Stations Manned and Ready 2nd Edition

Naval Battles in the Age of Steel

The Battle of Tassafaronga or The Battle Lunga Point 30th November 1942

A and A Game Engineering

Terms and Conditions

This product is made available for your personal use only.

The ship data sheets in this document may be printed for use when playing a wargame using the Stations Manned and Ready 2nd Edition rules.

This document file may not otherwise be copied or reproduced, wholly or in part, and/or distributed to other users. If you do this, you defeat the purpose of our offering the product at a lower price for a download version, and this also works against our continuing to provide you with our products in this way.

Visit our website for additional information, Clarifications and FAQs on all our products, as well as supporting material and useful links. We hope that you enjoy using this product, and by recommending it to fellow wargamers you will support our further development of rules.

If you have any questions regarding the rules or other products, contact us via the links on the website, or through the email address shown below.

Andrew Finch and Alan Butler Partners, A & A Game Engineering

Published by	A&A Game Engineering 20 Shrublands Court Mill Crescent Tonbridge Kent TN9 1PH Great Britain
Email	Info@AandAGames.co.uk
Website	http://www.AandAGames.co.uk

Naval Battles in the Age of Steel

The Battle of Tassafaronga or The Battle of Lunga Point

14th/15th November 1942

A BATTLE SCENARIO FOR USE WITH

STATIONS MANNED AND READY

2ND EDITION

NAVAL WARGAMES RULES FOR THE PERIOD 1885 TO 1945 USING MODEL SHIPS AND AIRCRAFT

> BY ANDREW FINCH AND ALAN BUTLER EDITION 1.1A

First published by A&AGE 2013

Updated December 2015, February 2016

All parts of this publication are Copyright © 2013, 2015, 2016 A&AGE

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form, or by any means, electronic, mechanical, photocopying, record or otherwise whatsoever, without the prior permission of the publisher and authors.

The Ship Data sheets that are encompassed by this booklet may be copied for personal use only

INTRODUCTION

This volume is part of a series of booklets providing scenarios for Naval Battles from the Pre-Dreadnought era through to the end of the Second World War, the "Age of Steel" referred to in the title.

This introduction is common to all the booklets, therefore it may refer to items that are not present in all.

Scenario Description

Following a brief introduction, a "potted history" if you like, we suggest the type of battle to be fought, if this is appropriate. Mostly a game will be fought as a typical fleet encounter.

A table set-up is provided describing the scene.

Victory conditions

Unless the game is a meeting engagement the victory conditions are defined. Many games are Breakthrough actions where one side has to get his forces off the table. The method is described in the rule book.

Forces and Special Rules

The deployment requirements for each side, and any special rules applying to the forces are shown separately. Some formations may have a delayed entry.

In some cases we may also specify some additional rules.

The map

A small map is provided, which defines which side starts where. As a convention, North is always at the top of the page, and the table is laid out so that it is based on an 8 foot by 4 foot playing area. Any terrain that should be present is also denoted on the map. The home edge for each side is defined by thicker black lines. In many cases the home edge is adjusted so that it does not follow the standard as laid down in the rules. If a force has to exit from an edge, then this is represented by a wavy line.

Fleets

The ships involved in each action are listed. As far as possible, where research has revealed the information, we have also shown the tactical orders of battle with names of the commanders of formations (shown in brackets). The ships in each formation are usually listed in descending order of size, so capital ships are listed before cruisers and destroyers. The actual composition of each squadron is left to the players. The listing shows the ship type, then the names of the ships in the class that were involved in the action.

In some cases you can choose whether to deploy the entire force at the start, or keep some off table in order to make flanking manoeuvre. Off table forces are treated as being in reserve.

Ships in the same class are grouped together and they will also appear grouped in the ship data sheets.

Aircraft

Some scenarios may include aircraft. In these cases players should organise them according to the tactical doctrine as shown in the rules. This allows some flexibility in squadrons in cases where fewer than the normal number are indicated.

Some large scenarios list a large number of separate formations of the same aircraft. These usually represent the appearance of repeat strikes by the same aircraft over a prolonged period. For this reason these separate formations should not be combined.

Comments:

Class names:

These have been taken from the names as defined in the Conway's series of books on Warships from 1860 onwards. They may be at variance to those that appear elsewhere, such as in '*Jane's Fighting Ships*' for example.

Ship data:

The ship data sheets appear in the same order as mentioned earlier, which means that larger ships appear first. They are then sorted by class, then by ship name in the class. This means that when perusing the ship names these will often not be in alphabetical order.

In some cases you will find that the ship name is blank on a sheet. Check at the bottom left of the sheet in such cases and you will find the names of the ships in the class (unless the list of names is prohibitively long). Enter the name of the ship you need.

In larger battles you will have to print multiple copies of the data sheets for destroyers and smaller ships, entering the names required, so you have one sheet per ship.

In the cases where one sheet is used to provide data for multiple ships, the class name for the ships concerned is shown in bold type. If the "name ship" of the class is not in the fleet, then this name is shown in parenthesis after the list of ships at the battle.

Optional Ships:

Some scenarios allow for optional vessels and squadrons. These are shown in italics in the fleet lists, and may be used if the players wish. Bear in mind that in some cases this may make the battle rather one-sided.

The Battle of Tassafaronga or The Battle of Lunga Point

30th November 1942

This was the last attempt by the Japanese to supply their troops on the island. For this purpose they loaded down a destroyer force with supplies, such that their guns and torpedoes were blocked, and went down Ironbottom Sound. The idea was to drop the supplies overboard and let the current carry them to shore. The plan succeeded largely. The unit was then to attack targets of opportunity (including bombardment).

Scenario Description

This is a night-time Convoy battle.

In the south east is an island 6" in diameter (Savo Island).

Victory Conditions

The Japanese must leave the table via the south-eastern corner in order to determine their level of victory.

