraft) from one carrier to another and carry any mix of squadrons that they like. Note, however, that VF and VA/VB should keep at least one squadron of each type of aircraft (Torpedo Bombers (TB), Dive Bombers (DB) and fighters (FF)) on board until at least 1941.i.1, or until that nation's carriers have taken part in at least two major air battles. It is my opinion that TB are more flexible and more successful than DB but that can only be shown by wartime experience.

New carriers (both PLT and Wartime builds) do not come with any aircraft – these aircraft must be built in time for the carriers to go operational. The squadrons built must follow the above rules until enough wartime experience has been gained. Normal land based aircraft can take off from a carrier but cannot land on one. They can be craned on and launched to an existing airfield. Note they cannot be struck down into the hangers either (no folding wings) so will take up deck space and no plane can be landed on the carrier until they have launched. Land Based aircraft cannot be launched from a catapult so the entire length of the Flight Deck will be needed to launch them – the aircraft are parked at the rear of the ship ready for take off.

New carriers built during the war, or PLT period carriers completing or VE converting from merchantmen, use steel that shall come out of a special "Carrier Pool". For VE, only the 1,500 tons built into it in the Cruiser Completion Dock needs to come from the Carrier Pool. To avoid a situation where only carriers are built, only a small percentage (5%) of any steel that is created from Iron Ore can be put into this "Carrier Pool", and only steel taken from this pool can be built into Carriers. Submarines suffer a similar restriction but the percentage is less (1%). Steel may be removed from this Carrier Pool to build other types of ships but cannot be replaced later, ie it cannot be borrowed for a short period of time. Only the given percentage of all created Steel can be added to the Carrier Pool at the point that it is created.

XXXX AA/DP armament for Carriers – covered earlier? But not AAA

## Fictional Cruisers

### Cruiser Periods

Cruisers are built in three periods (although the W1 period may include some pre-war Armoured Cruiser designs). These are W1, IT and PL, the latter of which won't be complete before the start of hostilities. The IT period can be split into EIT and LIT for Early and Late IT eras though as DP guns are not available during the EIT period, except to Japan.

### Cruiser Types

The following Cruiser types are defined starting with the oldest that is available:

AC - A pre-Dreadnought Armoured Cruiser Design, see also Other Mothballed Ships XXXX. These ships shall have one turret forward and one aft which can contain up to two guns of 7.5" to 10" calibre (Albion and Prussia and the Turkish German design may have a third Tw9.2” or 8.2” respectively on the centreline in Q position instead of a central wing turret – only two wing turrets per side may be mounted in this case, either Singles of the main gun or smaller twins). An AC shall also have up to 5 turrets per side of 5" to 10" calibre, if the calibre is 8” or less the turrets may be Twins, otherwise they must be Singles. It may also have a casemate containing up to 5 single guns of between 3" and 6" calibre. Speed may be 21 or 24 knots. No 21-knot AC may be built with an armament (excluding armour) heavier than two twin 12” and 2 twin 8” per side plus 5x6” casemates (the Japanese Ibuki class). No 24 knot AC may be built with an armament (excluding armour) heavier than two twin 10” plus 2 twin 8” per side plus 5x6” casemates. Japanese Using Nations may build AC with two Tw12 and either 2Tw8 per side plus 6x6” in casemates and 6x4.7 per side, no other Nation may build AC with weapons larger than 10” except where specified. Some or all of the armament on this ship may be removed during the war and replaced with DP weapons. They cost half their tonnage to build and use tonnage from the WW1 CA (CA1) Tonnage Pool if they are demothballed, otherwise they are free but only a total of four ships may be included in each Navy. These vessels are Coal Fired and may be refuelled at any Port or Coastal Town on the map. In the individual Nation descriptions, it suggests AC may be from different eras (Early SDr, Mid SDr and Late SDr) not all Nations get access to all eras.

|  |  |  |
| --- | --- | --- |
| Era | Max weight of all guns on the ship | Nations (number in brackets is the maximum number that Nation can build of that type |
| EAC | <1800 | America(4),Austria(2),British(4),Germany(2),Italy(2),Russia(2),Spain(1),Turkey(1 either GB or Germ) |
| MAC | <2100 | Albion(4),Austria(2),Germany(1@24kts),Greece(1 American),Italy(2),Japan(2),Russia(2) |
| LAC | <2350 | Japan(2), |

Note, Germany’s (and Prussia’s) single MAC is Blucher which is effectively an underarmed 24 knot Battlecruiser rather than an Armoured Cruiser, the Japanese MACs and LACs could also be described the same way. Germany and Prussia also get a fully operational OAC with AXTw9.4 and 14x5.9 in casemates (7 a side) – all other Nations get one gunnery training OAC and 3 that are non-operational as described in Other Demothballed Ships (XXXX).

Again, the Mediteranean Consortium gets 1 AC from each country and a fourth AC from any one of them, and Turkey only has to take one design but may take two if desired which could be one British and one German or two British.

Again, the South American Consortium gets 1 AC from each country and a fourth from either Chile or Brazil.

In the case of Prussia they have to use the same option that they took for SDr out of the options of either Abion (4xMAC with AQXTw8.2Long plus 2 wing turrets per side) or Germany (2xEAC and 1xBlucher and 1xOAC)

CA1 - A Late WW1 CA design like Hawkins or Furutaka. These ships will mount guns of either 7.5"BL (Britain, Albion, France, Japan, Japan and Austria) or 8" in single shields (Japan may also have 8” in turrets). Germany has other options – see CA1G below. No country (including Germany) may build this design larger than 10,000 tons, nor may they use Heavy Build XXXX !!. The ships may have guns in A, B (superposed over A), P~ (either side of the bridge or on either side between the 1st and 2nd funnel, one of which can fire forward). The after guns are Z at the same level as X (can’t fire aft) or superposed over Y if Y is at the same height as X), Y (either at the same height as X or superposed over X) and X. Not all of these gun positions need to be used, but the 2 wing guns must be fitted, with at least 4 of the 5 centreline positions filled too (ie a minimum of 6 guns and a maximum of 7). The CA1G carrying 9x6.7” and the Russian CA1R with 4 twin 7” mounts are exceptions to this rule. Armour must be at least 1" on the belt and 1" on the deck and shields. Speed must be 30 to 36 knots. Up to four AA guns of between 3" to 4” or 3 AA guns of 5" calibre may also be fitted, one or two on each side and up to one centreline amidships in Q position, or one twin AA in Q position amidships. The CA1A below is an exception to this rule. Up to three 3” to 4” or two 5” BL guns may be mounted each side (all unarmoured). This ship may be converted to a CAA and several other designs. All variants below and any self designed CA1 cost half their tonnage to build and use tonnage from the WW1 CA (CA1) Tonnage Pool. Note the variants below all have a reduction of 250 tons before the halving of the tonnage so any self designed ships will be heavier than the predefined variants. No ships of this type or their variants can be built in any period except for the LW1 period.

CA1A – A late period WW1 CA design for the USA, Confederacy and USA using Nations and any other nations which can use the 8” instead of (or as well as) the 7.5” in this period. It has two single 8” in shields forward A and B), one either side abaft the bridge (P~), one of which can fire ahead. It has 3 more aft, X and Z at the same level with Y superposed between them. It has four 5” AA in a square formation on a platform ahead of Z (with the aft mast through the centre of the platform). It also has 2Tw21” torpedo tubes each side. Speed is 30 Knots, weight is 9,880 tons. Belt is 3” and Deck is 1” and a range of 5640 XXXX nautical miles at 10 knots. They can be freely improved in the EIT period by replacing the superposed pairs A/B and X/Y to twins and leaving the remaining 3 single 8” in place. It could also be converted during the EIT period to a CAFA, see below. If unchanged during the EIT they can be changed during the war by replacing each 8” single with a twin 5”DP.

CA1J – A late period WW1 CA design (Furutaka) for Japanese Using Nations only. It has three single 8” turrets (not shields) forward with B position superposed above the other two. It has 3 further 8” turrets aft, all with 2” armour. She also has two 3” AA each side of the funnels, six 24” fixed TT (not Long Lance) a side and a catapult with one floatplane aft of the rear funnel, Speed is 36 Knots, weight is 9393 tons. Belt is 1” and Deck is 2”. They can be converted to a CA18 in the EIT period with 3 twin 8”. It can also be converted during the war to a CAAJ by removing the aircraft/catapult and torpedo tubes and replacing each single 8” turret with a twin 5”DP (ABCZYX with B & Y superposed). The CA18 can’t be converted to a CAAJ though.

CA1G – A German Using Nation only late period WW1 CA design. It has six 8.2”Lo in single turrets (not shields) in ABP~YX positions (P~ being wing turrets). 4 single 105mm AA are mounted as the 5” on the CA1A. It also has 2Tw21 Torpedo Tubes, armour is 3” belt and 1” deck. Speed is 30 Knots, weight is 9806 tons. Another alternative would be nine 6.7” in shields with a second pair of wing turrets aft and Y superposed above X and Z. All other details are the same as the 8.2 version except for the weight of 9664 tons. Either (or both) of these designs can be used by all German or Prussian Using Nations and either can be converted to different versions of CAFG during the EIT period. The 6.7” armed CA1G can also be converted to a CAAG replacing each 6.7 with a twin 105mmAA except for the after wing mounts which will be a single 105mmAA, it will have 2 HAC and 20 tons of extra fuel. The 8.2” armed CA1G cannot be converted to a CAAG as it only has 6 mount points – it would be a much inferior design weighing more than the 6.7” armed version.

CA1H – A late period WW1 CA design (Hawkins). It has two single 7.5”BL in shields forward, one either side on circular platforms abaft the bridge, one of which can fire ahead. It has 3 more aft, X and Y are both at the same level, with Z superposed above Y. It has four 4” AA in a square formation on a platform ahead of Z (with the aft mast through the centre of the platform). It also has two 4” (one either side) on another platform forward of that, one either side of Z and one built into either side of the bridge (for a total of 6Si4). It also has 7x21” fixed torpedo tubes. Speed is 30 Knots, weight is 9815 tons. Belt is 3” and Deck is 1” and a range of 5640 nautical miles at 10 knots, the shields have 0.25” splinter protection. They can be improved in the EIT period to three twin 8” (CA18) or converted to CAFH in the EIT period (with a single HAC added in the LIT period) or converted to nine single 6” (CA16) in the LIT period. If unconverted beforehand they can also convert to 6 twin 5.25” DP (British Using only – no Z turret) or 6 twin 5” DP and 1 Single 5”DP (in Z) (most other countries) during the war. If using 4.7SDP or 4.7DP then all 7 positions are twins. Note if Britain performs the 5.25”DP upgrade the ship will be Top Heavy by 20 tons and any extra AAA added during the war will increase this. The rearmost HAC could be removed to balance this, which would give 4 tons of extra fuel. The 5” DP conversion will have 30 tons and the 4.7” DP version will have 44 tons of extra fuel.

CA1R – A late period WW1 CA design (Russia only). It has four twin 7” in shields, one in position A forward, one in position Q, one in position S and one aft in X position. The two turrets amidships can only fire to one side or the other. It has four 4” AA in a square formation on a platform ahead of X (with the aft mast through the centre of the platform). It also has one triple21” torpedo tube mount each side. Speed is 30 Knots, weight is 9899 tons. Belt is 3” and Deck is 1.75” and a range of 5640 XXXX nautical miles at 10 knots, the shields have 0.25” splinter protection. They can be converted in the EIT period to CAFR. If unconverted beforehand they can also convert to a CAAR during the war by replacing all the twin 7” with a twin 5”DP and adding a single 5”DP superposed above Q and S. This is the only occasion that a Russian ship may have a number of turrets that is not 4 except for the SDr and AC designs. They will lose all other armament, including the torpedoes and AA, but will gain a pair of twin 40mm AAA on the bridge wings and 2 single 20mm down each side and will have 100 tons of extra fuel.

CAFA – A late period WW1 CA design (nations with 8” guns) rebuilt during the EIT period to carry 10 floatplane scouts and 2 catapults. All the original guns and torpedoes are removed and replaced as follows (all other details are the same as the original ship). There will be a twin 4”AA in position A and another twin superposed above it in B and a single 4”AA either side of the bridge (able to fire ahead, astern or to the side). The whole area aft is given over to the hanger, catapults and cranes to lift the floatplanes out of the water or out of the hanger on to the catapults. All Nations also get 2 tons of heavy AAA (twin 40mm or 25mm for the Japanese) on both bridge wings and 1 ton of light AAA (2 single 20mm) each side. The ship has her AAA upgraded as per a CA1, but may keep any gun of 20mm or larger as well. This ship also has 30 tons of extra fuel. No ships of this type can be built after LW1, these ships are bought as is from the fixed design list in the LW1 CA1 section instead of being bought as CA1A and converted. It also has one HAC added in the LIT period.

CAFG - A late period WW1 CA design (German Using Nations only) rebuilt during the EIT period to carry 7 floatplane scouts and 2 catapults. All the original guns and torpedoes are removed and replaced as follows (all other details are the same as the original ship). A German Using Nation will have a twin 105mmAA mount in A and single 105mmAA in B (superposed) positions and single mounts on the wings. The whole area aft is given over to the hanger, catapults and cranes to lift the floatplanes out of the water or out of the hanger on to the catapults. German Using Nations also get 2 tons of heavy AAA (twin 37mm) on both bridge wings and 1 ton of light AAA (2 single 20mm) down each side. The ship has her AAA upgraded as per CA1, but may keep any gun of 20mm or larger as well. This ship also has 42 tons of extra fuel. No ships of this type can be built after LW1, these ships are bought as is from the fixed design list in the LW1 CA section instead of being bought as CA1G and converted. This version is built from the 6.7” armed version of the CA1G, if rebuilt from the 8.2” version then there will 8 Floatplanes, B turret will be a twin and there will be 47 tons of extra fuel and the overall weight will be 9743 tons. Both designs will have an HAC on the bridge added in the LIT period.

CAFH - A late period WW1 CA design (Hawkins-Nations with 7.5” or 7.6” guns) rebuilt during the EIT period to carry 9 floatplane scouts and 2 catapults. All the original guns and torpedoes are removed and replaced as follows (all other details are the same as the original ship). All Nations except for German Using Nations may build this version if they can mount 7.5 or 7.6” guns, it will have twin 4AA mounts in A and B (superposed) positions and single mounts on the wings. The whole area aft is given over to the hanger, catapults and cranes to lift the floatplanes out of the water or out of the hanger on to the catapults. All Nations also get 2 tons of heavy AAA (quad PomPoms for British Using Nations) on both bridge wings and 1 ton of light AAA down each side. Japan for example could have triple 25mm on the bridge with a single and a 13.2mm per side. The ship has her AAA upgraded as per CA1, but may keep any gun of 20mm or larger as well. All versions of this ship also have 45 tons of extra fuel. No ships of this type can be built after LW1, these ships are bought as is from the fixed design list in the LW1 CA1 section. This design also has an HAC on the bridge added in the LIT period.

CAFR - A late period WW1 CA design (Russia only) rebuilt from the CA1R during the EIT period to carry 10 floatplane scouts and 2 catapults. All the original guns and torpedoes are removed and replaced as follows (all other details are the same as the original ship). There will be a twin 4”AA in position A and another twin superposed above it in B and a single 4”AA either side of the bridge (able to fire ahead, astern or to the side). The whole area aft is given over to the hanger, catapults and cranes to lift the floatplanes out of the water or out of the hanger on to the catapults. Russia will also get 2 tons of heavy AAA (twin 40mm) on both bridge wings and 1 ton of light AAA (2 single 20mm) each side. The ship has her AAA upgraded as per a CA1, but may keep any gun of 20mm or larger as well. This ship also has 49 tons of extra fuel. No ships of this type can be built after LW1, these ships are bought as is from the fixed design list in the LW1 CA1 section instead of being bought as CA1R and converted. It also has one HAC added in the LIT period.

CL1 - A WW1 CL design like C/D/E/Emden/Omaha. These ships will mount guns of 6" or 5.5" (Britain, Japan, France. Italy or Austria) calibre in single shields, they may also mount 3 AA guns of 3” or 4” calibre or 1 twin on the centreline as in CA1. All rules for position and armour for CA1 will apply except that minimum armour is 1" belt and 0.5" on the deck and shields. Speed shall be 30 to 36 knots. American Using Nations may choose the CL1A (Omaha) design. Any of the Nations may convert up to six of the CL1 ships in the Late IT period to CLA. All variants below and any self designed CL1 cost half their tonnage to build and use tonnage from the WW1 CL (CL1) Tonnage Pool. If German Using Nations build a CL1C, for example, then it will have 150mm which in all respects as far as the game is concerned is identical to a 6”.

CL1A – An American Using Nation only LW1 CL (Omaha), it has a twin 6” turret forward and aft and a double height casemate adjacent to the bridge and another forward of the aft twin each with a single 6”, so carrying 12 in all. It has a speed of 36 knots, weighs 7050 tons. It has deck 1.5” and belt 3” with 3” protection to all 6” guns, one 3” AA per side and one quintuple 21” torpedo tubes per side. There was also one trainable catapult each side in the waist carrying a scouting floatplane (XXXX).

CL1C - A mid WW1 period CL (Curacao) with two single 6” in shields superposed forward and another two aft and a 5th single between the funnels and the aft superstructure (Position T). It has a speed of 30 knots, weighs 4250 tons, belt 3”, Deck 1”, two 3” AA, one maxim machine gun and four twin TT and a range of 2100 on Half Power (XXXX). The 6” are in shields with 0.25” armour.

CL1D - A mid WW1 period CL (Delhi), laid out as CL1C but with a sixth 6” between the bridge and the first funnel (Position P). It has a speed of 30 knots, weighs 4970 tons, belt 3”, deck 1”, a single 4” AA, a single PomPom, 1 Maxim mg and two triple TT per side with a third single PomPom on the centreline and a range of 2300 on Half Power (XXXX).

CL1E – A late WW1 period CL (Emerald), laid out as CL1C, but with an extra pair of single 6”, one either side, between the 2nd and 3rd funnel (Position Q~). This allows a third gun to fire ahead when the ship is closing an enemy. The forward, superposed pair may be replaced by a twin turret on one ship of the class as an experiment. It has a speed of 36 knots, weighs 7550 tons, belt 1”, deck 1”, two single 4” AA, a single PomPom, 1 Maxim mg, two triple TT per side and a fifth 4”AA and a third single PomPom on the centreline and a range of XXXX.

CL1O - A mid WW1 period CL for Nations that use 5.5” such as Japan and Albion. It has two single 5.5” in shields superposed forward and another two aft and a 5th single between the bridge and the funnels (P Position) and a 6th one between the funnels and the aft superstructure (T position). It has a speed of 30 knots, weighs 4250 tons, belt 3”, Deck 1”, two 3” AA, one maxim machine gun and four twin TT and a range of 2100 on Half Power (XXXX). The 5.5” are in shields with 0.25” armour. It also has 22 tons of extra fuel.