American Forces

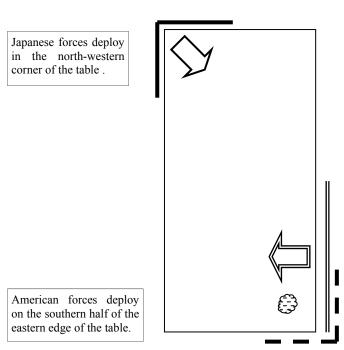
The American forces are deployed on the southern half of the eastern edge of the table at the start of the game.

Japanese Forces

The Japanese forces deploy in the north-western corner of the table at the start of the game.

Japanese Special Rules

The convoy rules for using warships to carry cargo are applied in this game.



American Forces

CruDiv 1 (Wright)

- CA Pensacola
- CA New Orleans, Minneapolis
- CA Northampton
- CL Honolulu
- DD Lamson, Drayton, Perkins (Mahan)
- DD Lardner (**Bristol**)
- DD Fletcher
- DD Maury (Gridley)

Japanese Forces

(Tanaka)

- DD Suzukaze, Kawakaze (Shiratsuyu)
- DD Kagero, Kuroshio, Oyashio
- DD Makinami, Naganami, Takanami (Yugumo)

How to use the Ship Data Sheets

You can print out the data sheets for the ships with little or no manual intervention required on your part. You will have to enter the crew quality on all ships, generated at the start of the game. In the case of destroyers and smaller vessels you will usually have to print multiple copies of sheets and add the ship names.

Some ships have minor changes to their close range defence weapons, noted on the sheets, which you can apply if you wish to do so. Note that these changes also have an effect on the points value of the ship, and revised values are shown in each case..

Ship Data – Normal Ships

The ship data on the sheets follows a standard pattern, and is explained in more detail in the Ship Data Glossary, available free of charge. This takes each part of the data sheet and briefly explains its use in the game. The fields are laid out as follows, starting at the top of the sheet. Not all fields appear on all the sheets.

Basic Data

The top section, above the armour boxes, shows on the left the ship name and under this its class. The ship name may be blank in the case of destroyers and smaller ships. In such cases there is a usually list of ships for which the sheet is valid at the bottom of the page.

An abbreviated ship type, a date range for which the sheet is valid, the cost in points of a ship with the indicated crew code, the base cost of the ship is shown (in parenthesis), and then the dataset number for the current sheet. A remark may also appear drawing your attention to changes to the ship's light anti aircraft or smaller calibre guns during the validity of the sheet. These changes are shown towards the bottom right of the sheet along with the adjusted points values.

On the right hand side is shown the nationality and a box showing the reconnaissance values, which are used during game set up.

At the top of some sheets there may be an additional italicised remark in the centre which identifies a variant of a ship, or otherwise shows some identifying remark.

Armour

The next row starts with the Armour on the ship in six main areas. An Armour Class of 0 means that the ship has negligible armour and is treated as unarmoured. This is explained in the rules themselves. Turrets and Casemates may be armoured or may show an entry of "n/a" which means that this ship does not have any weapons in the location.

You will see that in the case of Turrets and Casemates the armour value is shown in various sorts of brackets: [], () and $\{$ }. This is just intended as a handy reference to the weapons mounts shown lower down on the sheets.

To the right of the casemate entry there may be a special remark about armour on a specific part of the ship.

Target Size and Type

The last part, on the right, shows the ship's Size for when it is shot at, and the Target Type, which may restrict what can shoot at it.

Magazine Safety Factor

To the right of the Target Size is the Magazine Safety Factor (MSF), which has an effect if the ship suffers a main gun hit. Ships with no guns will not have an MSF.

Critical Hit Table and Types of Attack usable against this ship

In the next line there is an italicised section which tells you which Critical Hit table should be used, and which attack types can be used against the ship in question.

Saving Throw Modifier

On the right of this you will find reference to a Saving Throw Modifier. On larger ships this will show "n/a" to indicate that it does not apply. On many smaller and unarmoured vessels you will find a modifier, which is applied when testing the effectiveness of certain attacks on the ship in question.

Spotting Distance

Below the first black dividing line you will find the ship's Spotting Distance, which is how far the ship can see and engage a target. This may well be greater or less than the tactical visibility in your game.

Fire Control Value

Next is the Fire Control value, which is the resilience of the fire control systems on your ship. If reduced to zero, the ship must shoot using local control.

Gunnery Modifier

This is followed by the Gunnery Modifier, which reflects the level of technology for gunnery control when the ship was fitted out.

Crew Quality

Finally, in this row, is a space for you to enter the Crew Quality of your ship. You roll for this before the game.

Radar and Spotter Aircraft

Below this row, above the next dividing line, you may find information about Radar on the ship. From the left you may find radar for MAIN guns, radar for OTHER guns and radar for Dual Purpose AA guns. In the latter case they get a +1 to hit bonus. On the far right on all sheets is a field for any spotting aircraft the ship may carry. If there are no aircraft this field will be blank.

Weapons

The next section holds the weapons on a ship. This is divided into three groups: MAIN, OTHER and TORPEDOES. You will notice that above the data on the right is the to hit score at the 5 range bands for the weapons concerned. This may be helpful in play.

On the very left is the hit location number, which is used to determine where damage occurs when weapons are hit by Critical Damage Effects.

The number (of barrels/tubes) and calibre follow.

In some cases after the calibre there may be a special code showing AA and ASW weapons. Detailed explanations are given in the rules.

Under the section on arcs these are each defined with the letter code for the arc (which matches the graphic depiction shown at the bottom on the section, gun arcs to the left and torpedo arcs to the right). There is a letter and number code showing the mount type and number of guns or tubes in the mount. If the mount is armoured it is shown in one of the brackets which also appear in the armour section higher up. The mount is followed by a circle, and/or a special symbol, for each mount.

On the right centre are the penetration values for guns and to hit modifiers for torpedoes in each Range Band. A "–" means that a gun or torpedo will not go that far, and a to hit modifier in parenthesis shows a torpedo that can be effective at a range longer than the ship can see.

This is followed by the weapon IP and CV, and a notation whether this weapon has radar support.

In the OTHER weapon section you will also find the Close, Medium and Long range Factors which are mainly used for AA fire. If the ship has Anti Submarine Weapons, Long, Medium or Short Range Factors then there is a remark at the top of the OTHER weapon section about how these are lost to incidental damage.

Weapon Arcs of Fire

The final information in this part of the form is the weapon arc row, where the arcs in use on this ship in question are outlined with a thick black line.

Aircraft Carriers

Immediately below the third dividing line, Aircraft Carriers have details of their Handling, RRR Limit, Flight Deck Catapults and Aircraft Capacity. On non carriers this area is left blank.

Structure and Flotation

Structure and Flotation are on the next line, along with their value/3, which is linked to the Morale system.

Fires and Damage Control

The next row has space to record Fire on board ship, and on the right are details of the number of Damage Control Teams.

Speed and Manoeuvre Rating

Finally there is the speed of the ship, its Manoeuvre Rating (MVR) and Steering # to record damage.

Other Equipment

At the bottom of the page there are sections for Other Equipment and Special Effects. Any changes to the light anti-aircraft or other smaller calibre guns appear here, as do other remarks concerning the ship.

Ships in the Class

On ships with one sheet for a class of ships (in the case of destroyers and smaller) there is a list of the ships in the class, for which this sheet can be used.

CV Cost of loss of weapons

The page footer on all sheets shows the CV costs for the loss of weapons.

Dataset Version and Date

On the bottom right of the sheet you will find a version number and date for the dataset in question.

Ship Data – Small Ships of Type "X"

The ship data for small ships is slightly different and the sheets are designed to be used as a record for one or more squadrons of such ships. Again, the detail of how to use the sheets is explained in more detail in the Ship Data Glossary.

Basic Data

The top section, above the armour boxes, shows on the left the ship name and under this its class. The ship name will usually be blank in the case of smaller ships. In such cases there is a usually list of ships for which the sheet is valid at the bottom of the page.

An abbreviated ship type, a date range for which the sheet is valid, the cost in points of a ship with the indicated crew code, the base cost of the ship is shown (in parenthesis), and then the dataset number for the current sheet. When you are using the ship in this case, you must multiply the ship cost by the number of ships being used.

A remark may also appear drawing your attention to changes to the ship's light anti aircraft or smaller calibre guns during the validity of the sheet, shown lower down the sheet along with the adjusted points values.

On the right hand side is shown the nationality and a box showing the reconnaissance values, which are used during game set up.

At the top of some sheets there may be an additional italicised remark in the centre which identifies a variant of a ship, or otherwise shows some identifying remark.

Critical Hit Table and Types of Attack usable against this ship

In the next line there is an italicised section which tells you that Critical Hit tables are NOT used; then it shows which attack types can be used against the craft in question.

Target Size and Type

Next, on the right, shows the ship's Size for when it is shot at, and the Target Type, which may restrict what can shoot at it.

Saving Throw Modifier

The Saving Throw Modifier is used during combat to see what effect a hit will have on the craft.

Below this there are three boxes.

Spotting Distance

The first shows the vessel's Spotting Distance, which is how far the it can see and engage a target. This may well be greater or less than the tactical visibility in your game.

Speed and Manoeuvre Rating

Next are the speed of the vessel and the Manoeuvre rating (MVR).

Crew Quality

To the right is a space for you to enter the Crew Quality of your ship. You roll for this before the game.

Special Effects and Remarks

Next there is an area where there may be some remarks concerning Special Effects that may apply, and other information about the craft concerned.

Weapons

Below the first thick line across the form you will find the section referring to the weapon outfit. The first information shows the Close Range and Medium Range factors on the vessel, followed by any information about changes to the ship's light anti aircraft or smaller calibre guns during the validity of the sheet, with the adjusted points values.

The only weapons shown in detail in the case of smaller ships will be Torpedoes. Again, these are each defined with the letter code for the arc (which matches the graphic depiction shown to the right of the section). There is a letter and number code showing the mount type and number of tubes in the mount. The mount is followed by a circle, and/or a special symbol, for each mount.

On the right centre are the to hit modifiers for torpedoes in each Range Band. A "–" means that the torpedo will not go that far, and a to hit modifier in parenthesis shows a torpedo that can be effective at a range longer than the ship can see.

Weapon Arcs of Fire

The arcs in use on this ship in question are outlined with a thick black line.

Formation Record

Below the second thick black divider line you will find a section that you can use to record any formations or squadrons of these ships you have in use in the game. The method should be fairly obvious. the first column is to record the ID if the squadron in use, then the stand #, each of which will be in the form of counters or single small models representing the squadron. Finally there is a space to record the number of craft in the squadron.

To the right the weapon fit is repeated for each stand you are using. here you will cross out the torpedoes that the stand has expended, and if you need to make any notes, there is space for that as well.

Bear in mind that small craft are either in action, or they have been eliminated, as they do not have individual hit points.

Ship in the Class

On small vessels record sheets there is nearly always a list of the ships in the class.

Summarised Method of determining Attack Dice

The page footer shows in abbreviated form how you make use of the number of vessels remaining, linked to the number of Factors or tubes being fired to determine how many attack dice you roll.

Saving Throws

Also, in abbreviated form, there is information about how the saving throw system works when small ships are attacked.

Dataset Version and Date

On the bottom right of the sheet you will find a version number and date for the dataset in question.