CL1R - A late WW1 period CL designed for the Russian Nation, with Tw5 in AQS and X. It has a speed of 30 knots, weighs 4335 tons, belt 3”, Deck 1” and two 3”AA, 1 machine gun and four twin TT and a range of XXXX on economic cruise. The 5” are in shields with 0.25” armour, it has no tons of extra fuel.

CAA - Either a CA1 converted to the AA role (see rules to cover this below XXXX) or a purpose built Anti-Aircraft Cruiser in the W2 period. Britain, Germany and Prussia may build up to 3 each in the PLT Period XXXX. Sweden and The Netherlands may each build one CAA in the PLT Period. Albion may not build pure CAA ships in any era but may build PL era CL with Tw5.5DP in BY above Tr5.5QF, and Si5.5DP on the wings in the PLT period. Hibernian must choose to follow either Britain or Albion and use all their appropriate rules. The purpose built ships must have at least 1" belt and 0.5" deck and all mounts must have a single calibre of DP guns and have no wing turrets except where specified and have a speed not exceeding 33 knots.

No CAA with the exception of the American and German and Prussian Using Nations may place guns heavier than 9pdrDP on the wings.

It is worth reiterating (from XXXX DP guns) that no ship, no matter how large may mount more than 14 Light or 12 larger DP or AA guns capable of firing into a single broadside unless specifically stated.

* 5.5” DP – either 4 or 5 twins for Japan, 4 twins for Albion or Austria (with Singles on the wings) - XXXX Austria may design the Tr5.3DP after the Start of Hostilities
* 5.3” DP - either 4 or 5 twins for Italy (Q mount if five)
* 5.3” DP – 4 twins only for Austria (ABYX) – XXXX Austria may design the Tr5.3DP after the Start of Hostilities
* 5.25" DP - either 4 or 5 twins for Britain (ABCYX), ABQYX for Chile
* 5.1” DP - either 4 or 5 twins for France (ABQYX)
* AXQu5.1DP for France XXXX 5.1 or 5.5 other guns on wing?
* AXTr6DP for France XXXX other guns
* 4.5" DP - either 4 or 5 twins (ABCYX) for Britain (using the 4.5" DP mounts meant to rearm the WW1 BB and BC, or the height restricted 4.7" SDP from 1941.i.1. The new 4.5” SADP can be used later in the war XXXX) Brazil may build ABQFZYX Si4.5DP XXXX
* 5" DP - either 4, 5 or 7 twins (ABYX+XXXX+T~) (if 2 wing turrets are used) for American Using Nations
* 5" DP - either 4 or 5 twins for Japan, France XXXX, Italy and Spain XXXX
* 5” DP – 4 twins only for Russia (AQSX) – Russia may design Tr5DP after the Start of Hostilities for AX only – by majority player vote the Triple could be mounted in QS as well to compensate for the lack of arc.
* 4.7” SDP classified as 5” – either 5 (probably twins) or 7 (probably singles, but maybe mixed) for South America and Turkey, these are the British 4.7” SDP which cannot attack High Flying Aircraft. XXXX SDP or DP?) Only one out of every pair built can have 7 turrets, the other should have 5. Every third CAA built by South America (not Turkey) could be nine 5” DP with AQX being twins and BRY being singles, alternatively it could be ten guns with either R or Y being twins. Turkey's AA Cruisers should be a pair of CLA using Tw or Si105AA German guns, vessels started after 1940.v.1 may use 105mm DP mount if that mount has been designed. If started later when the 127mm (5") DP mount is available they can use that instead on a single CAA.
* 4.7” DP in four Twins for Spain (ARweX). These are the full DP and may attack all aircraft. Austria and Italy could also build CAA using this mount in a four turret design (Austria – can’t design a Triple however XXXX can Austria build a CAA) or 4/5 turret design (Italy) (AB(Q)YX)
* 4" AA or DP or 105mm AA or DP when that becomes available - either 5, 6, 7 twins (if 2 wing turrets are used) for any nation or 9 twins (if 4 wing turrets are used) for Germany, Prussia, Turkey, Chile, and Brazil. The Scandinavian Countries and The Netherlands also have this option, but have to develop the DP mount themselves. Turkey may only build this option for the third ship in every three CAA, they must build the other two designs using British designs. If Turkey builds a number of CAA that is not divisible by three then they can choose which design to use for the odd ones, but can only choose one extra of each design. They can’t for example build three of this design and one each of the two British designs. If any of these countries lay the ship down after 1940.v.1 then they can build it assuming the 105mm DP will be available and can delay the completion until the turrets are available. Alternatively they can build them with the lighter AA mounts and replace them later under the normal upgrade rules. If they do this, the ships will not be considered “Top Heavy” when the DP mounts are fitted later if they were designed for the DP in the first place.
* 3.9” DP (classified as 4”) – 5 or 6 twins for Japan with three turrets superposed either forward or aft (or both in the case of 6 twins). XXXX 1940.i.1?

Their guns are all in twin turrets with 0.25” of armour (4.7” in shields, 4” AA unarmoured) and arranged two or three forward superposed and two or three aft superposed unless otherwise stated. Those nations who may use wing turrets (USA and German and Prussian Using Nations) also mount either 1 or up to 2 (respectively) twin mounts on each wing. Nations placing three turrets aft and two forward may take advantage of the 10% reduction in Hull Weight rule.

CLA - A CL1 converted for the AA role during the war, or possibly a very light AA cruiser built during the W2 period using DP or AA only. The purpose built ships must have at least 1" belt and 0.5" deck. See the upgrade rules for converted ships XXXX. Brazil, Chile and Turkey may each build up to two CLA instead of 1 CAA during the PLT period. If there are absolutely no Argentinean ships at all then Brazil and Chile may build a CLA each as well as their normal CAA. Denmark and Norway may each build one CLA during the PLT period. Purpose built CLA have five possible positions for mounts which must be filled in the order X, Q, A, Y then B. These positions may be filled with the following depending on the Nation – 10x4”DP or AA or 105mmAA or DP (ie a twin in each position) or 8 or 9x4.5” to 5.1” (none or Si in B, others Tw) or 6xlarger (Tw in X or Q – not both - Si in others). Albion and Austria cannot fill the Q position and Russia can fill the AQSX positions only. Spain and China can mount Tw in ARweX with China mounting the AX guns at the extremities of the ship.

CLT - A CL1B XXXX built with 5.5” BL converted for the Torpedo role during the war. Only two CL1B may be converted to CLT and only by the Japanese Navy. Any 5.5 removed can be replaced with a single 5" DP and the remaining weight can be used to mount triple 24" TT without reloads. The Torpedo mounts are on the wings and both sides have to have the same number of TT, so 6, 8, 10 or 12 mounts would be acceptable. Twin 5" DP mounts can be used in place of a superposed pair of 5.5" (ie in A/B and X/Y position). If one of the two converted ships is sunk, then the Japanese Emperor may issue orders to convert another ship as a replacement.

CA6 - An Early IT design built using three twin 8" or 7.5”, and AA mounts as per the rules depending on the weight of the ship. The ships shall have at least 2" belt and 1" deck and turrets. Speed shall be between 30 and 36 knots. Above water Torpedo Tubes may be added but only in pairs. Ships of this design share the same tonnage pool as the AC and CA1 designs but cost their full tonnage. Designs with two turrets aft and one forward may take advantage of the 10% reduction in Hull Weight rule. Up to two trainable catapults with crane and a scouting floatplane may be fitted at the cost of 50 tons XXXX or 80? each.

CL6 - An Early IT design built using three twin 6" or 5.5”, and AA mounts as per the rules depending on the weight of the ship. The ships shall have at least 1" belt and 0.5" deck and turrets. Speed shall be between 30 and 36 knots. Above water Torpedo Tubes may be added but only in pairs. Ships of this design share the same tonnage pool as the CL1 designs but cost their full tonnage. Designs with two turrets aft and one forward may take advantage of the 10% reduction in Hull Weight rule. A trainable catapult with crane and a scouting floatplane may be fitted at the cost of 50 tons XXXX.

CA - An EIT design, built using either 6, 8 or 10 by 8" in twin turrets. American designs could be Ten 8” or 3Tr8. French and Italian designs could be 3Tr8 and Albion and Austria could have Ten 7.5” guns, and Russia 4Tr7. No CA may mount more than 10 main guns (8” or 7.5”) except for Russia designs, Brazilian and Turkish 7 turret designs and Argentinian 6 turret designs. Only Brazilian, Argentinian and Turkish CA may mount more than 5 turrets or shields on the centreline. For designs of this type started during the PLT period the French may build ships with two quad 8" turrets superposed forward and 2 twin DP turrets superposed aft. Early IT designs may have secondary AA guns according to the rules depending on the weight of the ship or QF. Only Germany and American Using Nations and Japan can produce Late IT period or PLT Period CA designs though note that only AA guns are available to the German Using Nations, see the section below (France may build CA in the PLT period). Note Britain pro-typically only carried two twin 4" DP a side on all her IT period designs (exceptionally three twin 4" DP). Note, players may choose to mount only two single 4" AA a side in the EIT and upgrade them to twin DP mounts in the LIT period - these will however add to the "top weight" of the vessel XXXX. Only Light AA or DP guns (105mm or smaller) may be mounted on the wings in Twin mounts, larger guns must be mounted in single mounts. This is true of all Cruisers until the CAS with twin 5” is produced, after which medium AA or DP may also be mounted in Twin mounts – Heavy AA and DP (larger than 5.1”) must still be mounted in singles until LW2. The 5 turreted designs will have at least one turret that is not superposed and can only fire to one side or the other, the turret layouts are the same as given below for CL. Speed shall not exceed 33 knots unless explicitly stated for a Nation. The ships must have at least 2" belt and 1" deck and turrets. Britain may build ships with armoured magazines only and no armour elsewhere, but must use Heavy Built Hulls. At least 40 by 8" or 7.5” or 48 by 7” guns must be mounted in the EIT period (ie with AA guns in the wing positions rather than DP guns), except for German Using Nations if they build Pocket Battleships, or Minor Nations. CA1 Tonnage Pool designs cannot be used to fulfil the requirement. Up to four Japanese LIT CL with triple 6.1” turrets may replace these turrets with twin 8” turrets during the PLT Period but the conversion will not be complete by Start of Hostilities (See XXXX). The old triple 6.1” turrets removed in this change will then become available to speed up building of other ships such as CLH during the W2 period.

CL - An IT design built using either up to 15 by 6" or up to 16 by 5.5” QF guns. Note, for Brazil and Turkey their cruisers will need to be 7Tw6 or to use some singles (Turkey also has a 5Tw6” design). For designs of this type started in the Late IT period the French may build ships with two quad 6" turrets superposed forward (optionally a third quad turret between the bridge and fore-funnel – position P) and 2 twin DP turrets superposed aft. Early IT designs mount AA guns according to the rules depending on the weight of the ship. Late IT period designs will replace these with DP guns (except for German Using nations) and add 1 or 2 HAC. The 6 by twin and 7 by twin designs have two turrets in the centre of the ship, which can only fire to one side or the other. The 7 by twin turret design has a Z turret at the same level as X (usually level 3) which can also only fire to one side or the other. The 5 gun turrets can be mounted either:

* 3 forward (either B or C at same height as A and the other one superposed) and 2 aft
* 2 forward, one centre Q (probably at the same level as X) and 2 aft
* 2 forward and 3 aft (probably with Z at the same level as X) taking advantage of the 10% reduction in hull cost rule.

From the PLT period onwards any Nation (unless they have specific gun requirements) may replace Turret A or Y on a cruiser with a Twin of their DP/AA gun. Note most Nations only get Heavy DP in the PLT period, some Nations such as the Colonies never get a larger DP gun. Only single DP mounts larger than a 5.1 may be placed on the wings.

From the PLT period onwards Hibernian may place twin 5.5DP turrets in X and Y (and optionally B) if their A and Q turrets are quad 5.5QF.

Speed shall not exceed 36 knots unless specifically mentioned for a Nation. At least 48 by 6" guns must be mounted in the whole IT (both early and late) period, not including ships from the CL1 Pool. The ships shall have at least 1" belt and 0.5" deck and turrets. If the 5.5" is used in the IT period then they will have to have 56 guns instead of 48 by 6" or they could be replaced on the ratio of 7 by 5.5" for 6 by 6". Thus it is possible for example to have 24x6" and 28x5.5". Centreline 5.5DP guns may be included in this total but not wing mounts.

CAH - A Japanese Only Late IT period Hybrid design (not to be confused with a CA1H) built using 8Tw8, all mounted forward and only one of which can be superposed. Up to 10 floatplane scouts may be carried. Two twin 5" DP turrets may be placed superposed aft between the funnels and the flying off area. The total DP weight is dictated by XXXX below and does include the two twin 5” DP turrets on the centreline XXXX not normally. Note the Japanese Navy doesn't have a 4" DP mount in this period – ships started after the beginning of hostilities may use the 3.9" DP twin mount in the QR and wing positions. Speed shall not exceed 33 knots. Only two of these ships may be built during the LIT period. Armour is as a standard CA.

CLH - A Japanese Only W2 period Hybrid design built using 2Tr6.1 in AB. Up to 10 floatplane scouts may be carried. One twin or two single 5" DP turrets may be placed superposed aft between the funnels and the flying off area. The total DP weight is dictated by XXXX below and includes the centreline DP. Note the Japanese Navy doesn't have a 4" DP mount in this period – ships started after the beginning of hostilities may use the 3.9" DP twin mount in the QR and wing locations. Speed shall not exceed 36 knots. This design may be built after Start of Hostilities, and any Triple 6.1” turrets removed from the four converted LIT Cruisers (or any other ship) during the PLT period may be used to speed up construction of this type of ship or any other W2 CL using triple 6.1” turrets. Armour is as a standard CL.

Con - An IT or later design of very light cruiser available to the Italian, Austrian and possibly Spanish Navies – a Condatori. The design must have either 4 or 5 twin 6". From the PLT period onwards twin heavy DP (larger than 5.1”) may be mounted instead of 6”, for other Nations building this design from MW2 onwards (see Sph below), single guns may be fitted to allow six or seven turret designs. Speed cannot exceed 39 knots. Armour will be at least 0.5" Belt and 0.25" Deck and Turrets. No AA or DP gun larger than a 40mm can be mounted. One quad 21" TT will be mounted on the centreline at no cost. Two thirds of the tonnage of the vessel (rounded up) come from the IT (or PLT) Cruiser Pool and one third (rounded down) come from the IT (or PLT) period Destroyer Pool. The pools used must be from the same period, either IT+IT or PLT+PLT, you can't use IT+PLT or PLT+IT. The ships will generally be used as replacements for the leading Destroyer, which the Italian navy did not have many Heavy Destroyers. Hence a Destroyer Division will generally be 1xCon/3xDestroyers. A maximum of 3 Destroyers may be built at the same time with an extra 3 or 6 knots to match the speed of the Con if necessary. If all three Destroyers loose at least six knots off their speed in combat the Con may be reassigned to another formation in the following order of precedence:

* Another formation that contains only Destroyers.
* A formation that contains only Cruisers.
* If the Con has DP armament then it may be assigned as a CLAA to any formation.
* Form a new Cruiser formation on its own.

If a Con loses any or all of its Destroyers then repairs/replacement of those Destroyers must be given the highest priority in the shipbuilding programme.

Reg - A PLT period variation of the Con design for the Italian, Austrian and possibly the Spanish Navies – a Regolo. The differences are that the design must have no more than 4 twin turrets, these may be 6” or heavy DP (larger than 5.1”) and the speed cannot exceed 42 knots and no armour shall be mounted in any location, although the turrets can have splinter protection (0.25"). If no more than six 6” are mounted then one twin AA or DP mount may be mounted. One centreline quad 21" TT will be mounted at no cost. Two thirds of the tonnage of the vessel (rounded up) come from the PLT Cruiser Pool and one third (rounded down) come from the PLT period Destroyer Pool. The ships will generally be used as replacements for the leading heavier Destroyer, which the Italian navy did not have many of. Hence a Destroyer Division will generally be 1xReg/3xDestroyers. Note, only one Reg can be built per Destroyer Division during the PLT period, any number can be built during the W2 period. The same rules for the Destroyers (extra 3 or 6 knots, reassignment to new formations, etc.) apply to the Reg as given for the Con.

Sph - A W2 period variation of the Con design for the German Using Navies – a Spahkreuzer. Historically the design will have 3 twin150mm (AYX), one Tw88mmAA (Z) and 4Tw37AAA (two per side). Build them as either a Con or a Reg obeying all the relevant rules with the following exceptions. Six months after the commissioning of the first of these ships, other nations can start building similar designs if desired. All Nations may start to build this design on 1942.i.1 regardless of what the German Using Nations do. The Other Nations designs shall mount only one gun type (plus AAA) and up to one TT mount as described above. The gun may be any calibre up to 6.1” and up to seven may fire to a single broadside. If a mixed Tw/Si mount layout is chosen then the Si is in B position (Tw in AYX) (a six turret design could have the Tw in X and a 5 turret design could have Tw in AX), if a mixed Tr/Si layout is chosen the Si is in Y position (Tr in AX). The centreline TT shall be Tr24 Long Lance TT without reloads for the Japanese. The German Using Nations can use these ships as Scout Cruisers. All other Nations shall only use them in place of a Destroyer Leader (Italy/Austria/Spain with 3 Destroyers, others with a flotilla of 8 Destroyers as an AA cruiser – ie DP guns rather than QF). They must be designed to match the speed of the destroyers assigned to them – the Destroyers may be built at the same time and have an extra 3 knots compared with the normal DD speeds. The formation shall be kept together at all times, and the Destroyers may only be split into two divisions of 4 ships if the Spahkruezer is assigned to another flotilla of 8 Destroyers with the same speed in the same larger formation.

CAS - The US may build one ship of this design during the LIT Period, it will have 3 Triple 8” turrets in ABX with a single 5” DP in C and Y positions and up to 3 single 5” DP a side. In the PLT period the US may build improved versions of this using 5” Twin mounts. Note like all PLT designs the maximum tonnage of the first vessel is theoretically restricted to 10,000 tons (the Americans can actually build heavier CA by this time, the W2 designs are less restricted XXXX. All other Nations can build similar ships in the EW2 period with different gun layouts and Twin DP. A 7 turreted Brazilian or Turkish ship could mount Twin DP in B and Y (both superposed) with Tw 8” in AQZX and a Si in R superposed. Note France and the American Using Nations are the only ones in the PLT period that can mount DP in location C, all other Nations must mount them in BY on cruisers. American Using Nations may also mount DP in location Z (superposed above Y) if there are QF in Locations X and Y. In the W2 period any nation, except those restricted to four turrets (Albion, Austria, Russia, XXXX others?), can add DP in C and/or Z if they desire.