Spotting Distance: 4 R8 Fire Control Value: 2 Gunnery Modifier: + 1 Crew Quality: Spotting Aircraft: 2 Hit Location # WEAPONS MAIN guns: #: Cal: Arcs: Hit#: 1.6 9 8.00 A:[T3] OO Z:[T3] O Pen: 8 6 4 3 - 3 4 No If a weapon 'Cnt' lands in this section lose 1 CR factor for each 2 CV or part thereof. Pen: 8 6 4 3 - 3 4 No OTHER guns: #: Cal: Arcs: Hit#: 1.6 II:9 III:12 IV:15 V:18 IP: CV: Radar: LRF: 0 OTHER guns: #: Cal: Arcs: Hit#: 1.6 II:9 III:12 IV:15 V:18 IP: CV: Radar: LRF: 0	New Orleans Class ARMOUR: Belt		eck: 3 (ts #1:	ith Crew Code D [6] Turrets <i>ff Weapons, Roc</i>	#2: n/a	Case	e Cost: emates:	730) n/a	Dataset:	3528			S		econ va + 0 T	arget Ty	- /	A M		0 + 1 1/a
WEAPONS MAIN guns: #: Cal: Arcs: Hit#: I:6 II:9 III:12 IV:15 V:18 IP: CV: Radar: 1-6 9 8.00 A:[T3] OO Z:[T3] O Pen: 8 6 4 3 -3 4 No If a weapon 'Crit' lands in this section lose 1 CR factor for each 2 CV or part thereof. Pen: 8 6 4 3 -3 4 No OTHER guns: #: Cal: Arcs: Hit#: I:6 II:9 III:12 IV:15 V:18 IP: CV: Radar: IRF: 0 OTHER guns: #: Cal: Arcs: Hit#: I:6 II:9 III:12 IV:15 V:18 IP: CV: Radar: IRF: 0 TORPEDOES: n/a Arcs: GUNS K: K R: K S: K K K K K K N: I IP: I III:0 IV: K K K K K K K K K K K K K K	Spotting Distance	:: 4 RB	Fire	e Control Value: 2		G	unnery Modi	fier:	+ 1								Crew	Quality:				
MAIN guns:#:Cal:Arcs:Hit#:I:6II:9III:12IV:15V:18IP: CV: Radar:1-698.00A:[T3] OO Z:[T3] OPen:8643-34NoIf a weapon 'Crit' lands in this section lose 1 CR factor for each 2 CV or part thereof.OTHER guns:#:Cal:Arcs:Hit#:I:6II:9III:12IV:15V:18IP: CV: Radar:LRF:77-1085.00AAI:01 OOOO R:01 OOOOPen:42132NoIRf loss 1 factor for each MAIN or OTHER gun mount marked AA or 'AA+' that is lost. When all such mounts are lost the LRF is reduced to 0.TORPEDOES: n/aARCS: $\frac{1}{\sqrt{2}}$ $\frac{1}{\sqrt{2}}$ 1		-															Spott	ing Aircr	aft: 2			
1-6 9 8.00 A:[T3] OO Z:[T3] O Pen: 8 6 4 3 - 3 4 No If a weapon 'Crit' lands in this section lose 1 CR factor for each 2 CV or part thereof. OTHER guns: #: Cal: Arcs: Hit#: I:6 II:9 III:12 IV:15 V:18 IP: CV: Radar: LRF: $\overline{\textbf{7}}$ 7-10 8 5.00 AA I:01 OOOO Pen: 4 2 1 - - 3 2 No CRF: $\overline{\textbf{5}}$ MRF: $\overline{\textbf{0}}$ Int is section lose 1 CR factor for each 2 CV or part thereof. OTHER guns: #: Cal: Arcs: Hit#: I:6 II:9 III:12 IV:15 V:18 IP: CV: Radar: LRF: $\overline{\textbf{7}}$ IRF loses 1 factor for each MAIN or OTHER gun more diverse 4/A or AA+ 'that is lost, When all such mounts are lost the LRF is reduced to 0. IRF loses 1 factor for each MAIN or OTHER gun such mounts are lost the LRF is reduced to 0. IRF loses 1 factor for each MAIN or OTHER gun such mounts are lost the LRF is reduced to 0. TORPEDOES: n/a Int if	Hit Location #						WEA	PONS	5													
If a weapon 'Crit' lands in this section lose 1 CR factor for each 2 CV or part thereof. CRF: 5 OTHER guns: #: Cal: Arcs: Hit#: I:6 II:9 III:12 IV:15 V:18 IP: CV: Radar: LRF: 7 7 -10 8 5.00 AA I:01 OOOO R:01 OOOO Pen: 4 2 1 - - 3 2 No LRF: 7 INF loses 1 factor for each MAIN or OTHER gun TORPEDOES: n/a ARCS: $\frac{N/2}{V_{5}N^{2}}$ $\frac{N}{V_{2}}$ N	MAIN guns: #:	: Cal:	Arcs:					Hit#:	I:6	II:9	III:12	IV:15	V:18	IP:	CV:	Radar:						
OTHER guns: #: Cal: Arcs: Hit#: I:6 I:9 III:12 IV:15 V:18 IP: CV: Radar: LRF: 7 7 -10 8 5.00 AA I:01 OOOO Pen: 4 2 1 - - 3 2 No LRF loses 1 factor for each MAIN or OTHER gun mount marked 'Ad' or 'AA+' that is lost. When all such mounts are lost the LRF is reduced to 0. TORPEDOES: n/a ARCS: GUNS Toppedoes Toppedoes Toppedoes Toppedoes Toppedoes *** **** B: $\frac{3/2}{5}$ B: $\frac{3/2}{5}$ G: $\frac{12}{5}$ H: $\frac{4}{5}$ S: $\frac{12}{5}$ T: $\frac{1}{5}$ U: $\frac{4}{5}$ Y: $\frac{1}{5}$ Y: $\frac{1}{5}$ Y: $\frac{1}{5}$ M: D: $\frac{1}{5}$ O: M: D: $\frac{1}{5}$ O: M: D: $\frac{1}{5}$ O: M: D: $\frac{1}{5}$ O: M: D: $\frac{1}{5}$ D:	1 - 6 9	8.00	A:[T3] O	O Z:[T3] O				Pen:	8	6	4	3	—	3	4	No						
7-10 8 5.00 AA I:01 OOOO Pen: 4 2 1 - 3 2 No LRF loses 1 factor for each MAIN or OTHER gun mount marked 'AA' or 'AA+' that is lost. When all such mounts are lost the LRF is reduced to 0. TORPEDOES: n/a ARCS: GUNS TORPEDOES $\frac{4}{1/2}$ $\frac{1}{2}$ <		a weapon 'Crit	t' lands in this sec	tion lose 1 CR fact	or for ea	ch 2 CV or part	thereof.										CRF:	5		MRF:	0	
TORPEDOES: n/a ARCS: $\frac{21}{s_{s}}$ B: $\frac{2}{s}$ C: $\frac{1}{s}$ D: $\frac{1}{s}$ C: $\frac{1}{s}$ F: $\frac{1}{s}$ G: $\frac{1}{s}$ H: $\frac{1}{s_{s}}$ F: $\frac{1}{s}$ F: $\frac{1}{s}$ S: $\frac{1}{s}$ T: $\frac{1}{s_{s}}$ U: $\frac{4}{s}$ V: $\frac{1}{s_{s}}$ W: $\frac{4}{s}$ X: $\frac{1}{s}$ Y: $\frac{1}{s_{s}}$ M: $\frac{1}{s}$ N: $\frac{1}{s}$ O: $\frac{1}{s}$ P: $\frac{1}{s}$ Structure (S): Fires: (All Crew Tests are penalised if ship is on fire) Damage Control Teams: 3	OTHER guns: #:	: Cal:	Arcs:					Hit#:	I:6	II:9	III:12	IV:15	V:18	IP:	CV:	Radar:	LRF:	7				
n/a ARCS: $\begin{array}{c c} & & & & & & & & & & & & & & & & & & &$	7 -10 8	5.00	AA I:01 OO	000 R:01 0000)			Pen:	4	2	1	—	—	3	2	No	moun	t marked	'AA' or 'AA	+' that is	s lost. Wh	nen all
$\frac{1}{9} \frac{1}{9} \frac{1}$																						
Fires: (All Crew Tests are penalised if ship is on fire) Damage Control Teams: 3	ARCS: $78 \frac{1}{2}$ 0 Arcs $78 \frac{1}{2}$ 0 Arcs $78 \frac{1}{2}$ 0 Arcs $8 \frac{1}{5} \frac{1}{4}$ 3 Stern	B: 10 1	C: $\overset{\$_1}{\longrightarrow}$ D: $\overset{7\$_1}{\overset{7\$_1}{\overset{7}\overset{8}{\longrightarrow}}}$	$E: \overset{(1)}{\swarrow}_{2} F: \overset{(2)}{\swarrow}_{6} C$	6: ¹ /2 3	$H: \frac{\gamma^{a}}{9} \qquad \qquad I: \frac{7}{9}$		2 3	S: 1/2	T: 7	U:	$\frac{\sqrt{2}}{\sqrt{3}}$ V: $\frac{7}{6}$	W: ,	2 5 4 ³	X: /	Y: 54	Z: 2	2 5 4 M				P:
	Structure (S):	21			7							F/3:	4									
Speed: 33 MVR: 9 Steering #: 9 When Steering # reduced to 0 then the ship requires a Crew Test to turn				•	-	-	•	fire)									-					
	·			MVR:	9	Steering #:	9						5			d to 0 the	en the s	hip requi	ires a Cre	ew Test	to turn	
Other Equipment (delete when lost): Changes to CRF or MRF:													to CRF (or MR	F:							
Searchlights (Optional) Smokescreen; test at - 2 None	5		(Optional) s	Smokescreen; test	at - 2																	
Special Effects: Remarks: None	Special Effects:																					

New Orleans Class ARMOUR:	Belt:		Deck:	CA 1942 to 1942 3 CT: 0 <i>by: Guns, Torpedoes,</i>	Turrets	#1:	n Crew Code D [6] Turrets Weapons, Roo	s #2: n/a	Case	e Cost: emates:	730) : n/a	Dataset:	3528			S		tecon va	arget T	Day: ype: aving Thr	A		0 + 1 n/a
Spotting Dista	ance:	4 RB		Fire Control Va	alue: 2			Gunnery Moo	lifier:	+ 1									Quality				
																		Spott	ing Airc	raft: 2	I		
Hit Location	#							WE	APONS	5													
MAIN guns:	#:	Cal:		Arcs:					Hit#:	I:6	II:9	III:12	IV:15	V:18	IP:	CV:	Radar:						
1 - 6	9	8.00		A:[T3] OO Z:[T3]	Ó				Pen:	8	6	4	3	—	3	4	No						
	Ifav	weapon 'Cr	it' lands	s in this section lose 1	CR factor	for eacl	h 2 CV or part	thereof.										CRF:	5		MRF:	0	
OTHER guns:	#:	Cal:		Arcs:					Hit#:	I:6	II:9	III:12	IV:15	V:18	IP:	CV:	Radar:	LRF:	7		-		
7 -10	8	5.00	AA	I:01 OOOO R:01	0000				Pen:	4	2	1	—	_	3	2	No	moun	t marked	ctor for eac 'AA' or 'AA re lost the	A+' that	is lost. W	hen all
TORPEDOES: n/a																							
ARCS: 7^{8} 1_{2} 6^{7} 5 4^{3} 3^{1} Stern	A: 78 1/2 6 3	B: 12	C: ∛	D: $\frac{1}{6}$ E: $\frac{41}{2}$ F:	₩ 6 6 6 6	<mark>1∕2</mark> H:		GUNS K: 1/2 5/3	₹: <	S: 1/2	- Τ: ^γ	U: 4	$\frac{\sqrt{2}}{\sqrt{3}}$ V: $\frac{7}{6}$	W: ,	2 5 5 4 ³	X: /	Y:-5	₹ <mark>}</mark> ₹	7 <u>2</u> N	1:[]= N	TORPE	DOES O:	P:
Structure (S)	:	21			S/3:	7	Flotation (F):	12					F/3:	4									
Fires:					(All Crev	v Tests	are penalised	if ship is on	fire)				L				0	amage	Control	Teams:	3		
Speed:		33			MVR:	9	Steering #:	9					When S	Steering	# re	duced	d to 0 th	en the s	hip requ	uires a Cr	ew Tes	t to turn	
Other Equipm	<u>nent</u>	(delete wi	nen los	t):									Changes	to CRF	or MR	F:							
Searchlig	ghts			(Optional) Smokescree	en; test at	- 2							None										
Special Effect	s:												Remarks	:									
													None										