CLS - An EW2 design for a Super CL. The ship has Tr6 in ABYX (XXXX defo – checked), with Tw5DP superposed in CZ, further Tw5DP may be side mounted, see XXXX below for DP restrictions. Speed must be no more than 36 knots. Armour is as a standard CL. Albion and Austria are restricted to four turret designs and Albion has no 6”. Hibernian can have a Qu5.5 in A (XXXX optionally B) and P with Tw5.5DP in YX and Si5.5DP on the wings. Austria could have Tr6 or Tr5.5 in the A/X positions with Tw5.5DP in B and Y with Si5.5DP on the wings. Russia is also restricted to four turret designs so could develop a Qu6 mount after Start of Hostilities for the AX positions and Tw5DP in PT and on the wings. Either P or T could also be replaced with a third Qu6 if preferred. Albion can build a PLT period design with Tr5.5QF in AX and Tw5.5DP in BY with Si5.5DP on the wings. Their EW2 design can replace AX with Tr5.5DP once that mount has been designed – Albion has no formal CAA design. In the W2 period all Nations except those restricted to four turrets (Albion, Austria, Russia, XXXX others?) may add DP in C and/or Z locations if they desire.

CLG - A Late IT (LIT) period design built only by Sweden (Gotland). These weigh 4,700 tons, have 30 knots speed, 2” deck armour, 1” turret (the singles are shield less) and no belt, with 1Tw6 forward (A), 1Tw6 amidships (R) with a single superposed above and in front of it (Q) and another Si6 between the funnels (P). Along each side are two shield-less Si3AA and three Si20mm AAA and aft is a hanger for ten floatplanes and a crossdeck catapult between the rearmost twin 6” and the hanger. The rearmost three 6” guns may fire aft but if there is a floatplane on the catapult or being craned out of or into the hanger when these guns fire within 45 degrees of due aft then the floatplane will be destroyed by the blast. The floatplanes are the scout version and may only carry depth charges and are used for surface or submarine search. When the ships are built, they only carry 6 floatplanes though four more can be added after Start of Hostilities. They are a fixed design – only the three Scandinavian Countries may build this ship, The Netherlands cannot nor can any other Nation. This is a full sized ship (not a Mini) even if the Scandinavian countries chose to build Mini ships. **The historic ship also carried up to 100 mines, but there are no mine-warfare rules in this set of rules so the ship will not carry them. XXXX**

CLF -All Nations may start to build this design from Start of Hostilities. It is built as a CL, with or without armour, and up to the maximum speed of that Nations CLs. They may mount DP or AA guns in locations A/B/P~ up to a total weight of 270 tons (excluding armour). They may also mount up to 4 tons of AAA (half of which may be heavy AAA) mounted on the bridge and along the sides of the bridge. They may also have 1 or 2 catapults to launch the planes and 2 cranes to winch them back on board and down into the hanger, and up to 10 FPS (floatplane scouts) which may be used for scouting or anti-submarine work with Depth Charges. For those Nations with smaller ships (Micro) designated with an M such as BBM, BCM, CAM, CLM, they can build CLFM with up to 180 tons of DP or AA guns in A/B/P~, 3 tons of AAA, 1 ton of which may be heavy AAA, one catapult, one crane and up to 5 FPS. Those Micro building nations may also build the CLF if they prefer as Micro building Nations are not restricted to Micro ships after the Start of Hostilities.

CAF - All Nations may start to build this design from Start of Hostilities. It is built as a CA with or without armour, and up to the maximum speed of that Nations CAs. They follow the same rules as CLF but with an upper limit of 420 tons of DP or AA in the same locations and 6 tons of AAA arranged the same. CAFM follow the same rules as CLFM but are built as a CAM with an armament of 270 tons DP/AA and 4 tons AAA.

CLQ - Certain Nations may mount Quad 6” (or 150mm/5.5”) on Light or Qu8.2Lo/8/7.5 on Heavy (CAQ) cruisers from the PLT period onwards. Depending on the Nation these may be mounted in AB, AQ or AX. These Quad Turrets will be Radical. Centreline DP/AA may also be mounted in BY or X depending on where the main turrets are mounted – if AB then DP in YX, if AQ then DP in BYX and if AX then DP in BY. If a PB is built in the PLT period with Quad turrets (eg Qu10, Qu9.2, Qu8.2Lo, Qu7.5) then if their Radical problems are fixed before the first CLQ/CAQ is commissioned then the latter are no longer Radical if they are within 2” of the calibre on the PB. France, Hibernian/etc may build 1 CAQ and any number of CLQ in the PLT period. Prussian Using Nations may build any number of CAQ/CLQ in the PLT period. German Using Nations may build any number of CAQ/CLQ in the PLT period if they built at least one Kaiser’s Design with Quad150 and Quad8.2Lo in the MW1 period. XXXX

CAM - Mini versions of a CA – see BBM for a set of rules describing what may be built. Note, Nations building CAM may also build CA1M with half the armament that would be expected on a CA1 (rounded down if necessary) or may build the full sized CA1. They may however not build both. CA1M if built would have to be self-designed – only a few of these have already been designed. Note the decision to build Mini ships was taken at the start of the EDr period (Early Dreadnought) – there are no ACM (or SDrM for that matter). If a decision to allow ACM (for completeness) was made, then they would be restricted to Single guns in their main turrets but could not exceed 21 knots – they have a lighter armament because of their size rather than Roma which had a restricted armament to allow a faster speed. They are of course also restricted in their secondary armament to be approximately half of what an AC could carry in another Nation.

CLM - Mini versions of a CL – the rules for CAM apply here too – CL1M if built would have to be self-designed – only a few of these have already been designed. Some variants may be built such as CLFM depending on the Nation.

AUX - Optional Rule – There are two types of AUX ships, those in the LIT period and those in the PLT or later period though there is a minor variation of the latter. LIT AUX ships are up to 12,000 tons, may have up to ½” belt armour and 1” deck armour, historical speed is 15 knots but any speed up to 30 knots can be designed if these are to accompany the Battlefleets, armed with up to 256 tons of DP or AA in ABYX and a HAC and up to 4 tons of light AAA, half mounted each side. It can carry up to 10,400 tons of ammunition or fuel oil or avgas (or a mixture). Oil and avgas is stored in barrels and palleted, ammunition is stored with the propellant and the fuses separate from the shell but is still a huge fire risk. PLT AUX ships are up to 12,000 tons, may have up to 1.5” belt and deck armour, speed is 15 knots or higher as needed up to 30 knots, armed with up to 320 tons of DP or AA in ABQYX and one HAC, up to 4 tons of light AAA half mounted each side. It can carry up to 12,100 tons of ammunition or fuel oil or avgas. The exact combination of materials carried must be specified before the ships sails, eg enough 4.7” shells for 8 LIT DD and 4” shells for 4 LIT DD on a LIT AUX.

AUX ships may be used as Depot ships away from a main base for one of Destroyers, Submarines or Floatplanes (they can’t carry any but see variation below) as well as carrying ammunition, fuel oil or avgas to rearm/refuel ships after battles. If an AUX is used as a Depot ship for up to 24 FPT then it can send them on up to 5 missions each of both torpedo attack and anti-submarine work. All AUX ships are coal fired. They may anchor in a Sheltered place XXXX and deal with their designated “chicks”, they cannot refuel or rearm anything when under way. If adding this type of ship then add one extra slip to each YC capable of launching up to 12,500 tons of ship, the AUX ships will launch from this extra slip and be completed in a normal YC completion dock.

Four of the LIT designs will be available at the Start of Hostilities and 48,000 tons are available to build them, up to 6 of the PLT designs (with a maximum of two of the variation described below) may be completing at Start of Hostilities. For the completion times of the first four PLT AUX, form a third group of ships using the rules described before for cruisers. Note the 5th ship cannot be laid down until the 1st has launched, similarly the 6th ship cannot be laid down until the 2nd ship has launched.

A variation of the PLT design for the last two PLT ships allows for another 500 tons of ship to add a single float-plane catapult cross deck between the funnels and one FPT (Float Plane Torpedo). It also carries 5 extra TT for the aircraft, 5 sets of DC and enough Avgas to allow the plane to fly all day during the daylight hours for 5 days, though note that the plane will have to return to the Depot ship to refuel from time to time and possibly rearm if it has attacked anything. If the variant Depot ship is for FPT, this extra aircraft may travel with the other FPT when on a search or attack role. Note the optional rule in XXXX that allows for micro islands on the Map which could allow more sheltered places to moor these Depot ships.

### Cruiser Build Rules

The CA1 Tonnage Pool is 28,000 tons XXXX check, and only ships of type AC, CA1 (and variants - all at half tonnage) and CA6 (counts as full tonnage) may be built using this pool. No spare tonnage from the pool can be used elsewhere. So for example if a 16,000 ton AC is built then only count 8,000 tons towards the CA1 Tonnage Pool. If an 8,000 ton CA6 is built then count all 8,000 tons towards the CA1 Tonnage Pool.

The CL1 Tonnage Pool is 18,000 tons and only ships of CL1 (and variants - all count half their tonnage) and CL6 (counts as full tonnage) may be built using this pool. No spare tonnage from the pool can be used elsewhere.

The IT Tonnage Pool is 154,000 tons and only ships of type CA and CL (and appropriate variants - all count as full tonnage) may be built using this pool. The Japanese Navy may build up to two ships of type CAH during the LIT period. Germany may build PB designs during the EIT period and up to 2 CA during the LIT Period, if they do so then they are exempt from the 40x8” rule if they build at least 3 PB during any IT period and the 2 CA during the LIT Period. For the Italian and Austrian Navies, ships of type Con may also be built. The Swedish Navy may build any number of CLG during the LIT period. The Scandinavian Countries may build ships of type PB during either IT period but cannot arm them with guns larger than 11” (XXXX Sweden may mount up to 12” optionally with a twin 5.9” in B position). Alternatively the Scandinavian Countries may build ships of type CAM and CLM – but can’t in that case build any PB or CA or CL apart from CLG. For other Nations, ships built from this pool must include CA ships built using the Early IT period rules with at least 40 by 8" or 7.5” (eg 5 by 8 gunned or 4 by 10 gunned CAs). The Netherlands must build at least two ships with 8” or 7.5” in the EIT period. Ships built from this pool must include CL ships built using either Early or Late IT period rules with at least 48 by 6" (eg 4 by 12 gunned CLs, or 2 by 15 gunned CLs and 3 by 6 gunned CLs). 5.5"QF guns may also be used for CL designs in the appropriate Nations (but not Con designs) – see CL description. If 5.5” are used then they are replaced on a 7 for 6 ratio for the 48x6” rule – so if all the CL are armed with 5.5” then there needs to be at least 56 guns mounted of that type. It would also be possible to have 2 twelve gunned 6” CL and four with seven 5.5” guns (eg three twins and a single – probably in B position). Ships built using the CA1 and CL1 pools do not count for this. No spare tonnage from the pool can be used elsewhere.

The PLT Tonnage Pool is 85,000 tons. Only ships of type CL may be built using this pool. Exceptionally he American Navy can build one and only one CAS during the PLT period XXXX LIT? of the early design using single 5” DP. Exceptionally Britain, Germany and Prussia may build up to 3 CAA during the PLT Period using the rules for restriction of DP guns in the case of Britain. Albion and Hibernian have variations on the CL theme with a mix of 5.5 QF and DP guns in the PLT period instead of normal CL and CAA that Britain, Germany and Prussia get. Brazil, Chile and Turkey may each build up to 1 CAA in this period (or 2 CLA). Scandinavia build ships using the same decision that they made in the IT period (ie Mini ships or PB/CA/CL) and may mount twin 105mmAA in B and/or Y positions or a Twin 5.9”QF, the main guns can be twin or triple 11Long or 12Long. For Italy and Austria, up to five ships of type Reg may be built (or a maximum of 1 per PLT DD division if that is lower - 4 ships to a division including the Reg), any remaining tonnage may be used for type Con or ordinary CL. No spare tonnage from the pool can be used elsewhere. None of these ships will be complete at the start of the hostilities.

Before the PLT period no Nation may build a cruiser with DP on the centreline – PB built with the PLT budget and completed prior to Start of Hostilities are still considered to be PLT ships.

All CA and CL will have 4 triple 21" TT (two per side though the Japanese will have 4 twin 24" Long Lance TT) and one catapult with two floatplanes. Other cruisers get no TT (except where specified, eg Con). The torpedo tubes all have one reload internally within the ship except for the Con/Reg and Sph designs but they can only be reloaded out of action.

The Japanese CAH and CLH get two catapults along with their floatplanes. Other Nations may start to build these nine months after the first of that type has been completed. If for example the Japanese choose to only build the CAH then no other Nation can start a CLH, and vice versa. Only 8 heavy guns may be carried on the CAH and only 6 light guns may be carried on the CLH. Nations can place turrets as per their standard doctrine – Albion for example may build two triple 7.5 turrets low and one twin superposed. America could do similar with 8” turrets. Because the two CAH built during the LIT period will be complete before the Start of Hostilities, other Nations can start to build this concept on 1940.vii.1 assuming Japan chooses to build it. When other Nations can start to build CLH, all Nations, including Japan, can instead of using two triple 6” (or 5.5” for Albion) in A and B they can mount two twin DP. These are not taken into account when calculating the maximum DP for the ship. If that Nation has already started to build a CLS before the CLH is started then a twin DP can be mounted in C position – this is taken into account when calculating the maximum number of DP the cruiser can mount. The C position can be mounted above a pair of triple 6” or a pair of twin DP. However see the CLF above.

Note the AC, CA1 and CL1 ships can be partially or fully converted to AA ships after the start of the hostilities. Some CL1 can be converted to AA ships during the PLT period.

All cruisers built by all nations with the exception of Germany have to approximately abide by the 10,000 ton Cruiser limit – they are allowed any weight up to 10,175 tons. Germany will of course insist that their designs are less than 10,000 tons. Once a Nation (not Britain, Albion or Hibernian) has completed eight Cruisers (CA or CL or CA6, or CA1 converted to 3 twin 8” turrets), they can increase the maximum size to 11,000 tons. Once a further four Cruisers have been built this limit rises to 11,500 tons. For all nations (including Britain), all ships started after Start of Hostilities have no limit at all. Britain, Albion and Hibernian may not build ships heavier than 10,175 tons before the PLT period, but like all nations may build ships in the EIT period with single 4" AA and replace them with twin 4" DP turrets in the LIT period - this will add to their "top weight" though XXXX. British, and Albion, PLT Cruisers can be built up to 10,500 tons.

Also all nations can start to develop heavier guns at Start of Hostilities. Britain, ABC and Turkey can develop twin or triple (Britain, Albion and Hibernian only for quad) 9.2” turrets. Germany, Austria, Turkey can develop twin or triple 9.4” turrets or quadruple 8.2” for German and Prussian Using Nations only. The remaining nations can develop twin or triple (France quad) 10” turrets. Note the Scandinavian countries already have access to larger guns for their Pocket Battleship designs, they can use twin or triple 11Long on a cruiser design started after Start of Hostilities. America and Japan can also start to develop triple 12” turrets at Start of Hostilities.

Nations can use otherwise wasted tonnage from their BB PLT Pool to build up to one PB in the LIT period (complete before Start of Hostilities). If these include larger guns as in the previous paragraph then that gun design will already be known at Start of Hostilities and new ships can be built using that turret design from Start of Hostilities. For example Britain, Albion and Hibernian have the option to build their PB with two quad 9.2” turret (AB for Britain, AQ XXXX for Albion and following whichever Nation they have chosen for Hibernian). No further work would be necessary on that design but triple 9.2” turrets would have to be designed and prototyped as for other guns (they already have a twin 9.2” design dating back to the Armoured Cruisers). Note the ships can be started before the turrets are available, but the turrets must be completed before they can be fitted after the ship has been launched. No PLT design can be changed after Start of Hostilities to take guns larger than 8” (note only Germany and Japan can have any 8” armed ships in the PLT period – the Japanese are replacements for the triple 6.1” turrets XXXX is this true? What about ADL, etc).

After the start of hostilities (1940.i.1), the American navy can start to build the improved CAS design (or PLT XXXX?) or the CLS design and the other nations may start these designs six months after the first is commissioned. The French may build a variant of this (after the 6 month rule) with two quad 6" forward with a twin 5"DP superposed and 2 twin 5" DP superposed aft. (See CLQ).

The Japanese 3.9" DP can be designed from 1940.i.1 XXXX, so they may start to build CLAs with either 6, 8 or 10 of these guns (classed as 4" in my rules) or use them in any other ships started after the beginning of hostilities, including Carriers, Destroyers and Escorts. No PLT period ship may be modified after the start of hostilities to carry them instead of other guns.

### DP Armament in Cruisers During LIT and Later

The Total DP armament of a Cruiser or Pocket Battleship depends on its total tonnage (including the DP armament as designed) – this includes DP guns specified in a type such as a CAS. The table below gives the maximum tonnage of DP (and separately AAA) armament that can be designed into a Cruiser – I have also added values for Battlewagons to keep all of the data in one place. In general this maximum tonnage does not include any DP superposed in positions BCZ or Y, specific instances will specify if this is not the case. After 1941.i.1, upgrades are available that are additional to the original designed tonnage.

For vessels built before the LIT period (except for predefined vessels such as CA1G or CL1C), in the LIT period one single 88mmAA or 3”AA can be removed and up to 2 tons of Heavy AAA and up to 3 tons of light AAA can be added. A maximum of 5 tons of AAA can be added per ship in this manner. XXXX check table against spreadsheet.

|  |  |  |  |
| --- | --- | --- | --- |
| Ship Tonnage | DP Tonnage | AAA Tonnage | Max HAC |
| >84999 | 1430 | 40 | 4 |
| >74999 | 1320 | 35 | 4 |
| >64999 | 1210 | 30 | 4 |
| >54999 | 1100 | 25 | 4 |
| >44999 | 990 | 20 | 4 |
| >34999 | 880 | 15 | 4 |
| >17999 | 650 | 10 | 4 |
| >11749 | 600 | 8 | 3 |
| >9799 | 475 | 5 | 3 |
| >8499 | 435 | 5 | 2 |
| >6749 | 365 | 4 | 2 |
| >4999 | 250 | 3 | 1 |
| >3999 | 125 | 3 | 1 |
| <4000 | 70 | 1 | 0 |

A Maximum of 50% of the AAA Tonnage can be spent on 40mm, 37mm and 30mm guns. British Using Nations PomPoms are not included in this as most British Ships would have nothing but PomPoms until 20mm were introduced in 1941.