Ship name: Northampton Cla ARMOUR: <u>Crit. table:</u>	iss Belt		Deck:	3	942 to 1942 CT: 0 ;, <i>Torpedoe</i>	Tur		vith Crew	Code D Turrets	#2: n/	(Bas a Cas	e Cost: emates	798) : n/a	Dataset:	3368			S		econ va	arget Ty	·	A M	light: 1SF: lifier:	0 + 1 n/a
Spotting Dis	stance:	4 RB		F	ire Control	Value:	2		G	iunnery Mo	difier:	+ 1								Crew	Quality:				
RADAR:		Radar fo	r MAIN	Guns		-	Radar for	OTHER	Guns		I	opaa r	adar: +	1 to hit						Spott	ing Aircr	aft: 2			
Hit Locatio	n #									W	EAPONS	5													
MAIN guns:	: #:	Cal:		Arcs:							Hit#:	I:6	II:9	III:12	IV:15	V:18	IP:	CV:	Radar:						
1 - 5	9	8.00		A:[T3]	00 Z:[T3	B] O					Pen:	8	6	4	3	—	3	4	Yes						
	If a	weapon 'Cr	it' land	s in this s	ection lose	1 CR fa	ctor for ea	ach 2 C	/ or part	thereof.										CRF:	6		MRF:	0	
OTHER gun	ns: #:	Cal:		Arcs:							Hit#:	I:6	II:9	III:12	IV:15	V:18	IP:	CV:	Radar:	LRF:	7		-		
6 -10	8	5.00	AA	I:01 C)000 R:(01 000	00				Pen:	4	2	1	_	_	3	2	Yes	mount	: marked	tor for ead 'AA' or 'AA re lost the	+' that	is lost. V	Vhen all
TORPEDOE n/a	S:																								
ARCS: 7 8 $1/2$ 6 5 4 3 5 4 5 5 5 5 5 5 5 5 5 5	A: 7	B: 78/1/2	C: ∜ ¹ ∕	$D:\frac{78}{6}$	E: ^{8/1/2}	F: 78	G: 42	H: 78		GUNS K: 7 5 3	R: 🛃	S: 43	- T: 7	U:	$\frac{\sqrt{2}}{\sqrt{3}}$ V: $\frac{7}{6}$	₩: ,	543	X: /s	Y: 6	Z: 7	2 5 4 ³ M	: [= N	TORPE	DOES O:	P:
Structure (S	5):	19				S/3	3: 6	Flota	tion (F):	12					F/3:	4									
Fires:						(All	Crew Tes	sts are p	enalised	if ship is o	n fire)				_		_		D	amage (Control 1	Teams:	3		
Speed:		33				MV	R: 9	Stee	ring #:	9					When S	Steering	# rec	luced	d to 0 th	en the s	hip requi	ires a Cr	ew Test	t to turr	ו
Other Equip	oment	(delete wl	nen los	t):											Changes	to CRF	or MRF	:							
Search	lights			(Optiona	l) Smokesc	reen; te	st at - 2								None										
Special Effe	ects:														Remarks	:									
Sunk in 194	12														From N	lovembe	r 1942								

Gun mounts are lost starting with the mounts with least protection in the order of priority shown below, followed by the largest calibre, then by highest number of guns in the mount. (OTHER guns are eliminated at the CV cost shown.) Dataset v.1 • O (Open) $1CV \cdot S$ (Shielded) $2CV \cdot C$ (Unarmoured Casemate) $3CV \cdot T$ (Unarmoured Turret) $4CV \cdot \{C\}$ (Armoured Casemate) $3CV \cdot T$ (Unarmoured Turret) $4CV \cdot \{C\}$ (Armoured Casemate) $3CV \cdot T$ (Unarmoured Turret) $4CV \cdot \{C\}$ (Armoured Casemate) $3CV \cdot T$ (Unarmoured Casemate) $4CV \cdot \{C\}$ (Armoured Casemate) $3CV \cdot T$ (Unarmoured Casemate) $4CV \cdot \{C\}$ (Or (D)) Torpedoes are lost starting with the mount with the largest calibre (if there is a choice) followed by the mount with the greatest number of tubes. The cost in CV is equal to the number of tubes.