Note to have a reasonable chance of hitting aircraft, at least one High Angle Controller (HAC – fitted forwards) must be fitted to a Cruiser. These become available at the start of the LIT Period and weigh 24 tons for a Cruiser, their weight must come out of the DP tonnage defined above. To enable a Cruiser to engage more than one wave of aircraft per move, more HAC must be fitted (one per attack). The Maximum Number of HACs fitted to a ship is listed in the table above. For three, the extra is forward (port and starboard) the fourth one is aft so there is one port and starboard at both ends. Some countries, eg China and African Defense League have special rules for DP weight.

### To Build a Cruiser

In a similar manner to the way in which Battleships can be designed, the following rules show how to build Fictional Cruisers.

First select the base weight of the build. If the rules include different effects on vessels due to weather conditions (ie speed and combat value) then the designer may use whatever weights they desire.

Heavy Build Weight will treat the weather as if it were one band less than it really is. Standard Build Weight will treat the weather exactly as it is. Medium Build Weight will treat the weather as one step worse and Light Build Weight will treat the weather as two steps worse unless the weather is at its lowest value in which case treat the weather as the lowest level. XXXX

There is only one weight for AC XXXX. If there are no rules to adjust the weather effect on ships, then CA1 use the Medium Cruiser Weight and CL1 use the Light Cruiser Weight and all later cruisers use the Standard Cruiser Weight. Derivatives of CA1 and CL1 use the same weights as the original design. Con and Reg use the Light Weight – Sph can use either Standard or Light if weather rules are available.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| AC Build Strength | Base Tonnage |  | CA1, CL1, CA, CL Build Strength | Base Tonnage |
| Medium | 8770 |  | Heavy | 7650 |
|  |  |  | Standard | 5800 |
|  |  |  | Medium | 4250 |
|  |  |  | Light | 3100 |

Reduce the Hull Weight by 10% if the combined weight of aft turrets is greater than the combined weight of the fore turrets.

Add the Base Tonnage from the chosen Build Strength above to all modifiers chosen from the tables below (note, if there is more than one of an item, then multiply the weight of that item by the number of items, eg 6x5" in twins is 3x61):

Note a W1 or an Early IT Period AA gun weighs the same as the same sized low angle gun.

|  |  |
| --- | --- |
| **AC Speed Modifier** | **Additional Tonnage** |
| 21 Knots | 0 |
| 24 Knots ( this is the standard speed for all AC) | 500 |

|  |  |
| --- | --- |
| **CA1, CL1, CA6, CL6, CA, CL Speed Modifier** | **Additional Tonnage** |
| 30 knots | 575 |
| 33 knots | 650 |
| 36 knots | 1000 |

|  |  |
| --- | --- |
| **Con, Reg and Sph Speed Modifier** | **Additional Tonnage** |
| 36 knots | 320 |
| 39 knots | 500 |

|  |  |  |
| --- | --- | --- |
| **Cruiser Belt and Deck Modifier** | **AC Additional Tonnage** | **CA, CL, etc Additional Tonnage** |
| Each 1" of Belt | 250 | 350 |
| Each 0.5" of Deck | 250 | 350 |

XXXX Magazine only armour.

|  |  |  |
| --- | --- | --- |
| **Weapon Modifiers** | **Additional Tonnage** | |
| XXXX **SHIELDS** | Single | Twin |
| 3" or 3"AA | 19 | 36 |
| 3"DP | 29 | 56 |
| 4" or 4"AA | 24 | 47 |
| 4"DP | 34 | 67 |
| 5" or 5" AA | 32 | 61 |
| 5" DP | 47 | 91 |
| 5.5" | 47 | 92 |
| 5.5" DP | 67 | 132 |
| 6" | 58 | 113 |

All the above values assume a splinter protection of 0.25" armour on the turrets or shields.

Larger weapons for the AC, CA1, CA6 and CA designs are included in the tables on how to build a Battleship. Also 6" turrets with better than splinter protection should use the rules in How to Build a Battleship XXXX.

## Fictional Destroyers

### Destroyer Periods

Destroyers are only built in three periods, although 79 mothballed ships will be available from the LW1 Period (classed as MB). Destroyers are built in the Early IT period when no DP guns are available (the Japanese can fit DP to their EIT destroyers, but with limitations). The second period is the Late IT period when DP guns become available, this actually stretches all the way to the Mid War 2 period, and the third is the Late War 2 period when Auto mounts become available. The PLT designs are constrained by the same rules as the Late IT period except that some Nations gain heavier DP guns (larger than 5.1”, a French/ADL 5.1” is still considered to be a Medium DP gun) during the PLT period. Wartime changes will be introduced when appropriate such as the Japanese 3.9"DP gun which can be designed from 1940.i.1. All Destroyer types can be designed with speeds from 30 to 39 knots unless otherwise noted. For example Italian and Austrian DD can be built up to 42 knots to match a Regolo super light cruiser. German Using Nations destroyers may use a 150mmQF gun which obeys all the rules of Heavy DP. No more than two Heavy guns may be mounted before the Bridge on a Destroyer type.

You might have noticed that none of the EIT Destroyer Types may mount 5x150mmQF, the earliest that this option is available is the LIT period. Some of the real later designs mounted more 150mmQF but under no circumstances is this allowed. If a German Using player wishes to build a ship with more than 5x150mmQF they must build them as Spahkreuzer, using those rules under Cruisers.

### Destroyer Types

Below are four Destroyer types that specify the maximum weight of main guns that can be mounted on them, ranging from D Heavy through Standard, Medium and Light and also three smaller/older types that can be used in the campaign. Note, all LIT and later destroyer types, except DH, can have up to the specified number of Depth Charges and ASDIC type for that period.

DH - a Heavy Fleet Destroyer. For most nations this is 6 or more guns, generally in twin turrets with 8 to 10 by 21" TT in quad or quint mounts all centreline mounted. If the guns are 105mmDP or lighter, then the ship is considered to be a DS or lighter. If the gun is a 150mm QF (5.9”) then it can only be mounted in singles with up to 5 in a DH. One experimental ship with a Tw150mm, in position A with B empty, can be built in the PLT period.

With the exception of France no Navy may build more than eight DH in any period – they may build up to eight in each period if desired. France may build double that number. Note most Navies historically only built DH in the EIT period except for France, Italy, Austria and German and Japanese Using Nations who continued to build them right through the war, I would strongly suggest that this be made a rule, optionally decided by a vote of all players with the referee having the deciding vote.

The American Using Nations can also replace the centreline torpedo mounts with 12 TT in 4 triple mounts, two per side that can only fire to the appropriate side.

The Japanese shall only have a 6 gun DH until the 3.9"DP becomes available during the war (designed from 1940.i.1 XXXX) when they can have up to 8 guns of that type. Also they shall have up to 9x24" Long Lance in the early IT period in three triple mounts without reloads and 8x24" Long Lance in two quads in the late IT period with one mechanical reload per tube (can be reloaded while in combat). See below XXXX. They may also build one experimental ship in the PLT period with 3Qi24TT without reloads and may repeat the design after Start of Hostilities if they like it.

The German Using Nations shall only have 4x150mm in the EIT period and up to 5x150mm in the LIT period, but can build Spahkreuzers during the war.

The French historically have 5 or 8 by 5.1" with 6, 7, 9 or 10 TT. Note, none of the French destroyers appear to have DP guns so I would recommend replacing the 5.1" with a 6 by 5.1" DP in the late IT period (as in the wartime Le Hardi class) and allow a two quad TT mount option as well as the quint. They could also have 5.1" non-DP in the late period if desired - either the 5 or 8 gunned designs. The PLT designs can use the 5.1DP.

The Italians only have one DH design (3 twin 4.7" DP - Soldarti) but can build some of the Condatori Classes (but only those completed before 1940.i.1, ie not the Regolo class or later ships). Also in the PLT period, the 5.3" DP is introduced which could be used in the Reg designs. Most Italian designs mounted 6 TT in 2 triples but this need not be adhered too.

The Austrians haven't got a lot of examples so I would recommend that they follow either the Italian (including Condatori and Regolo type ships) – or just build ships with 3 or 4 twin 5"/5" DP or 4.7”/4.7”DP XXXX.

The Brazilians should build DH with 7Si4.7 in the EIT period or 7Si4.7SDP mounts in the LIT period following their design philosophies. The Chilean 5Si4.7 and 5Si4.7SDP design are DS or DM. The Argentinian Navy could build American designs with six single 5/5DP if that country is being used.

The Russians should build DH with four twins following their design philosophies.

The Spanish should build DH with four twins (probably 4.7" true DP) using the Wing rules (AweX) although singles may be mounted in either AX or the wing positions.

For the half-sized Nations (eg China, ADL, etc) it is recommended that they use full sized Destroyers as they would be at a considerable disadvantage if they built half sized destroyers. They could possibly be limited to DM or DL designs and have more of them.

DH speed is dependent on the weapons carried, if they are greater than 5.1” then their speed may not exceed 33 knots, if they are between 5.1” and 4.5” they may not exceed 36 knots and if they are less than 4.5” then may not exceed 39 knots. The only exception to this is where Nations have a specifically mentioned speed advantage such as the Italian and Austrian Navies which need to keep up with their fast Con and Reg leaders.

DS - a Standard Destroyer. For most nations this is 4 or 5 guns in single mounts of up to 5.5" or 6 by 5” with 3 twin turrets, generally with two at the stern, with 8 or 10 by 21" TT in quad or quint mounts all centreline mounted.

The Japanese can only have 5 gun DS laid out as twin forward with twin aft and a single superposed aft in Position Y, or the three twin option. Also they have up to 9x24" Long Lance in the EIT period in three triple mounts and 8x24" Long Lance in the LIT period with one mechanical reload per tube (can be reloaded in combat). XXXX Mutsuki class, proly a DL

The German Using Nations can only have 5Si127mmQF (5”) in the EIT period and 4Si150mm (5.9") in the late period but can build 4 or 5 Si127mmDP XXXX once that gun becomes available. They could also be built with a mix of 105mmQF and 105mmAA – up to 8 guns in total – it is the mount that determines whether it is a QF or AA not the barrel.

The French can only have 5Si5.1 in the EIT period and 4 or 5 Si5.1DP in the LIT period with 6, 7, 9 or 10 TT, again an 8 TT (2 quad) option could be used.

The Italians have both 4 and 5 single 4.7DP gunned designs but they are laid out in twin forward and aft with a mid mounted (not superposed) single in the case of the 5 gunned designs. In the PLT period they can also mount 2 twin 5.3" DP (AX). Most Italian designs mounted 6 TT in 2 triples but this need not be adhered too.

The Austrians haven't got a lot of examples so I would recommend that they follow either the Italian designs or just mount 4 or 5 by 5" or 4.7” singles XXXX.

The Chileans should build DS with 5Si4.7 in the EIT period and 5Si4.7SDP in the LIT period following their design philosophies.

The Russians should build DS with four singles following their design philosophies but are more likely to build DM than DS.

For the half-sized Nations (eg China, ADL, etc) it is recommended that they use full sized Destroyers as they would be at a considerable disadvantage if they built half sized destroyers. Again a limit to DM or DL is a possibility.

DS speed is dependent on the weapons carried, if they are greater than 5.1” then their speed shall not exceed 33 knots, if they are between 5.1” and 4.5” they shall not exceed 36 knots and if they are less than 4.5” then they shall not exceed 39 knots. The only exception to this is where Nations have a specifically mentioned speed advantage or where Destroyers are built to match Con or Reg speeds (3 or 6 knots may be added in this case to give a maximum of 42 knots).

DM - a Medium Destroyer, typically mounting five single guns up to 5.1” or seven single guns of 105mm or less but more likely 4 twin guns of the latter calibres. It follows all the other rules given for DH and DS.

DL - a Light Destroyer, typically mounting four single guns up to 5.1” or five single guns of 105mm or less. It follows all the other rules given for DH and DS. DL are more likely to mount four Si4 or similar sized guns like the British O/P class.

DT - an EIT period Torpedo Boat. Most nations didn't build this type of ship, but to use up otherwise unused EIT period tonnage, up to 3 ships of this type can be built. These ships will all have up to three turrets (ABX or AYX) which are either twin 3"QF or 4"QF or three single 5"QF with up to 2Tr21TT all centreline mounted. The Japanese may use 2Tw24TT Long Lance instead of Tr21TT and shall not fit reloads (they don’t become available until the LIT period). All DT shall have speeds between 30 and 39 knots inclusive. These ships are all built using the Build Weight below the build weight of the Destroyers for that Nation – either Medium or Light depending on whether the Build Weight of the Nation is Heavy or Standard. Medium Build Weight Nations will have Light DT and DE the same as Standard Build Weight Nations as there is no lighter weight. As built they have no AAA but it can be fitted during the war if at least one item is removed. If the speed is less than 39 knots, or they lose one gun or TT mount then they can mount up to one 1Si4AA or Si105AA in T location.

DE - a LIT period or later Destroyer Escort. Most nations didn't build this type of ship before the war, but to use up otherwise unused Late IT period tonnage, up to 1 ship of this type can be built. Up to 3 ships of this type can be built in the PLT period to soak up the remaining tonnage. These ships are mostly slower (to give them a longer range), and shall not exceed 24 knots. They can have 2 or 3 Tw4" DP or Tw105mm, or three Si5DP or up to 4 Tw3DP, with one TT mount (twin to quad) all centreline mounted. Japanese DE will have twin Long Lance TT instead of the 21", and may fit reloads if desired.

MB - a LW1 period Destroyer (as built – now classified as a poor Torpedo Boat). See the rules in XXXX on Fictional Fleets rather than Fictional Ships, and the rules in XXXX regarding converting them after Start of Hostilities. They are known as moth-balls as they have all been mothballed since the Washington Treaty and have to be de-mothballed before they can be used or converted.

### Destroyer Build Rules

When building Destroyers (any of the four D… types), they must be built in divisions of four ships, except when replacing vessels lost during the war or as specified otherwise. When vessels are lost during the war, the divisions need to be reorganised as soon as possible such that there are never more than 3 ships acting solo in the entire Navy. If there are more than 3 solo Destroyers then the remainder must either be placed in port in a decommissioned state, or ordered to sail to a force which has lost some of its Destroyers. These can't take part in any action (or be attacked) until it reaches its destination force, though it can enter a battle if that destination force is in combat when it arrives. Of the three usable solo vessels, each shall be assigned to different convoys (there can never be two solo Destroyers vessels in a single convoy, and that includes one of each type) until the replacements are complete and replacements must have a greater priority than new divisions.

Divisions could be 4 of the same type of Destroyer (ideally the same class), 1 heavier Destroyer (acting as a Destroyer Leader) + 3 lighter Destroyers of the same type or for Italy and Austria 1 Con or Reg and 3 Destroyers or for Germany (when Spa can be built) 1 Spa and 3 Destroyers XXXX. All Nations can build a Destroyer Squadron of two divisions of Destroyers as described above possibly with one AA support ship (leading the flotilla). When building Divisions, all Destroyers should be of the same speed and have the same Gun calibre (QF and DP may be mixed). If a single heavier Destroyer is assigned to a Division with 3 lighter Destroyers it may have a different calibre and speed, though it would be better if the heavier Destroyer didn’t slow the Division down. When building a Squadron of a CrAA and 8 Destroyers, each division must also obey these rules but the two divisions need not have the same speed (it would be ideal to do so) and calibre. Hence a Division of DH and a Division of DS would be possible as an example.

There will never be more than 3 DTs so these can always act solo, but should not be assigned to the same convoy as a solo Destroyer if at all possible. There is no need to complete a division of DT, they can't be built during the Late IT period or the PLT period and there is no point in building this type of vessel during the war – the DE is a much better vessel.

DEs may be built in ones and can always be assigned solo to any convoy even when there are real Destroyers or other DEs assigned to that same convoy. They should however be built and sail as divisions if possible. Note that Japan does not have an equivalent to the 4" DP until after Start of Hostilities. A division would be assigned to a standard convoy route and sail back and forth with any convoy on that route although they can be diverted to other routes if there is no need to run a convoy along a particular route.

EIT Destroyers and DT may have one 3” AA gun. This can be replaced in the LIT period by up to 2 tons of heavy AAA (Quad PomPom for British Using or Triple 25mm for Japanese Using) on the centreline (B or Y if only 3 turrets or R otherwise). Also up to 1.5 tons of single light AAA per side may be fitted.

LIT, and later, Destroyers may have the same AAA armament as the converted EIT destroyers described in the previous paragraph.

LIT, and later, DE may fit 1 ton of heavy AAA and 1 ton per side of light AAA.

PLT and later Destroyers and DE may fit single 3pdr or 6pdr AA or DP guns in either B and/or Y positions if they are not otherwise filled.

EW2 and later Destroyers and DE may fit single or twin 3pdr or 6pdr AA or DP guns in either B and or Y positions if not otherwise fitted. They can also place one such mount in P position amidships firing to either side.

All LIT period Destroyer designs, except DH, may have 6x5 Pattern Depth Charges and Type 1 ASDIC and all PLT and EW2 period Destroyer designs will have 10x5 Depth Charges and ASDIC as built (Type 1 in the PLT designs and early W2 designs). LIT period DS ships generally left the ASDIC and Depth Charges off the ship. Ships started after 1940.xi.40 XXXX shall have 12x10 XXXX Pattern Depth Charges and a Type 2 ASDIC, ships started after 1941.xi.40 shall have 10x15 XXXX Pattern Depth Charges and a Type 3 ASDIC. XXXX do we need 4 types of ASDIC?

The Early IT Destroyer Tonnage Pool is 75,000 XXXX tons. This should be enough for four XXXX and maybe five divisions of destroyers. Also up to three DT can be built.

The Late IT Destroyer Tonnage Pool is 85,000 XXXX tons. This should be enough for three XXXX and maybe more divisions of destroyers. Also one DE can be built.

The PLT Destroyer Tonnage Pool is 50,000 XXXX tons. This should be enough for four and maybe more divisions of destroyers. If Italy and Austria want to build divisions of 4 Condatori or Regolo then all of the cost must come from the CL pool. If they are built in place of a Destroyer using one third of their weight from the Destroyer pool then they are restricted to only one of these per division replacing the lead Destroyer. Also up to three DE can be built.

### To Build a Destroyer

In a similar manner to the way in which Battleships can be designed, the following rules show how to build Fictional Destroyers.

First select the base weight of the build. If the rules include different effects on vessels due to weather conditions (ie speed and combat value) then the designer may use whatever weights they desire.

Heavy Build Weight will treat the weather as if it were one band less than it really is. Standard Build Weight will treat the weather exactly as it is. Medium Build Weight will treat the weather as one step worse unless it is at its lowest and Light Build Weight will treat the weather as two steps worse unless the weather is at its lowest value in which case treat them as the lowest level.

Otherwise for DT, DE and MB use the Medium Build Weight from the DT/DE and MB table. For Destroyers, use the Standard Build Weight from the Destroyer table.

Note, Destroyers have different Build costs and Speed costs to DT, DE and MB.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Destroyer Build Strength | Base Tonnage |  | DT, DE and MB Build Strength | Base Tonnage |
| Heavy | 2105 |  | Heavy | 1170 |
| Medium | 1795 |  | Medium | 995 |
| Standard | 1515 |  | Standard | 775 |
| Light | 1220 |  | Light | 355 |

Add the Base Tonnage from the chosen Build Strength above to all modifiers chosen from the table below (note, if there is more than one of an item, then multiply the weight of that item by the number of items, eg 6x5" in twins is 3x61):

Note an Early Period AA gun weighs the same as the same sized low angle gun.

Destroyers carrying Heavy guns (larger than 5.1”) are restricted to no more than 33 knots.

Destroyers carrying Medium guns (5.1” down to 4.5”) are restricted to no more than 36 knots.

Destroyers carrying Light guns (less than 4.5”) are restricted to no more than 39 knots.

|  |  |
| --- | --- |
| **Destroyer Speed Modifier XXXX** | **Additional Tonnage** |
| Speed 7 (this is the standard speed for all DD) | 0 |
| Speed 8 | 500 |

|  |  |
| --- | --- |
| **DT, DE and MB Speed Modifier XXXX** | **Additional Tonnage** |
| Speed 3 | 0 |
| Speed 4 (this is the standard speed for all DE) | 150 |
| Speed 5 | 200 |
| Speed 6 (Only for DT or MB) | 250 |
| Speed 7 (Only for DT) | 350 |
| Speed 8 (Only for DT) | 500 |

In the table below, Max Gun Wt includes the weight of TT and any AA mounted on the ship:

|  |  |  |  |
| --- | --- | --- | --- |
| DD Type | Max Gun Wt | Wt AAA | #HACs |
| EITDL | 229 | 3 | 0 |
| EITDM | 260 | 3 | 0 |
| EITDS | 311 | 4 | 0 |
| EITDH | 354 | 4 | 0 |
| LITDL | 276 | 4 | 1 |
| LITDM | 322 | 5 | 1 |
| LITDS | 392 | 5 | 1 |
| LITDH | 459 | 7 | 1 |
| LW2DL | 362 | 6 | 2 |
| LW2DM | 425 | 6 | 2 |
| LW2DS | 517 | 8 | 2 |
| LW2DH | 614 | 10 | 2 |
| LITDE | 232 | 4 | 1 |

LIT designs are applicable up to MW2 period inclusive.

XXXX DE may not be correct.

|  |  |  |
| --- | --- | --- |
| **Weapon Modifiers** | **Additional Tonnage** | |
|  | Single | Twin |
| 3" or 3"AA XXXX 88mm etc | 19 | 36 |
| 3"DP | 29 | 56 |
| 4" or 4"AA | 24 | 47 |
| 4"DP | 34 | 67 |
| 5" or 5" AA | 32 | 61 |
| 5" DP | 47 | 91 |
| 5.5" | 47 | 92 |
| 5.5" DP | 67 | 132 |
| 5.9" | 58 | 113 |

Note, all of these turrets or shields except the 3" mounts have a quarter of an inch splinter protection.

|  |  |
| --- | --- |
| **Modifier** | **Additional Tonnage** |
| Twin 21" TT | 16 |
| Triple 21" TT | 24 |
| Quad 21" TT | 32 |
| Quint 21" TT | 40 |
| Twin 24" Long Lance TT | 24 |
| Triple 24" Long Lance TT | 36 |
| Quad 24" Long Lance TT with 1 Reload | 64 |

Note, none of the TT mounts have splinter protection.

Note also, only a Japanese themed navy can have 24" Long Lance. All Destroyer designs that I have seen with Triple Long Lance have no reloads, and all Quad Long Lance have a single reload so only these options have been given.

GOT HERE – need to remove all fictional ship stuff from GlobWar2 except for merchant, trawler and tug. And submarines, still need to cover completion in globwar2

# REBUILDING BETWEEN THE WARS

## Rebuilding WW1 Ships

As in real history some of the older Battleships can be rebuilt between the wars, this is restricted to:

Note these changes can only be done to ships that are actually in commision at the time, this specifically excludes SDr, AC, EDr, MDr or LDr as all these ships were in mothballs at the time, any in commision at Start of Hostilities will have been de-mothballed during 1939.

~~During the EIT Period, any 12" main guns on a WW1 BB or BC (but not SD, PB or AC without the agreement of all players) can be re-bored to 12.7" at no cost. Note, no ships can be built with the 12.7" gun, and no new ships built with 12” guns can be converted. If Germany Using Nations convert their 12” Long guns to 12.7” using this rule, then the 12” Long guns lose their special abilities.~~ XXXX may remove this rule - why?

All secondary guns in the casemates of all W1 period ships and earlier shall be reduced to a maximum weight of 288 tons per side if they are not completely replaced, this is 4\*6.7” or 5\*6” per side. Guns on the upper or weather decks are not affected by this rule. Note, secondary guns can only be fitted on the upper or weather decks of a W1 period ship if at least 378 tons were placed in the casemate when the ship was originally built. This is equivalent to 7\*6” per side. XXXX normally 5 in case 2 on upper? If all the casemate guns are removed and replaced by DP guns, the weight that cannot be exceeded is the original tonnage of the casemate not the reduce post war tonnage specified here. If guns are removed from the casemate under this rule it will be the foremost ones as they are most affected by spray.

During the EIT period, all ships with up to 27knot speed with at least one mid turret may be rebuilt by removing one (or both) mid turrets and the Conning Tower and torpedoes and increasing the speed by 3 knots at no cost. 30 knot ships cannot be upgraded to 33 knots in this manner, as it would mean increasing the length by too much – this upgrade will add about 50 feet to the length of the ship. Decks may be increased by 1" at the same time without cost (2" if 2 mid turrets are removed) in Battlewagons and half that in Cruisers and Pocket Battleships. If this upgrade is performed during the war then see Cost and Effort to Upgrade Items below XXXX. In this case each removed mid turret can be replaced by up to 138 tons of twin AA mounts (singles can’t be used). This will allow 2Tw5AA turrets or 3Tw4AA for British Using Nations or 3Tw105mmAA for German using Nations. Ships with the AA upgrade will get a single HAC on the bridge during the LIT period. If such ships also get the DP upgrade during the PLT period or later then these turrets shall also be converted to DPs at the same time. Ships that get the DP upgrade will get two HAC – one on the Bridge and one on the Aft Superstructure. In the case of British Using Nations (not Albion) the replacement turrets could be Tw4AA in the EIT period and Tw4.5DP after conversion in the PLT period. These extra guns are on the centreline and can only fire to the sides (ie not forward or aft). All AA or DP guns on a ship must be of exactly the same type with the exception of 6pdr and smaller guns. XXXX 1 turret removed = 2 upgrades (A, S or N), 2 turret removed = 3 upgrades (D or T). Upgrades are A – 2” armour no speed, S 6kt speed no armour, N normal 1” armour 3kt speed, D double 6kt speed 1” armour, T thick 3kt speed 2” armour. Halve the armour thickness if the ship is an AC or smaller.

A catapult may be added to all Battlewagons that don't already have one with a maximum of 3 Floatplanes (FPS only) per ship free of charge.

Up to two W1 period BCs can be upgraded by increasing the armour by 4.5" (each ¼ inch added to the deck counts as ½ inch out of this) to a maximum of 9" Belt and 4.75" Deck. All Nations shall have one of these complete by Start of Hostilities, and the second will be ready to sail on 1940.iii.1. The one to be ready on 1940.iii.1 could be the same ship that will have its DP upgrade complete on 1940.iii.1. See Cost and Effort to Upgrade Items XXXX if performed during the war. Double check these figures. Dbl check these months – thought one was v.

For all Nations' W1 period Battlewagons, at least 3 and up to 6 of their Battlewagons can have all secondary (casemate) and smaller guns removed and replaced with up to 360 tons of DP/AA per side (allows for 5Tw4.5DP per side, but see below for restrictions on the number of these guns) + up to 2 HAC prior to hostilities. Up to two turrets per side can be superposed if the weight is less than 337 tons per side (allows for 2Tw5DP to be superposed over two more). If the ship being upgraded already has had the mid turret(s) removed, then their AA guns that replaced the removed main turret will have to be upgraded to the same size DP gun at the same time. Some of these ships won’t be ready to sail until 1940.iii.1. XXXX or 1940.v.1 See PLT Period AA Upgrades XXXX. Less turrets added if mid turret has been replaced with AA?

If a ship receiving a DP upgrade had previously had a main mid turret removed then the ship will never be top-heavy as the mid main turret will obviously be heavier than any number of DP turrets to be added. If taking advantage of this rule then no more than two HAC may be fitted. If the ship has not had a mid main turret removed then the weight of the original as built casemate guns must exceed the weight of the DP turrets to be added (and any HAC) otherwise the ship will be top-heavy qv XXXX.

All ships with casemates can be upgraded during the war with DP mounts (if there are enough available in the case of Britain) but it takes time to complete, during which time the ship is not available – see Cost and Effort to Upgrade items XXXX. After 1941.i.1, Britain can upgrade her old battleships in this manner with Tw4.7SDP when that gun becomes more available. If the weight of the removed casemate guns (the armour has to remain in place to protect the ammunition hoists for the DP) is less than the weight of the added DP then “Top Weight” will be added to the ship, see XXXX. If one or more High Angle Controllers (HAC) are also added then this too will effect “Top Weight”.

Britain is historically short of DP mounts for battleships or cruisers prior to WW2. She shall have 10 Tw4.5DP for each Battlewagon being upgraded. If a ship has lost one mid turret in the EIT period and the DP upgrade is performed in the PLT period, then Britain may place three of the 10 mounts allocated to this ship on the centreline and three more each side, saving one mount. If an even number of mounts is saved in this manner then some of the ships could have 4 mounts per side (14 light AA/DP guns firing to a side is the limit, 12 for medium or heavy DP guns). British Using Nations only receive enough Tw4.5DP to upgrade 3 ships with 10 mounts (5 a side). They and Albion/etc are expected to upgrade six of their CL1 designs to CLA designs as well. In addition British Using Nations have sufficient additional twin 4.5” turrets to arm the PVB Carrier – the PVL Carrier uses Tw4DP. So they will receive an allocation of 30 Tw4.5DP mounts for the BW upgrade and 10 extra mounts for use on CAA either during the PLT or EW2 periods, and 3 for the PVB. If any of these are unused they may be kept for later builds including carriers as well as any saved from the BW upgrades by filling the centreline locations.

British Using Nations also have 38 twin mounts of 5.25" DP that can be assigned to ships started Post London Treaty (ie in the process of being built at the start of the war). This is just enough 5.25" turrets for 3 Battleships being built of the type of KGV or Lion or similar and 2 Dido with 10 guns and 1 with 8. If the 5.25" turrets are not used elsewhere then 3 by 10 gun Dido's could be built. XXXX May need more now as can proly start 5 KGV in the PLT period.

Note a player using a Britain theme may opt to only mount 3Tw5.25DP turrets on each side of each PLT period battleships with the middle one superposed above the other two, unlike the real designs which used 4 twin mounts per side. Or they could add a 7th turret in Y position to keep the same broadside on at least one side. Similarly they may chose to use up their precious DP mounts and put 6 twin turrets a side (but no more). Note, PLT ships can have DP superposed at both ends. Note also that the weight of the DP carried varies by ship tonnage, see spreadsheet under DP. XXXX thought you could have 12 heavy DP guns per side? You can.

Albion has 56 twin 5.5” DP turrets that can be used for PLT period Battlewagons and Cruisers. Note, Austrian CAA and CLA can only have four turrets laid out as ABYX. XXXX Albion cannot build pure CAA or CLA (but can convert CA1 or CL1 to CAA or CLA) – all Albion PLT CL may have 2Tr5.5QF and 2Tw5.5DP plus Si5.5DP on the wings. Russia may also have only four turrets laid out as APTX – whilst Russia is restricted to 4 turrets on the centreline they may also have wing AA/DP mounts in the same way that other Nations do. XXXX any others? Austria?

## Rearming British Cruisers during the LIT period

Historically Britain (and Albion) built their EIT Heavy and Light Cruisers with single 4” AA mounts (usually two per side, sometimes 3). During the LIT period all of these ships were upgraded by replacing each single AA mount with a twin, often this was a twin DP mount. With the agreement of the majority of the Players this can be done. There are two choices here – replace a single AA mount with a twin AA mount or replace a single AA mount with a twin DP mount. If this agreement passes then all Players may take advantage of it regardless of which Nation they choose. Note, if this upgrade is actually done then the ships will become Top Heavy (qv XXXX). This rule only applies to cruisers built during the EIT period, and there is nothing stopping a player from building their EIT cruisers with twin AA, hence getting round the problem of persuading the other players to allow the upgrade. They only get an HAC (one only) if the upgrade to DP is allowed.

## PLT Period AA Upgrades

Historically Britain (and Albion) was the only Nation to put any effort into upgrading their old ships to be more effective against air attacks. Two Battlewagons received 10Tw4.5DP before 1940 and a third was completed during 1940. Also six old CL (CL1 in my nomenclature) were converted to AA cruisers with an average of 4Tw4DP each. One large old Destroyer (MBH) was converted to a DAAH with 2Tw4DP, and 14 small old Destroyers (MBL) were started to convert to DAAL with a similar armament. A new class of CAA cruisers (Dido’s) was also started using whatever large DP armament was available.

Originally I had intended to restrict these rules to Britain and Albion to compensate them for the issues with their heavy DP, then I realised that it also affected the British Using Nations as well. Then I realised it also impacted the German Using Nations who had no access to DP guns whatsoever until well into the war.

Therefore I suggest that these rules be available to all Nations, though the referee may restrict them to Albion and British and German Using Nations only. If these rules are restricted to Albion and British and German Using Nations only, all the other Nations may still upgrade up to 6 Battlewagons according to these rules.

Note under these rules British Using Nations and Albion get 2 DAAHB completed before the Start of Hostilities to compensate them for their issues with DP guns and the Scandinavian consortium gets 6 DAAHS completed before Start of Hostilities to compensate them for their lesser DP armament on their VL carriers – see XXXX. No other Nation gets these ships. There is no cost associated with these eight MB conversions but future conversions to the same or a similar design would cost the standard amount. XXXX Other nations with VL only?

During the PLT period a special pool of 96 points is available only for upgrading the AA on ships as follows.

A minimum of three and a maximum of six Battlewagons shall be upgraded to have up to 360 tons of DP or AA per side at a cost of 16 points each. So, at least 48 points of this pool must be spent on Battlewagons. Those Battlewagons that have lost one or two mid turrets must replace the centreline AA turrets at the same time, but this is not included within the 360 ton limit.

Allocate your six chosen Battlewagons a number from 1 to 6, the odd numbered ships will be complete by the Start of Hostilities, the even numbered ships will be available on 1940.iii.1. A maximum of 4 points can be worked into each ship a month, the even numbered ships have 2 months remaining so will need 8 points to complete each one. All of the 8 points for each battlewagon will be available at Start of Hostilities but can only be used for upgrading the AA on the chosen ships and can’t be used elsewhere, including other CA1 or CL1.

For All Nations who wish to also upgrade some of their CA1 to CAA or CL1 to CLA, some of the Battlewagon conversions will have to be given up to provide points for the cruisers. For example if a Nation wants to convert two CL1Cs to CLACs (at a cost of 8 points each) one Battlewagon will have to be given up (only 5 will be converted). The Battlewagon number 6 will be given up first, then number 5 and finally number 4. If all three possible conversions are given up to allow a maximum of six CLACs then only two Battlewagons will be complete by Start of Hostilities (numbers 1 and 3) and one by 1940.iii.1 (number 2).

Note the points given here are not the real tonnages required to make the change – they are an indication of the worth of the change. For the cruisers, multiply the number of guns firing to one side (including any centreline guns) by 5.75 if the calibre is greater than 5.1”, 4.25 if it’s a 105mm AA, 4 if it’s a 4”DP or 4.75 otherwise. Divide the result by 4 and round to the nearest digit. If the result is 9 then the worth is 8, add 1 for every point above 9 and subtract 1 for every point below it. The worth of a Battlewagon upgrade will always be 16 regardless of what guns are fitted to it. Hence the 96 points available is not 96 points of steel so cannot be used for any other purpose and all that has been paid for will be available ready for the work to be done on the incomplete ships. The identical conversion done after Start of Hostilities will be done using tons of steel and will be different from the figure given here. A conversion cannot be started with this upgrade budget and finished using real tons of steel.

If some cruisers are to be upgraded by these rules then allocate them a number as was done for the Battlewagons, starting with 1 for the lightest, 2 for the second lightest, etc. Again the odd numbered conversions are complete at Start of Hostilities and the even numbered conversions still have two months of work to be done on them..

Any CA1 or CL1 may be converted, but the points available are restricted. If larger cruisers are converted then not all of the points may be useable – if for example three CA1 are converted at a cost of 14 points each, then 6 points will be unusable, though a small CL1 (if there is one) could be converted to use up this amount.

The tables below show the original ship, the conversion, the total cost in points of the conversion, the points left at Start of Hostilities and the number of months that will be required to complete the conversion at a rate of 2 points per month. These tables cannot be used for converting additional CA1 or CL1 after the Start of Hostilities – in that case see the actual tonnage for the conversion in the section on Upgrading Ships During the War XXX.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Original CA1 | Conversion | Pts Cost | Pts Left | Months Left |
| CA1A | CAAAA America or 5DP | 14 | 6 | 3 |
| CA1J | CAAJJ Japan or 5DP | 16 | 8 | 4 |
| CA1G | CAAGG German or 105AA | 14 | 6 | 3 |
| CA1H | CAAHB British | 16 | 8 | 4 |
| CA1H | CAAHS Spain or 5DP | 13 | 5 | 2.5 |
| CA1H | CAAHI Italy or 4.7DP | 16 | 8 | 4 |
| CA1H | CAAHO Albion | 15 | 7 | 3.5 |
| CA1R | CAARR Russia | 16 | 8 | 4 |
| CA1M | CAAMA ADL | 7 | 0 | 0 |
| CA1M | CAAMC Chinese | 11 | 3 | 1.5 |
| CA1M | CAAMD Dwarven | 11 | 3 | 1.5 |
| CA1M | CAAMS Scandinavian | 12 | 4 | 2 |

The German CAAGG and Scandinavian CAAMS can be built cheaper if some of the twin 105mmAA mounts are replaced with twin 105mmQF mounts to give an anti-ship capability (all other ships have DP). Reduce the total tons cost by 2 points for each twin replaced, so if two of the mounts, firing to the same side eg A and X, are QF then the cost for the CAAMS is 8 points.