Spotting Distance: 4 RB Fire Control Value: 2 Gunnery Modifier: + 0 Crew Quality: Spotting Aircraft: 2 Hit Location # WEAPONS WEAPONS WEAPONS WEAPONS III:12 IV:15 V:18 IP: CV: Radar: IP:	MSF: +1 Modifier: n/a
WEAPONSMAIN guns:#:Cal:Arcs:Hit#:I:6II:9III:12IV:15V:18IP:CV:Radar: $\mathbf{1-6}$ 108.00A:[T2] O +[T3] O Z:[T2] O +[T3] OPen:8643-34NoCRF: 0 MFOTHER guns:#:Cal:Arcs:Hit#:I:6II:9III:12IV:15V:18IP:CV:Radar:LRF: 7 $\mathbf{7-10}$ 85.00AAI:01 OOOO R:01 OOOOPen:42132NoLRF loses 1 factor for each M. mount marked 'AA' or 'AA+' t	
MAIN guns:#:Cal:Arcs:Hit#:I:6II:9III:12IV:15V:18IP:CV:Radar: $1-6$ 108.00A:[T2] O +[T3] O Z:[T2] O +[T3] OPen:8643-34NoOTHER guns:#:Cal:Arcs:Hit#:I:6II:9III:12IV:15V:18IP:CV:Radar:CRF:0MFOTHER guns:#:Cal:Arcs:Hit#:I:6II:9III:12IV:15V:18IP:CV:Radar:LRF:7To 85.00AAI:01 OOOO R:01 OOOOPen:42132NoLRF loses 1 factor for each ML mount marked 'AA' or 'AA+' t	
1 - 6 10 8.00 A:[T2] O +[T3] O Z:[T2] O +[T3] O Pen: 8 6 4 3 - 3 4 No OTHER guns: #: Cal: Arcs: Hit#: I:6 II:9 III:12 IV:15 V:18 IP: CV: Radar: LRF: 7 7 -10 8 5.00 AA I:01 OOOO R:01 OOOO Pen: 4 2 1 - - 3 2 No	
OTHER guns: #: Cal: Arcs: Hit#: I:6 II:9 III:12 IV:15 V:18 IP: CV: Radar: LRF: 7 7 -10 8 5.00 AA I:01 OOOO R:01 OOOO Pen: 4 2 1 - 3 2 No LRF loses 1 factor for each M. mount marked 'AA' or 'AA+' t	
OTHER guns: #: Cal: Arcs: Hit#: I:6 II:9 III:12 IV:15 V:18 IP: CV: Radar: LRF: 7 7 -10 8 5.00 AA I:01 OOOO R:01 OOOO Pen: 4 2 1 3 2 No LRF loses 1 factor for each M. mount marked 'AA' or 'AA+' t	
7 -10 8 5.00 AA I:01 OOOO R:01 OOOO Pen: 4 2 1 3 2 No LRF loses 1 factor for each M. mount marked 'AA' or 'AA+' t	RF: 0
mount marked 'AA' or 'AA+' t	2
	nat is lost. When all
n/a	
ARCS: GUNS TOF $7 \frac{8}{\sqrt{2}}$ $8 \frac{\sqrt{2}}{\sqrt{2}}$	RPEDOES
Structure (S): 20 S/3: 7 Flotation (F): 12 F/3: 4	
Fires: (All Crew Tests are penalised if ship is on fire) Damage Control Teams: 3	
Speed: 33 MVR: 9 Steering #: 9 When Steering # reduced to 0 then the ship requires a Crew	est to turn
Other Equipment (delete when lost):	
Searchlights (Optional) Smokescreen; test at - 2 • CRF of 3 fitted in 1941 then increased to 5 by 1942 • (Revised ship cost with crew = 693 then 696 [Base cost = 729 then	733])
Special Effects: Remarks: None	

Ship name: Brooklyn (1st gro ARMOUR: <i>Crit. table:</i>	Belt:	s 6	Deck:	CL 1941 to 1942 3 CT: 6 <i>by: Guns, Torpedoe</i>	Turrets	#1:	h Crew Code D [7] Turret Weapons, Ro	s #2: n/a	a Case	e Cost: emates:	878) n/a	Dataset:	3374			S		econ va + 0 T	arget T		A MS	_	1 + 1 /a
Spotting Dis	stance:	4 RB		Fire Contro	l Value: 3		(Gunnery Mo	difier:	+ 1								Crew	Quality	<i>'</i> :			
RADAR:		Radar fo	r MAIN	Guns	Rada	ar for O	THER Guns		Ĩ	opaa r	adar: +	1 to hit						Spott	ing Airc	traft: 2			
Hit Location	n #							WE	APONS	5													
MAIN guns:	: #:	Cal:		Arcs:					Hit#:	I:6	II:9	III:12	IV:15	V:18	IP:	CV:	Radar:						
1 - 5	15	6.00		A:[T3] OO K:[T	3] O Z:[T3]	00			Pen:	6	4	3	2	—	4	3	Yes						
	Ifa	weapon 'Cr	it' lands	in this section lose	1 MR or CR	factor	for each 2 CV	or part ther	eof. Los	e factor	s in orc	ler: MRF	then CR	— — F				CRF:	3		MRF:	2	
OTHER gun	ns: #:	Cal:		Arcs:					Hit#:	I:6	II:9	III:12	IV:15	V:18	IP:	CV:	Radar:	LRF:	7		-		
6 -10	8	5.00	AA	I:01 0000 R:	01 0000				Pen:	4	2	1	-	—	3	2	Yes	moun	t marked	ctor for eac I 'AA' or 'AA are lost the	+' that is	lost. Whe	en all
TORPEDOE	S:																						
ARCS: 7^{8} 12^{2} Bow 6^{5} 4^{3} Stern	A: 78 1/	B: 1/2	C: *	$D:\frac{\gamma^{8}}{6} E: \frac{8}{3}$	F: 5 G:	Kara H	:) :)	GUNS K:7	R: <	S: 1/2	T: 75	U: 4	$\frac{\sqrt{2}}{\sqrt{3}}$ V: $\frac{7}{6}$	 W: ,		X: /5	 ↑↓ Y:- ₽	Z: 2	7 <u>2</u> 8 5 4 3				P:
Structure (S	S):	23			S/3:	8	Flotation (F)		C)				F/3:	4					c	-	-		
Fires:					` _	v Tests	are penalised		n fire)				When C	haaving	# ""	d		5		Teams:		+- +	
Speed: Other Equip	amont	33 (delete wl	hon loct	٠.	MVR:	9	Steering #:	9					Changes	-				en the s	nip requ	uires a Cre	ew rest	lo lurn	
Search		(uelete wi		.). (Optional) Smokeso	roon, tost at	- 2							None										
Special Effe	5					2							Remarks	:									
													None	-									