All conversions that cost more than 8 points will still have some work that needs doing on them. The total cost for all incomplete conversions will be sitting in the dock ready to be worked into the ship (but can’t be used elsewhere for any other purpose).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Original CL1 | Conversion | Pts Cost | Pts Left | Months Left |
| CL1A | CLAAP America or 5" | 4 | 0 | 0 |
| CL1A | CLAAF America or 5" | 9 | 1 | 0.5 |
| CL1O | CLAOO Albion XXXX no descrip | 8 | 0 | 0 |
| CL1C | CLACA America or 5" armed | 6 | 0 | 0 |
| CL1C | CLACC Colonies or 4" armed | 8 | 0 | 0 |
| CL1C | CLACG Germany or 105mm | 11 | 3 | 1.5 |
| CL1C | CLACI Italy or 4.7" armed | 9 | 1 | 0.5 |
| CL1D | CLADA America or 5" armed | 9 | 1 | 0.5 |
| CL1D | CLADB British 4.5" | 11 | 3 | 1.5 |
| CL1D | CLADC Colonies or 4" armed | 11 | 3 | 1.5 |
| CL1D | CLADO Albion 5.5" | 8 | 0 | 0 |
| CL1E | CLAET Twin 6" - LIT | 6 | 0 | 0 |
| CL1E | CLAEA America or 5" armed | 10 | 2 | 1 |
| CL1E | CLAEB British 4.5" | 13 | 5 | 2.5 |
| CL1E | CLAEC Colonies or 4" armed | 12 | 4 | 2 |
| CL1E | CLAED ABC/Turkey | 13 | 5 | 2.5 |
| CL1E | CLAEI Italy or 4.7 | 12 | 4 | 2 |
| CL1E | CLAEG Germany or 105mm | 14 | 6 | 3 |
| CL1E | CLAEO Albion 5.5 | 9 | 1 | 0.5 |
| CL1R | CLAR Russian 4” XXXX | 8 | 0 | 0 |
| CL1M | CLAMA ADL | 5 | 0 | 0 |
| CL1M | CLAMC Chinese | 6 | 0 | 0 |
| CL1M | CLAMD Dwarven | 9 | 1 | 0.5 |
| CL1M | CLAMS Scandinavian | 8 | 0 | 0 |

The cost of the CLACG, CLAEG and CLAMS can also be reduced as in the case of the CAAMS above, however the small number of guns on the CLAMS won’t hit very often in my rules so it will probably be better to leave them with only AA guns.

As in the CA1 conversions, if the cost exceeds 8 points then some will still have to be put into the ship after Start of Hostilities, the whole of the remaining points are already available, though this can’t be used for any other purpose.

Descriptions of the ships are given in XXXX below

In the case of Turkey, only one ship in every 3 may be of the German design – the other two must be to the British designs unless Turkey chose in the MW1 period to only build German designs.

In the case of ABC (Argentina/Brazil/Chile), Brazil and Chile can only use British designs. If Argentinian designs are built as well then American designs shall be used for that country.

## Rebuilding British and Scandinavian Heavy Mothballed Destroyers (MBH) to DAA

During the LIT Period, British Using Nations and Albion/etc may convert up to 2 of her MBH ships to a DAAHB-37 ship using 4” DP guns. These follow the rules in XXXX. If these Nations chose not to perform these conversions, the 4" DP guns are not available for any other purpose. The guns are mounted in two twin shields (one forward, one aft) and shall have 0.25" splinter protection. AAA in this case is 1 quad PomPom in Y Position superposed over X and two single PomPom per side (one may fire forwards and one may fire aft) and two single 20mm (may only fire to the side) per side. In the case of Albion they get a third PomPom as they can never have 20mm. Six loads of 5 Pattern Depth Charges are also carried.

British Using Nations and Albion/etc also have a further 15 MBLs being converted (during the PLT period) to DAAL, mounting two twin 4” DP shields (one forward and one aft), and two single 20mm (PomPoms in the case of Albion) AAA per side (no DCs). One will be completed at the end of each month starting with the first one being ready to sail on 1940.ii.1. The four to be completed in 1941 will also have an additional 40mm (TwPomPom for Albion) each side in front of the most forward 20mm. The first eleven may have the additional 40mm/TwPP added later but no further AAA may be added to any of these ships.

These conversions take a minimum of four months – the engine conversion can start the same day that the ship is de-mothballed and takes the full four months. One month later, the old armament can be removed, the decks repaired and the new Tw4DP fitted. This takes 11 weeks and 4 days for a single AA Gang, so can be done in the remaining 3 months. The AAA can be fitted in 2 days probably towards the end of the four months and the HAC can be fitted in the last 4 weeks. There is plenty of time to fit a LAC before that as well. Hence the first DAALB will have had 3 months work completed on it at Start of Hostilities, the second 2 months and the third 1 month. The rest will have to be taken in hand after Start of Hostilities. In fact if there are Completion Docks and Gangs available, several could be started at the same time, speeding up the conversions. However if all 15 are converted before the end of 1940, none of them get the extra 40mm, though they could be put back into a Completion Dock from 1941.i.1 and have a Si40mm fitted both sides. Remember though that SRE’s (Short Range Escorts – MB converted during the war) might have priority.

The Scandinavian and Low Countries Consortium may convert a total of six MBH to the Scandinavian DAAHS-37 design (as described in the table below XXXX) during the LIT period. This is to reflect the fact that their carriers do not have the same AA armament that other countries’ carriers have – these ships are 30 knots rather than the standard 20 knots of other DAA and are meant to accompany the carriers, one with each carrier. During the war this consortium may convert one more DAAHS for each new light carrier built to the Scandinavian design. All other DAAH conversions shall be to the DAAHG design.

# UPGRADING SHIPS DURING THE WAR

Note with all rules about upgrading ships after the start of the war, any equipment needed for the upgrade (Asdic, Guns, Director Controllers, etc), must be built before the upgrade can occur. This will require the requisite amount of steel to be supplied at least one month before the equipment is needed. In my campaign there is four XXXX or 5 Naval Factories capable of making all of this equipment (and all of the guns and turrets for the ships building). Each is capable of making up to 10,000 tons of equipment per month provided the correct amount of steel is provide at the beginning of the month. This month doesn't have to be a calendar month, it is just one month (or 40 days) on from when the steel was provided.

There will be enough steel available at a Naval Factory at Start of Hostilities to produce (or continue to work on a longer turret build) the first month’s worth of turrets and ammunition for any ship due to complete at the end of the first month (which can only be a British Using Nation or Albion/etc DAALB).

## W1 Heavy Cruisers (CA1) and Light Cruisers (CL1)

These WW1 ships can all be upgraded to AA ships during the war and some may be converted prior to the war using a different system – see XXXX above.

The possible conversions of standard W1 cruisers during the IT period are as follows:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Old | New | Main Armament | AA Total | AAA sides | HAC | Fuel |
| CA1A | CAFA | 10 Scout Float Planes (FPS) 2 Cata ABTw4”AA | 1Si4AA /side | Qu40/2Si20 | 1 | 53 |
| CA1J | CA18 | ABXTw8, 1AC/Cata | 4Si4.7DP, 6Si25mm | 6Si13.2 | 0 | 92 |
| CA1G | CA18 | AYXTw8, 1AC/Cata | 4Si105mm AA | Tw37 8Si20 | 0 | 36 |
| CA1J | CAFJ | 10 FPS 2Cata ABTw4.7DP | 1Si4.7DP /side | 9Si25 | 1 | 93 |
| CA1G 8.2” | CAFG | 10 FPS 2 Cat ABTw105mmAA | 1Tw105mmAA /side | 1Tw37 2Si20 | 1 | 44 |
| CA1G 6.7” | CAFG | 9 FPS 2 Cat ATw105mm, BSi105mm | 1Tw105mmAA /side | Tw37 2Si20 | 1 | 19 |
| CA1H | CA18 | AYXTw8 | 4Si4DP+QuPP | 4SiPomPom | 0 | 86 |
| CA1H | CA16 | ABCP~RZYXSi6 | 4Tw4”DP+OctPP | 2SiPomPom | 0 | 156 |
| CA1H | CAFH | 10 FPS 2 Cata ABTw4AA | Tw4AA /side QuPP | 4SiPomPom | 1 | 138 |
| CA1R | CAFR | 10 FPS 2 Cata ABTw4AA | Tw4AA /side Qu40 | 2Si20 | 1 | 134 |
| CL1E | CL1ET | AXTw6, P~YSi6 | Q~R~Tw4AA | none | 0 | 1164 |
| CA1MA | CAFMA | 5 FPS 1 Cata ABTw3.9AA | 2Si3.9AA /side Tw40 | 2Si20 | 1 | 77 |
| CA1MC | CAFMC | 5 FPS 1 Cata PQwe2Tw4AA | ATw4AA, Tw40 | 2Si20 | 1 | 90 |
| CA1MS | CAFMS | 5 FPS 1 Cata ATw105AA BSi105AA | Tw37 | 1Si20 | 0 | 2 |
| CLMD | CLFMD | 10 GyL AB~Si3How |  | 2Si20 | 1 | 43 |

In the table above, the Old Column is the original ship that the conversion was carried out on , New is the new name after the conversion, Main Armament is the armament of the ship after the conversion, AA Total is any AA or AAA that is on the centreline unless it is marked “per side” or “/side”, AAA Sides is the number and type of any AAA on each side, HAC is the number of HAC’s carried by the conversion and Fuel is the Tonnage of the Extra fuel carried over and above what would normally be carried by that type of ship.

An AAA mount in Z position will be superposed above Y, but an AA mount will not be. With ZYX arrangements of identical turrets, Y is usually superposed above both Z and X which are at the same level. Sometimes, Y and X are at the same level (qv HMS Hawkins) and Z is superposed above them. Only in the case of the CA16 will Z be superposed over Y when Y is also superposed above X. Where an AAA mount is given as Bridge/Br or Position B then it may at the player’s wish be placed in Z and vice versa. A note must be made of this decision.

If there is an AA mount in position T~ then it will be at the same level as X ie one either side of the aft superstructure. If there is only one mount in position T then it will be at the same level as Y placed on the aft superstructure but more forwards than Y or Z. If mounted either side of the ship, these guns can fire at an aircraft at low level approaching directly from behind. If mounted on the superstructure then the Y mount blocks such a firing and they guns cannot bear any closer than 45 degrees from due aft The same is true of other guns mounted in the middle of the ship though only rearmost side mounted guns (T~ or Z~) may fire directly aft.

Note the Japanese and German CA18, and the CAFA, CAFG, CAFH, CAFR and CL1ET are EIT conversions. If the generic CA18 conversion is carried out in the EIT period it will have AA instead of DP, but can be converted to DP after Start of Hostilities without making the ship Top Heavy. The CA16 is a LIT period conversion. The first CAFG is built from the 8.2” armed CA1G, the second CAFG is built from the 6.7” armed CA1G. All tonnages and armour are exactly the same as the original ship, except the new guns will generally have only splinter armour (0.25”).

The CAFA/G/H/R and CAFMA/C/S designs do not carry any Torpedoes so the FPS can only be armed with Depth Charges (DC) or sent out without any armament as scouts.

The possible conversions of standard CA1 or CL1 designs post Start of Hostilities or as part of the DP upgrade prior to Start of Hostilities are as follows, ships already converted to a different design cannot be reconverted, except for the CLAET which can only be converted from the CL1ET:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Old | New | Main Armament | AAA | AAA Sides | HAC | Fuel |
| CA1A | CAAAA | ABP~T~YXTw5DP | SSi5 2Tw40 Bridge | 2Si20 | 2 | 43 |
| CA1J | CAAJJ | ABCZYXTw5DP R~T~Si5DP | 2Tr25 Bridge | Si25/Si13.2 | 2 | 245 |
| CA1G 6.7” | CAAGG | ABP~ST~YXTw105AA | 2Tw37 Bridge Tw21TT /Side | 2Si20 | 2 | 277 |
| CA1H | CAAHB | ABP~TYXTw5.25DP | ZOct PomPom | 2SiPomPom | 2 | 243 |
| CA1H | CAAHS | ABP~TYXTw5DP | 2Tw40 Bridge | 2Si20 | 2 | 298 |
| CA1H | CAAHI | ABP~RT~YXTw4.7DP | 2Tw37 Bridge | 2Si20 | 2 | 261 |
| CA1H | CAAHO | ABP~YX Tw5.5DP TSi5.5DP | ZOctPomPom | 2SiPomPom | 2 | 109 |
| CA1R | CAARR | ABPQTYXTw5DP | 2Tw40 Bridge | 2Si20 | 2 | 80 |
| CA1M | CAAMA | ATw9.4 BP~XTw3.9DP | ZTw20 | 2Si20 | 1 | 0 |
| CA1M | CAAMC | 2Tw4.7DP replace each Tw8Lo mounts en-echelon between Bridge&Funnels, Tw4.7DP right forward and aft | Tw20 Bridge, Note 6Tw4.7DP mounts all together | 2Si20 | 2 | 77 |
| CA1M | CAAMD | AB~C~R~Z~Y~XSi4How | Tw20 Bridge | 2Si20 | 2 | 53 |
| CA1M | CAAMS | ABP~T~YXTw105AA | ZTw20 or Bridge | 2Si20 | 1 | 0 |
| CL1A | CLAAP | AX Tw5DP 6Si6 Case 2FPS 2 Cata | YQ40mm Qi21TT per side | 2Si20 | 0 | 304 |
| CL1A | CLAAF | AC~Y~XTw5DP 2FPS 2 Cata | ZQ40mm | 2Si20 | 2 | 366 |
| CL1C | CLACA | AXTw5DP PYSi5DP | BTw40 | 1Si20 | 2 | 44 |
| CL1C | CLACC | ATYXTw4DP PSi4DP | BTwPomPom | 2SiPomPom | 2 | 40 |
| CL1C | CLACG | ABTYXTw105mmAA | PSi105mmAA | Tw37 Br 1Si20 | 2 | 62 |
| CL1C | CLACI | APYXTw4.7DP | BTw20 | 2Si20 | 2 | 19 |
| CL1O | CLAOO | ATYXTw4DP PSi4DP | BTwPomPom | 2SiPomPom | 2 | 189 |
| CL1D | CLADA | ABX Tw5DP PYSi5DP | ZTw20mm | 2Si20 | 2 | 648 |
| CL1D | CLADB | ABPYXTw4.5DP | ZTwPomPom | 2SiPomPom | 2 | 678 |
| CL1D | CLADC | ABPTYXTw4DP | ZTw20mm | 2Si20 | 2 | 651 |
| CL1D | CLADO | AYXTw5.5DP | ZTwPomPom | 2SipomPom | 1 | 664 |
| CL1ET | CLAET | AXTw6 RTYTw4DP P~Si4DP | BQuPomPom | 2SiPomPom | 2 | 1164 |
| CL1E | CLAEA | ABP~XTw5DP YSi5DP | ZTw40 | 2Si20 | 2 | 1178 |
| CL1E | CLAEB | ABP~TYXTw4.5DP | ZQuPomPom | 2SiPomPom | 2 | 1192 |
| CL1E | CLAEC | ABP~RYXTw4DP T~Si4DP | ZQuPomPom | 2SiPomPom | 2 | 1180 |
| CL1E | CLAED | ABP~TYXTw4.7SDP | ZQuPomPom | 2SiPomPom | 2 | 1192 |
| CL1E | CLAEI | ABP~YXTw4.7DP TSi4.7DP | ZTw40 | 2Si20 | 2 | 1189 |
| CL1E | CLAEG | ABP~RT~YXTw105mmAA | ZTwin 37mm 1Tr21TT /Side | 2Si20 | 2 | 1230 |
| CL1E | CLAEO | AYXTw5.5”DP P~Si5.5DP | BQuPomPom | 2SiPomPom | 2 | 1181 |
| CL1R | CLAR | AQSXTw4DP XXXX | BSi40 | 2Si20 | 2 | 157 |
| CL1 | CLFP | ABP~Tw4DP | 3Flts FP 1Cat/1Lift | 2Si20 | 2 | 120 |
| CL1M | CLAMA | ABP~XTw3.9DP | Si20 Bridge | 1Si20 | 2 | 13 |
| CL1M | CLAMC | Tw4DP en-echelon and right forward and right aft | Si20 bridge | 1Si20 | 1 | 90 |
| CL1M | CLAMD | AB~CP~ZY~XSi4How | Si20 Bridge | 1Si20 | 2 | 38 |
| CL1M | CLAMS | AP~T~XTw105AA | Si20 Bridge | Si20 | 1 | 6 |

*AC/Cata means one Floatplane Scout (FPS) + Catapult*

The CA1J conversion to CA18 also has a quad 24” TT mount (not Long-Lance) each side which can be reloaded once while out of combat. The Japanese Nation can mount single 4.7DP in the AA positions as they developed this type of gun earlier than other Nations. The AA (two turrets per side) and AAA are side mounted. Conversion costs 2000 tons from the EIT period XXXX CA Pool per ship and at the end of it the ship weighs 9174 tons, note my software calculates this ship as converted as much heavier than the real weight of 8800 tons. Non-Japanese Nations building this conversion have two triple 21” TT per side. The AA will probably be 5” AA (remove 1 single 25mm AAA per side) or 4” AA (add an extra single 25mm AAA per side once the normal number is calculated before converting to the appropriate AAA – round down if they can’t convert exactly). The AAA shall have no more weight than the Japanese AAA (except when fitting 4” AA). Note the AAA in this conversion is in excess of what would normally be allowed for the weight of the cruiser.

The CA1G conversion to CA18 has the AA side mounted (two turrets per side), the single 37mm AAA mounted one superposed at each end in BZ and 4 Single 20mm AAA per side. There are two triple 21” TT mounts per side. The conversion costs 1750 tons from the EIT period Cruiser Pool per ship.

The CA1H conversion to CA18 has the AA side mounted (two turrets per side), the Quad PomPoms are superposed at each end in BZ with two single PomPoms a side. There are also two triple 21” TT mounts per side. The conversion costs 1750 tons from the LIT period CL Pool per ship. The AAA is excessive for the weight of the cruiser but the DP is light compared to other CA18. Note this is a LIT conversion and follows a design suggested by the British Navy though it was never actually built.

The CA1H conversion to CA16 has single 6” guns in all 7 positions with an extra 6” squeezed into Position C superposed over Position B and a second superposed above Position Z. Note, as in the original Hawkins design, the Y mount was at the same level as the X mount (unable to fire over it), with Z superposed over Y, and the new mount superposed over Position Z. The 4” DP are mounted two per side, with the quad PomPoms on the wings each side of the bridge. There are two single PomPoms just forward of the new mount aft. There are two triple 21”” TT mounts per side. For non-British Using Nations, the DP can be replaced with single 5” DP mounts or Tw105mmAA, the AAA can be replaced by up to 4 tons of large calibre AAA (40mm, 37mm or 30mm) and up to 1.5 tons of lighter AAA per side. The cost of the conversion is the weight of twelve single 6” (to allow for the weight of the new supports of the extra mounts) plus the weight of the DP and the AAA. In reality this conversion took place in the EW2 period, it can be performed in the LIT period if desired. Again the AAA is excessive for these rules, but this is pretty much how the ship was actually converted. It had one octuple PomPom each side of the bridge and a quad 0.5”mg each side in real life but that would make it too heavy and have way too much AAA for these rules. It costs 1500 tons to convert from the LIT CL pool.

All the CAFx designs cost 2000 tons to convert and the CAFMx designs cost 1000 tons. They are based on some suggestions that I found in more than one Navy for extra scouting capability and are a poor version of the Japanese Tone & Chickuma XXXX.

The table in XXXX gives the points costs for the CAAxx conversions if done immediately prior to the Start of Hostilities. If done after Start of Hostilities then compute the cost of the new armament and the effort and time required to make the change. A sheet will be added to the spreadsheet to allow these figures to be calculated depending on what is being removed and what replaced. XXXX

The CA1H conversion to CAAHB has twin 5.25” in all CA1H positions except Z, two of the turrets are in the wing positions, giving 10 guns per side and 6 guns forward and aft. For those who feel this may be a little overgunned, I agree the weight of a Tw5.25DP turret on the wings of such a narrow cruiser appears a little excessive. It was seriously considered by the Royal Navy however and such a conversion might have been made if the guns had been available. I would feel happier if the P~ turrets were replaced with singles if the player develops them – in that case maybe a Twin or Single could be fitted in Z. I have included this second variant in the spreadsheet if somebody does develop the Single mount.

The CAAMA conversion of a CA1M of the African Defense League retains its twin 9.4” turret in A but replaces all of the other turrets with twin 3.9DP mounts in BP~X. It has a twin 20mm AAA in either the bridge or Y position and two singles per side. Only 1 HAC is mounted and the original speed of the CA1M 30 Knots XXXX should this be 15? is retained.

The CAAMC conversion of a CA1M of the Chinese Nation replace each Tw8Lo mount that are en-echelon between the bridge and funnels with two twin 4.7DP each so there are 4 turrets in the en-echelon area. All 8 guns can fire directly forwards and rearwards, but only 4 can fire into the area between directly forwards (or rearwards) and 45 degrees on either side. There are also two more twin 4.7DP, one right at the bow and one right at the stern. Their sight lines are blocked by the superstructure against low flying aircraft but only 5 degrees either side of the ships axis. It has 2 HAC.

The CAAMD conversion of a CA1D of the Dwarven Nation replaces the heavy howitzers with more Si4How, giving that mount in AB~C~R~Z~Y~X. It has 2 HAC and a Tw20 either on the Bridge or aft in front of the Z mounts and two Si20 per side.

The CAAMS conversion of a CA1M for the Scandinavian Nations has twin 105mmAA mounts in ABP~T~YX. To reduce the cost of the conversion, or to give the ship some anti-surface capability some of the AA mounts may be converted to QF mounts instead. The weight of the QF is the same as the AA so the cost of the conversion should be the same, however the two sides must be the same – it is not possible to have AA armament one side and QF the other. The ship has only 1 HAC, to add a second, switch the T~ mounts to singles and add 22 more tons of fuel.

The CLAAP is a partial conversion of a CL1A, removing the forward and aft twin 6” and the two single 3”, and also the upper casemate aft and replacing them with two twin 5” DP and a Quad 40mm. The aircraft and catapults are kept.

The CLAAF (or CLAA if the owner prefers) is a full conversion (taking longer) that removes all of the 6” and both 3” and all of the casemates and TT. Two further twin 5” DP are placed on either side of the bridge in place of the foremost casemates and another two placed either side in front of X position replacing the after casemates. The quad 40mm is mounted above the three aftermost twins and between them in Y position. Two HAC are fitted in the full conversion but none are added in the partial conversion.

The CLACA is an American Using conversion of a CL1C, removing all the guns and Torpedoes and replacing them with Tw5DP in AX with Si5DP in PY. Two HAC are carried and a Tw40 either on the Bridge or Aft and two Si20 per side.

The CLACC is a conversion of the CL1C for those Nations only having 4”DP such as the Colonies or maybe Albion. Tw4DP are mounted in ATYX with a single in P. Two HAC are carried and a TwPomPom either on the Bridge or Aft and two SiPomPom per side.

The CLACG is a German Using conversion of a CL1C, removing all the guns and Torpedoes and replacing them with Twin 105mm AA (note this mount weighs about 2/3rds of the 4DP) in ABTYX. The 3”AA in P position is replaced by a single 105mmAA, and a twin 37mmAAA can be mounted on the bridge or aft and two single 20mmAAA are mounted on each side.

The CLACI is conversion of the CL1C for those Nations (such as the Italians) only having access to the 4.7”DP, though it could be used by British Using Nations with the SDP version of that gun – add 34 tons of Extra Fuel if DP are replaced by SDP. Tw4.7DP are mounted in APYX, 2 HAC are carried and a Tw20 on the Bridge or Aft with two Si20 each side. Replace the 20s with PomPom for British Using Nations before 20s become available.

The CLADA is an American Using conversion of a CL1D, removing all the guns and Torpedoes and replacing them with Tw5DP in ABX and Si5DP in PY. The AAA is a twin 20mm either on the Bridge or in Z and two singles a side.

The CLADB is a British Using Nations conversion of a CL1D, removing all the guns and Torpedoes and replacing them with Tw4.5DP in ABPYX. The AAA are a twin PomPom either on the Bridge or in Z with two singles per side. This conversion was one recommended by the British Navy but there weren’t enough 4.5DP turrets available.

The CLADC is a conversion of a CL1D for any Nation with access to the twin 4”DP, removing all the guns and Torpedoes and replacing them with Tw4DP in ABPTYX. There are two HAC and the AAA are as either CLADA or CLADB depending on the Nation.

The CLADO is an Albion conversion of a CL1D, removing all the guns and Torpedoes and replacing them with twin 5.5” DP in AYX. The AAA is as the CLADB, but only 1 HAC is carried.

The CL1ET is an EIT conversion of a CL1E (the Enterprise version with the twin 6” turret forwards). This replaces the aft pair of single 6” with a twin in X position and moves the mid 6” to Y position superposed over X, and replaces the mid 6” with a twin 4” AA. If the Torpedo Tubes are deleted then the four side-mounted S4AA can be replaced with Twins, the Spreadsheet assumes that this will be done. For non-British CL1ET replace the single PomPoms on the sides with an equivalent weight of Light AAA.

The CLAET is a wartime conversion of either a CL1E or a CL1ET, deleting all the Torpedo Tubes and old AAA. The Tw6 are both retained, but the Si6 and the 4AA are replaced with Tw4DP in RTY with Si4DP in the P~ wing mounts and a Quad PomPom or an equivalent weight of Heavy AAA added in B position just forward of the Bridge or Aft. Two single PomPoms, or equivalent light AAA, are mounted each side, one may be in front of the P mounts and one aft below the Y mount to allow them to fire into the end arcs. The ship carries two HAC. A mixed AA and DP battery may not be fitted to any ship – the AA must be changed to DP when doing the conversion.

The CLAEA is a non-British wartime conversion of a CL1E with two single 6” forward (Emerald) during the war. Note for all the CLAE… conversions the CL1ET can’t be used as the basis for the conversion except for the aforementioned CLAET. Like the CLAET all the Torpedo Tubes and old AA are removed and twin 5”DP are mounted in ABP~ (these two are wing mounted), and X. A Si5DP is mounted in Y position. A twin 40mm is superposed on the Bridge or in Z and two single 20mm are mounted each side. A second after HAC is also mounted.

The CLAEB is a British Using Nations conversion of a CL1E during the war. It is similar to the CLAEA but Tw4.5DP shields are mounted in ABP~TYX. A Quad PomPom is superposed on the Bridge or in Z with two single PomPoms each side.

The CLAEC is a Colonies and British Using Nation’s conversion of a CL1E during the war if only 4”DP are available. It is the same as the CLAEB but with Tw4DP in ABP~QYX with Singles in T~.

The CLAED is for those nations using 4.7”SDP guns instead of 5”. It is the same as the CLAEA except Tw4.7SDP are mounted in ABP~TYX. Two HAC are carried as well as a quad PomPom on the Bridge or in Z, and two SiPomPoms per side.

The CLAEI is for those nations using 4.7DP guns instead of 4.7SDP such as the Italians. It is the same as the CLAED except the T mount is a single. Two HAC are carried as well as a Tw40 on the Bridge or in Z, and two Si20s per side.

The CLAEG is for the German Using Nations using 105mmAA. Note the AA mount is lighter than a DP of the same calibre and this modified ship is much lighter than all the other CLAE… designs – there are no more locations where extra mounts could be placed and even adding two more single 105mmAA would make the ship top heavy. For the same reasons a German Using Nation version of the CL1D is not given as it would have the identical gun layout as the CLACG and the original ship would cost more to buy. The Twin 105mmAA are in ABP~RT~YX with a twin 37mm superposed on the Bridge or in Z and two single 20mm per side. One torpedo mount may be left in place each side to absorb some of the remaining weight. Two HACs are carried.

The CLAEO is an Albion conversion of a CL1E during the war. It is similar to the CLAEA but Twin 5.5”DP shields are mounted in AYX with singles in P~. A Quad PomPom is superposed in B or Z with two single PomPoms each side. Two HACs are carried.

The CLAOO is an Albion conversion of a CL1O during the war. It is similar to the CLACC, mounting Tw4DP in ATYX and a Si4DP in P with a TwPomPom in B or Z and two single PomPom each side. Two HACs are carried, and an extra 189 tons of fuel.

The CLAR is a Russian conversion of a CL1R during the war. It is similar to the CLACC but the Tw4DP are mounted in AQSX with a Si40mm in B or Y and two single 20mm each side. Two HACs are carried and an extra 157 tons of fuel.

The CLFP conversion of a CL1 for the Pacific Sphere of Influence has a twin 4DP in ABP~ and a Small Aircraft Lift (SACLift) aft with a single crane and catapult and room for three flights (each of one FPF float plane fighter and two FPT float plane torpedo bombers) in the hanger below. It has 124 tons of extra fuel and five torpedoes for each of the FPT. Loading the Torpedo takes 10 minutes in the hanger or 30 minutes on the catapult if the sea state is better than rainy. FPT are not normally loaded until they are ready to be launched. Alternatively each FPT can be armed with two 5 pattern DC loadouts but this takes twice as long. Ten 5 pattern DC loadouts can be carried for each FPT on board. The ship has two HAC and a Tw20 on the Bridge or right aft and one Si20 each side.

The CLAMA conversion of a CL1M for the African Defence League has Twin 3.9DP in ABP~X. It also has 1 single 20mmAAA either on the bridge or aft and one more each side, 2 HACs.

The CLAMC conversion of a CL1M for the Chinese Nation has two Tw4DP in the en-echelon positions and a twin right forward and another right aft. It also has 1 HAC, 1 single 20 either on the bridge or aft and one more each side.

The CLFMD conversion of a CLM for the Dwarven Nation has a Si3How in AB~. Between the side paddle boxes, there is a lift capable of lifting 1 GyH, or 2 GyM or 4 GyL at a time. Aft is a space where up to 3 GyM can take off simultaneously and a fourth can be readied for take off. Alternatively two GyH can take off from the after area and a third from the lift if it is in the up position, or six GyL can take off at the same time with two more being prepared. Up to five of these cruisers can be built using each of the LIT or PLT Cruiser Pools. They can hold up to 12 GyL or 6 GyM or 3 GyH (depending on the period, helicopters could also be carried) in the hanger. They have 2” of armour belt over the guns, machinery, paddles and hanger only and 1” of armour deck over the whole ship and a Tw20 either on the Bridge or Aft and a Si20 each side, and have a speed of 33, built as 27 knots, the Dwarven Nation gets a 6 knot bonus to their speed. They also have 1 HAC.

The CLAMD conversion of a CL1M for the Dwarven Nation has a Si4How in AB~CP~ZY~X, none are superposed nor do they need to be as all of them can fire at any target in any direction. The ship has 2 HACs and one Si20 on the Bridge or aft and one more each side.

The CLAMS conversion of a CL1M for the Scandinavian counties has twin 105mmAA in AP~T~X positions. They also have 1 HAC and a single 20mmAAA either on the bridge or aft and one more each side. As with the CAAMS conversion, some of the AA could be replaced with QF to give the ship some anti-ship capability.

For the non-specific CA1 and CL1 designs (note all shields being replaced must have at least 1” armour), make the following changes:

* Add one High Angle Controller (above the bridge)
* For 8” being replaced with twin 5” DP, add an extra centreline twin 5” DP in T position.
* For other mount sizes, remove one single centreline mount from the design (except in the case of 7.5” being replaced with Tw5DP or 6.7” being replaced by Tw105mmAA). Replace each remaining Single large mount with a Twin (Single for 6” to 5”) DP (AA for German Using Nations) as follows

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Old | 8” | 7.5” | 7.5” | 6.7” | 6” | 6” | 6” |
| New | 5.5” to 5” | 5” | 5.5” to 5.25” | 105mm AA | 5” Single | 4” | 105mm AA |

* A second HAC can be added aft but will increase the “Top Weight”
* Add up to 2 tons of AAA on the centreline aft in Z position or on the bridge
* Add up to 1.5 tons of AAA per side

Note the weight of AAA is given in XXXX.

For CL1 armed with 5.5” guns, if they are mounted in shields of at least 1.75” thick armour, XXXX really this thick? then the following replacements can be made (either all 4” or all 5” guns must be fitted):

* A superposed pair of single shields can be replaced by a twin 4” DP turret or a twin 5” DP turret with a superposed AAA of at most 2 tons weight.
* The wing shields can be replaced by a single 4” DP turret or a single 5” DP turret.
* Any shield in Position Z can be replaced by a twin 4” DP turret or a single 5” DP, but this isn’t superposed over the AAA in Position Y (it can engage high flying aircraft attacking from the rear though).
* Up to 1.5 tons of AAA can be mounted on each side
* Up to 2 High Angle Controllers can be fitted, one forward above the bridge and one aft above and ahead of the after AAA in Y Position. If only the forward HAC is fitted on the 4” design then the wing shields can be twins. For the 5” DP design, only the forward HAC can be fitted, unless either the single in Z position or the singles on the wings are deleted.

Got Here

## Landing Ships Infantry (LSI)

LSI are converted from Liner Small (LS) by removing all of the lifeboats and replacing them with the Infantry Landing Craft described in the Merchantman section, see XXXX. To save weight, this requires reducing the number of cabins so while it can still carry 5,000 troops, it can only do so for 24 hours due to the cramped conditions. If the ship has to travel further than that time then they can only carry 3,750 troops. It will take 6 XXXX months to complete all of the conversions at a Merchant Completion Dock or larger, and XXXX tons must be provided to the Naval Factory (FN) to build the Infantry Landing Craft. This conversion cannot be started before 1944.i.1.

XXXX LSI can also be converted from Liner Large (LL) in a similar manner and double the number of troops that they can carry and doubles the weight of Infantry Landing Craft that it carries and must provide to the Naval Factory. It can still only carry 10,000 troops for a maximum of 24 hours otherwise it is restricted to 7,500 troops. The conversion takes 6 XXXX months to complete at a Battleship Completion Dock. This conversion cannot be started before 1944.i.1.

GOT HERE

## Other Mothballed Ships

In addition to the Mothballed Destroyers (MB) described in the previous section XXXX, there are other hulls lying around in various states that could be revived and added to the list of commissioned ships with varying amounts of work. If a Nation has chosen to add Semi-Dreadnoughts or Armoured Cruisers to their starting Navy, they will have been chosen from this group of ships so not all of the listed ships may be available.

The Pre-World War 1 period can be divided into four separate periods. In general, there will be four of each type of ship in each period, but specific Nations will differ. The oldest period contains only Old Armoured Cruisers, these will all be hulks with no engines and one ship may have the A turret for use as a gunnery training ship. The rest of the ship will be covered with accommodations.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Generic | 4Old AC | 4EarlyAC & 4ESDr | 4EDr | 4MDr |
| Britain | 4Old AC | 2ESDr+AP~TX-3+4EAC | 4AP~TX-4 | 4APQTX-4 |
| Japan | 4Old AC | 4ESDr+2LAC^ | 2LSD+2AP~T~X+2LAC\* | 4Kongo |
| Italy | 4Old AC | 4ESDr+4EAC | XII12+4LAC(Roma) | 4xXIII12 |
| Austria | 4Old AC | 4ESDr+4EAC | 2xABYXTr12 | 4xABYXTr12 |
| Russia | 4Old AC | 4ESDr+2OAC | 4xAQSXTw12+2LAC | 4xX12 |
| Germany | 4Old AC | 4ESDr+2EAC+1OAC | 4EDr+1LAC(Blucher) | 4MDr+VdT |
| Albion | 4Old AC | 4ESDr+2OAC | 4EDr+2LAC | 4MDr |
| Prussia | 4Old AC | 4ESDr+2OAC | 4EDr+2LAC | 4MDr+VdT |
| America | XXXX |  |  |  |

The next period generally contains Early SD (Semi-Dreadnoughts) and Early AC (Armoured Cruisers). Where OAC are included these are operational Old Armoured Cruisers with no large calibre wing turrets and 6” as being the largest casemate calibre. The Russian OAC will have AXTw10 with 6” casemates. The German OAC will have AXTw9.4 with 150mm casemates. The Albion OAC will have AQXTw9.2 with 5.5” casemates and the Prussian OAC will have AQXTw9.4 with 150mm casemates. The Albion LAC will be AQXTw9.2+2Si9.2W with 5.5” casemates. The Prussian LAC will be AQXTw8.2Lo+2Si8.2LoW with 150mm casemates. The German EAC should be AXTw8.2Lo+2Si8.2LoW (ie Scharnhorst and Gneisenau), but could be built as bigger ships if desired, though with only singles on the wings – Blucher is the only exception to the rule on Wing Twins being 8” or less).

The third period generally contains Early Dreadnoughts and possibly Late AC and Late SD. The -3, -4 and -6 at the end of Dreadnought designs indicates the maximum calibre for the casemate guns in inches, though American Using Nations/Spain/Russia may have 5” and France may have 5.1”, and German Using Nations/Austria/Italy may have 6” XXXX.

The last period generally contains Mid Dreadnoughts but no AC or SD at all. VdT is Von der Tann, a 24knot BC with AQPweXTw11Lo and 150mm casemates.

In all cases, these ships were mothballed at the start of the EIT period (as a result of the Washington Treaty), and none of them may have any of the upgrades mentioned anywhere else. All of those which should have a casemate should have at least 7x6” or 5.5” or 8x5” or 9x4” or 10x3” in the casemate. The two forward guns will be removed when de-mothballing the ship if they weren’t before they were mothballed.

British Using Nations (including Albion) may have up to two BC in place of BB in the Early Dreadnought Period (EDr) and any number of BC in the Mid Dreadnought Period (MDr). BC will have one less turret than the BB of the same period. Note that I consider APQneX to be only 6 guns per side for these rules. The MDr BC (APQweX for Britain) should be compared to the BB with APQweYX. Albion BC of this period will have Tw11 instead of Tw12 but will have an extra centreline turret in Q. Germany and Prussia have Von der Tann in the MDr period as well as the 4MDr. In the MDr period, Japan may only have 4 BC (Kongos with 4Tw14). No other Nation may have guns heavier than 12” except for specific minor navies such as the Dwarven or Elven navies.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Ship Type | EarlySD (ESD) | LateSD (LSD) | OldAC (OAC) | EarlyAC (EAC) | LateAC (LAC) |
| Gun Tonnage | 3200 | 3900 | 1350 | 1800 | 2100^\* |
| Speed | 18 XXXX | 18 | 21 | 21 | 24 |
| Min Belt | 9” | 9” | 3” | 4.5” | 4.5” |
| Max Belt | 12” | 12” | 4.5” | 6” | 6” |
| Min Deck | 1.5” | 1.5” | 1” | 1” | 1.5” |
| Max Deck | 2.5” | 2.5” | 2” | 2” | 2.5” |

^ Japan may build two Late AC with AXTw12 and up to 6x6” and 6x4.7” per side (the 6” are in the casemate and the forward one will be removed as part of the de-mothballing – note this is an exception to the 7 gun requirement above).

\* Japan may build two Late AC with up to 2350 tons of guns.

Note, I consider the Roma design to be a Late AC rather than an SDr.

Gun Tonnage, is the maximum tonnage of guns that the ship may contain, excluding armour after the forward 2 casemate guns have been removed from each side. No SDr should have wing turrets weighing more than 10x9.2 guns in total unless specifically described in any of these rules.

No turret on a SDr may be bigger than a Tw12, on an EAC or LAC Tw10, OAC Si10 or Tw8, though Japan may build LAC with 2Tw12 (Ibuki and Tsukuba), and Italy may build LAC with 2Si12 (Roma).

Speed, is the maximum speed in knots for each type of ship.

Min Belt, is the minimum Belt armour in inches, similarly Max Belt is the maximum Belt armour.

Min Deck, is the minimum Deck armour in inches, similarly Max Deck is the maximum Deck armour.

In the case of Albion and Prussia, they may only have two LAC with AQXTw and two singles per side of their preferred calibre (9.2QF and 8.2Lo respectively). Their other two AC will be operational OAC (ie still with engines and armament as built)

XXXX There is a 5th pre-WW1 period containing possible LDr (Late Dreadnoughts) – it is assumed that these were all destroyed during WW1 along with the other ships that were built in the periods 1-4 above. At the choice of the Referee a vote could be made by the players to determine if any of these survived – either a majority vote or an all or nothing vote. These ships could number anywhere between none up to a fleet of at most 10xX13.5BB + 3xABQXTw13.5BC (the ships that Britain actually built in the LDr period).

The total ships historically built in the earlier period (including those described above) include up to 7 EAC/LAC, 10 SDr (in the case of Britain 8 of these will be ESDr), 7EDrBB, 3EDrBC, 4MDrBB and 2MDrBC. Note these are the ships that Britain built in these periods, other Nations actually built far less than these but they give an upper limit on the number of ships that might have survived. Any number of OAC may be available – Britain probably had in excess of 50 such ships over the period, most of which had 2Si9.2BL and up to 9xSi6, exceptionally 16xSi6 in the case of Powerful.

Once de-mothballed, all EDr will lose 6 knots off their designed speed and all other ships will lose 3 knots off their designed speed. All EDr, MDr and LDr ships will be oil fuelled. All the SDr and AC ships are coal fuelled, any that have been de-mothballed in the LIT period will have had a thorough overhaul of their engines and boilers and may attain the designed speed during the conflict. If this thorough overhaul is carried out on the de-mothballed ships then it will take an additional 6 months per 3 knots speed loss to perform once the ships have been de-mothballed. XXXX see other rules. SDr and AC will take 4 months to de-mothball and all Dr will take 6 months. XXXX not what is assumed in my spreadsheets. No guns will be converted from 12” to 12.7” by the ship being de-mothballed and no centre turrets will be removed. The ships will have been untouched since the Washington Treaty at the start of the EIT period and will still contain all their casemate guns too – the forward pair of guns in the casemate will be removed as part of the de-mothballing process. XXXX thought they were actually removed during WW1.

XXXX rules to use the OAC – thought I had written them already?

It is up to each player to determine if these probably slow and lightly armed ships will be of any value to them during the war – Convoy Escorts would be one obvious use.

## Merchant Self Defence Upgrade

After the Start of Hostilities, each CS or TA or OI can receive this upgrade if enough steel is provided to the Factory Naval (FN) to build the gun. Older guns taken off other ships could be used if preferred.

The upgrade takes 1 day at a Merchant Completion Dock or larger and allows one gun to be fitted to the after deck on the ship. The gun can be either a 4" AA or a 3" AA or a 4" BL or a 3" BL – the choice is up to the player.

A Liner (LSI converted from one) can fit two single guns, one forward and one aft. They don't have to be the same, and even if they are they cannot act together as one battery. They will each be counted separately even if firing at the same target. A Large Liner could have one Si6 fitted if available, the other gun would be a smaller BL or an AA gun.

No Merchant ship other than an AMC or AAMC will ever have Low or High Angle Controllers fitted. AA Craft XXXX

## Upgrading Light AAA During the War

|  |  |
| --- | --- |
| PomPom in Octuple, Quad, Twin and Single | Available to all British Using Nations, Albion and the Colonies, a short barrelled 40mm having less range and weighing half the amount of a normal 40mm. The Octulple and Quad mounts are Heavy AAA, the twin and single mounts are Light AAA. XXXX Octuple mounts per month. XXXX Quad mounts per month – no restriction on twin/single. They do the same damage as a 40mm but only have the range of a 20mm. |
| 57mm | Available to France only from the start of the PLT period in both triple and single mounts, The Single mount is considered to be Heavy AAA, the Triple is a DP mount but may be on the same ship as the Tr6DP or Qu5.1DP breaking the rule that a ship may only mount one type of DP or AA. Germany has a similar gun available on 1944.i.1 (no need to design it) in Si or Tw mounts instead of the 3”SAAA (it’s actually a 55mm but it’s close enough that it is not worth including a separate gun). |
| 40mm | Available to all Nations from 1941.i.1 except Albion, exactly the same as the 37mm. |
| 37mm | Available to German Using Nations from the start of the LIT period, available in Quad, Twin and Single mounts, all are considered to be Heavy AAA. XXXX Austrian, Italian? |
| 1.1” | Available to American Using Nations from XXXX, available in XXXX mounts, all of which are considered to be Light AAA. Considered to be 25mm for all purposes. |
| 25mm | Available to Japan only from the start of the LIT period, the triple is a Heavy AAA, the twin and single mounts are Light AAA. Ships built in the LIT and PLT XXXX PLT only period must initially have at least a sixth of the AAA weight built as 13.2mm. |
| 20mm | Available to German Using Nations from the start of the LIT period, and all other Nations except Albion from 1941.i.1. Available in Quad, Twin and Single mounts all of which are considered to be Light AAA. |
| 0.5” | Available to American Using Nations from the start of the LIT period, no other type of AAA can be mounted until 1941.i.1 except 1.1”. |
| 13.2mm | Available to all Nations from the start of the LIT period except American and British Using Nations and Albion who may never mount this gun. |
| NOTE for AAA | When a ship may have both Heavy and Light AAA, the Heavy AAA weight may not exceed half of the maximum weight for AAA for that ship. Heavy AAA is initially mounted on the centreline only though Single mounts and all mounts after 1941.i.1 may be mounted on the wings. Where there are different sizes of mounts on a ship, the larger one should be mounted aft above all of the rearward facing guns and the smaller one forward either in front of the Bridge or amidships. A British Cruiser for example might mount an Octuple PomPom aft and a Quad on the Bridge if it could only carry 6 tons of Heavy AAA. A ship large enough to carry two Octuple and one Quad would mount the second Octuple amidships. Note some British Using and Albion ships are allowed a quad pompom with only one single per side, these are exceptions to the rule that the Heavy AAA cannot exceed half the total. Note, some rules state that the largest heavy AAA mount can be fitted in front of the bridge or split to the bridge wings so a quad could be a twin on either bridge wing if preferred. |

As described earlier, the secondary guns on the WW1 ships can be upgraded to modern DP guns.

In addition, the light AA suite (or AAA) of any ship type can be upgraded as the war progresses. Most ship types have an upgrade every year after the first, some only in 1941 and 1943. Some will need to remove equipment before extra AAA can be added.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | 1940 | 1941 | 1942 | 1943 | 1944 | Remove | Cost per Upgrade |
| BB/BC | 3S | Q40CF, 2T40CA, 7x20S, 4x20CA | Q40CM, Q40S, 9x20S | Q40CM, Q40S, 9x20S | Q40CM, Q40S, 9x20S | Catapult after 1942 see notes | 21 tons |
| VA/VF | 3S | Q40CF, Q40CA, 10x20S | Q40S, 10x20S | Q40S, 10x20S | Q40S, 10x20S |  | 18 tons |
| VL | 2S | T40CF, T40CA, 7x20S | T40CF, T40CA, 7x20S | T40S, 7x20S | T40S, 7x20S |  | 13 tons |
| VE | 2S | 1x40CF, 1x40CA, 3x20S | 1x40CF, 1x40CA, 3x20S | 1x40S, 3x20S | 1x40S, 3x20S |  | 5 tons |
| CA/CL/PB | 2S | Q40CF, 2T40CA, 3x20S, 1x20CA | T40S, T40CM, 3x20S, 1x20CA | T40S, T40CM, 3x20S, 1x20CA | T40S, T40CM, 3x20S, 1x20CA |  | 9.5 tons |
| CA/CL/ CA6/CL6 |  | 2xQ40CA, 2x20S |  |  |  | Y Turret | 10 tons |
| WW1 CAA | 1.5S | Q40CF, Q40CA, 4x20S |  | 2xQ40CM, 3x20S |  |  | 11.5 tons |
| CA1/CL1 | 1S | Q40CF, 4x20S |  | 2T40CA, 3x20S |  | Y Turret | 7.5 tons |
| SD/AC | 1S | 2x40CF, 2x40CA, 4x20S |  | T40S 3x20S |  |  | 5.5 tons |
| DD | 1S | Q40CF, 2T40CA, 2x20S |  |  |  | Y Turret | 10 tons |
| DD |  |  |  | Q40CM |  | TT Mount | 4 tons |
| CS, TA, OI | 0 | 1x20S |  | 1x20S |  |  | 1 ton |
| LL, LS, AM | 0 | 2x20S |  | 2x20S |  |  | 2 tons |
| Trawler | 0 | 1x20CF |  | 1x20CA |  |  | 1/2 ton |
| SS | 0 | T20CA | 1x20CF | T20CA | 1x20CF |  | 1 ton |
| OGT | XXXX | S40CA | S40CF | S40CA | S40CF |  | 1 ton |

Key to table above:

Q40 means Quad 40mm, for the appropriate Nations this could be 37mm, Albion=OctPom

T40 means Twin 40mm, or 37mm or QuPomPom

nx20 means n single 20mm or SiPomPom

CF means centreline forwards, this mount can fire into 1 and only 1 of the forward arc and either side arc each move.

CA means centreline aft, it can fire into 1 and only 1 of the aft arc and either side arc each move.

CM means centreline mid, it can fire into 1 and only 1 of either side arc each move.

S means side, the number and type of weapon preceding the S can fire into both sides, for example 7x20S means that the ship has 7 20mm guns on each side which may be fired independently. One quarter of each side can be fired into the foreword arc and one quarter can be fired into the aft arc, but this can't happen in the same move as the whole side armament is firing into a side arc. It is possible to split the side guns over all three arcs though.

If there is just a single number before the S (eg 3S, 1.5S) then this is a value in my AAA rules, as explained earlier 3S is roughly equivalent to 5x20mm).

For example in my aircraft rules, 7x20mm is worth 4 AAA points, if aircraft are attacking from all four arcs (fore, port, aft and starboard) then the 7x20mm on each side could be split as follows (remember that the side is worth 4 AAA points):

2 AAA points Forward (1 point from each side)

2 AAA points to Port (2 points from port side)

2 AAA points to Starboard (2 points from starboard side)

2 AAA points Aft (1 point from each side)

Notes: For all BB and BC, these ships have to give up their catapults and floatplanes before they can receive the 1943 and 1944 upgrades.

Albion may never fit any AAA except PomPoms until the 3”SAAA mount becomes available – in their case an Octuple PomPom replaces a Quad40mm and a Quad PomPom replaces a Twin40mm and a Twin or Single PomPom replaces a Twin or Single 20mm.

By giving up its Y Turret a four (or more) turreted CA or CL gains extra AAA (it can only do this once but at any time after the beginning of 1941). Similarly by giving up its Y Turret a DD gains some AAA (it has virtually none if it doesn't do this) and by giving up a TT mount it gains further AAA per TT mount removed. For a DD with 4x5" turrets in A, P, X and Y positions and two 5 tube 21" torpedo mounts, then it gains a Quad 40mm in place of Y. Plus a further Quad 40mm amidships on the centreline (can't fire forward or aft) and two single 20mm on each side which may fire forward or aft instead of to the side. If it gives up one TT mount then it gains a second CM Quad 40mm in its place and if it gives up the other TT mount then it gets a further CM Quad 40mm in place of that too. In the case of the American Destroyer design with torpedo mounts on both side, remove both sets of torpedo mounts (one each side) and place a Qu40mm CM with 4Tw20 on each side.

In the case of the 1942 VL changes, the second twin 40mm in the CF and CA arcs, actually converts the 1941 twin to a quad, so only one arc may be engaged. ie after the 1942 VL change the ship becomes Q40CF, Q40CA, 14x20S.

Similarly for the 1942 VE changes, the second single 40mm in the CF and CA arcs converts the 1941 single to a twin so only one arc may be engaged.

All heavy cruisers (except WW1 designs such as Raleigh or Blucher) and all light cruisers (except WW1 designs such as D, Omaha) gain the specified AAA each year. In ships with A, B, X layout the B turret can be removed instead of Y and the Quad 40mm becomes a CF instead of a CA. In ships with a layout of A, B, C, D (Tone) then the superposed turret must be the one that is removed.

A WW1 CAA (a WW1 CA or CL converted in the manner described above) gains the specified AAA but in 1941 and 1943 only. A Post London Treaty AAA cruiser such as Dido or Atlanta will be treated as a normal Light Cruiser.

An unconverted WW1 CA1 or CL1 gains the specified additions to its AAA in 1941 and again in 1943 but only if it removes its Y Turret (and one of its mid turrets if Y turret is a single 6") before making the 1941 changes. Note, while removing Y Turret takes two months XXXX (in all classes) which means that the 1941 change will take two months, the 1943 change will only take 1 month like all other AAA changes. An unconverted WW1 CA1 or CL1 can be converted to a WW1 CAA at any time but then takes the AAA armament of that type of ship (during the conversion), with extra cost if it does not have enough AAA to start with.

A Semi-Dreadnought (SDr) or Armoured Cruiser (AC) gains a single 40mm on each bridge wing and on each side of the after superstructure in 1941 along with 4x20mm singles on each side. In 1943 it gains a twin 40mm on each side with a further 3x20mm singles. Nothing needs to be removed for this other than any earlier light AA. The ships are inherently more stable than any of the cruiser designs.

Destroyers cannot increase their AAA without sacrificing one of their turrets, this was traditionally Y Turret but in a design with A, B and X then B can be removed instead. In this case the CA Quad is CF instead.

The 1943 T20CA on a submarine converts the 1941 T20CA to a Quad so only 1 target can be engaged. The 1944 1x20CF converts the 1942 1x20CF to a twin so again only 1 target can be engaged in that arc. Both the quad and the twins and the singles can engage targets to the side. The two 1x20CF upgrades cost half a ton instead of 1 ton for the Twin upgrades.

Note that when the 1941 AAA changes are made the 1940 AAA is removed (it consists mostly of small machine guns – 3S for example is equivalent to 5x20mm but would probably be a number of 1.1" or 13.2mm or similar weapons). The weight gained by removing them helps to keep stability when the 1941 AAA is added.

Each increase in AAA requires the ship to be in a Completion Dock for one month during which time it can't be used and is decommissioned so it can't defend itself. If multiple TT mounts are removed at the same time then they can all be removed and replaced in one month. If needed urgently the ship can be re-commissioned in 8 days (unless it has less than 9 days left to complete the change) but will sail without its new AAA armament and any equipment removed.

If a 5.5" or larger Turret needs to be removed to make these changes then it will require a second month in the Completion Dock. XXXX

All ships completed during the war will have the appropriate AAA refit. If they are completed in February or later in the year, then they will get the refit for that year too. Hence a PLT period battleship completing in February 1942 will have the 1941 and the 1942 AAA Refits for a total of a Quad 40mm Centreline Aft, another Centreline Amidships, and two more per side, with 16x20mm per side and 4 Centreline Aft. They will also be 42 tons heavier than designed.

For German Using Nations, replace the 40mm above with 37mm (which are identical in all ways except for the name). For Japanese ships replace the 40mm with 25mm mounts that weigh the same or less than the 40mm mounts. Eg a quad 40mm will be replaced with 2 triple 25mm – note I haven’t seen any ships with quad 25mm. Also note that a single 25mm weighs more than a single 20mm, so the total weight of the AAA on a Japanese ship must be less than or equal to the above descriptions.

After 1944.i.1, a quad 40mm can be replaced by a twin 3” semi-auto AA mount. It will take three months to replace all the mounts on a ship of Cruiser size or larger, Destroyer sized ships will only take two months. XXXX If performing the 1944 upgrade and replacing the existing 40mm with the 3” mount at the same time then this will take three months to complete all the work, including the 1944 upgrade – two months for a Destroyer sized ship.

# Alternative Uses for the Rules

Another possibility for the rules would be to use it for small games. A small amount of tonnage may be allocated for the ships in the game. I would suggest that no ship should exceed one quarter of the total tonnage and if a battle was to take place with a full squadron of 8 ships then this should obviously be reduced to no more than one eigth of the tonnage, probably a lot less.

One possibility might be to set up a convoy with a Lord Nelson type SDr and a Monotaur AC and four old Destroyers that include TT tubes vs a Deuschland and a Hipper with four modern Z type Destroyers.

Multiple eras should be used for each side if possible if putting together a game

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