Ship name:																		R	econ va	lues	Day:	1 Nigh	t: 1
Bristol (later build ARMOUR: <u>Crit. table: N</u>	Belt:	0	Deck:	DD 1941 to 1942 0 CT: 0 <i>by: Guns, Torpedoes, 1</i>	Turret	s #1:		rets #2	: n/a	Case	e Cost: emates: <i>kets, A/</i> :	n/a		282 ze			S	Size:	- 2 T			MSF: row Modifie	
Spotting Dist	tance:	3 RB		Fire Control Va	lue: 1			Gunn	nery Modifi	er:	+ 1								Crew	Quality	y:		
								_											Spott	ting Airo	craft:		
Hit Location	#								WEAF	PONS	5												
MAIN guns:	#:	Cal:		Arcs:					F	lit#:	I:6	II:9	III:12	IV:15	V:18	IP:	CV:	Radar:					
1 - 4	4	5.00	AA	A:T1 OO Z:T1 OO						Pen:	4	3	2	—	_	4	2	No					
	Ifaw	veapon 'Cri	it' lands	in this section lose 1	SW or	CR facto	or for each 2	2 CV or	part there	of. Lo	ose facto	ors in o	rder: AS\	N then (CRF				CRF:	4		MRF: 0	
OTHER guns	s: #:	Cal:		Arcs:					F	lit#:	I:6	II:9	III:12	IV:15	V:18	IP:	CV:	Radar:	LRF:	5			
5 - 7			ASW	Z: DC Ω Ω (10cm)															moun	t marke	d 'AA' or 'A	- ch MAIN or C A+' that is lo LRF is reduc	st. When all
TORPEDOES	: #:	Cal:		Arcs:					F	lit#:	I:14	II:17	III:19	IV:20	V:21	IP:	CV:						
8 -10	5	21.00		0:TT5 O					Ν	4od:	+0	-1	-2	—	_	6	7						
ARCS:									GUNS													TORPEDO	ES
$ \begin{array}{c c} 7 \\ 7 \\ 6 \\ 5 \\ 4 \end{array} \begin{array}{c} 8 \\ 7 \\ 6 \\ 5 \\ 4 \end{array} \begin{array}{c} 8 \\ 8 \\ 5 \\ 8 \\ 5 \\ 8 \\ 5 \\ 8 \\ 5 \\ 8 \\ 5 \\ 8 \\ 5 \\ 8 \\ 5 \\ 8 \\ 5 \\ 8 \\ 5 \\ 8 \\ 5 \\ 5 \\ 8 \\ 5 \\ 5 \\ 8 \\ 5 \\ 5 \\ 8 \\ 5 \\ 5 \\ 8 \\ 5 \\ 5 \\ 5 \\ 5 \\ 5 \\ 5 \\ 5 \\ 5 \\ 5 \\ 5$	$A:\frac{7}{6} \frac{1}{2}$	B: 78 1/2	C: ^{∛∦1} ∕	D: $\frac{78}{6}$ E: $\frac{812}{3}$ F:-	∮ G:		$H: \frac{7^8}{6_5} \qquad I: \frac{7}{6_5}$	≽ к:	: 7)∕2 R:	2<br 3	S: 4	T: 75	U: 🤞	$\frac{\sqrt{2}}{\sqrt{3}}$ V: $\frac{7}{6/5}$	₿ ₩:	2 5 4 ³	X: /₅	°}_ ¥:-	3 3 4 ³ Z: 7	$\frac{7}{6}$	M: 🚰 N	l: 🔐 O: [P: P
							7	_															
Structure (S)):	4			S/3:	1	Flotation (F/3:	1								
Fires:					•		s are penali:		hip is on fii	re)											l Teams:	1	
Speed:		35			MVR:	5	Steering #	≠: <u>5</u>	5						5			d to 0 th	en the s	ship req	juires a Cr	ew Test to	turn
Other Equipr		(delete wh		,										Changes	to CRF	or MR	F:						
Searchli	-		9	Smokescreen; test at -	• 0									None									
Special Effect	ts:													Remarks	:								
														None									

Ships in class: Bristol, Ellyson, Hambleton, Rodman, Emmons, Macomb, Laffey (+1942), Woodworth, Forrest, Fitch, Corry, Hobson, Aaron Ward, Buchanan, Duncan (+1942), Lansdowne, Lardner, McCalla, Mervine, Quick, Farenholt, Bailey, Carmick, Doyle, Endicott, McCook, Frankford, Bancroft, Barton (+1942), Boyle, Champlin, Meade, Murphy, Parker, Caldwell, Coghlan, Frazier, Gansevoort, Gillespie, Hobby, Kalk, Kendrick, Laub, Mackenzie, McLanahan, Nields, Ordronaux, Davison, Edwards, Glennon, Jeffers, Maddox, Nelson, Baldwin, Harding, Satterlee, Thompson, Welles, Cowie, Knight, Doran, Earle, Butler, Gherardi, Herndon, Shubrick, Beatty, Tillmann, Stevenson, Stockton, Thorn, Turner

Gun mounts are lost starting with the mounts with least protection in the order of priority shown below, followed by the largest calibre, then by highest number of guns in the mount. (OTHER guns are eliminated at the CV cost shown.) Dataset v.3 • O (Open) 1CV • S (Shielded) 2CV • C (Unarmoured Casemate) 3CV • T (Unarmoured Turret) 4CV • {C} (Armoured Casemate)* 3CV • (T) (Armoured Turret)* 4CV (* If armour is penetrated in case of mount marked { } or ()) 28/09/2015 Torpedoes are lost starting with the mount with the largest calibre (if there is a choice) followed by the mount with the greatest number of tubes. The cost in CV is equal to the number of tubes.

Ship name:														R	econ va	lues D	ay:	1 Night:	1
Fletcher Class ARMOUR: Crit. table: No	Belt: ormal;	1 Deck Can be attack	DD 1942 to 1942 : 0 CT: 0 ed by: Guns, Torpedoes,	Turrets #1:		#2: n/a Ca	ase Cost: asemate	: 446) es: n/a	Dataset:	457			S	ize:	- 2 ⊤	arget Ty	/pe:	Search Ra A MSF: ow Modifier	+ 1
Spotting Dista	ince:	3 RB	Fire Control Va	alue: 1	G	unnery Modifier:	+ 1								Crew	Quality:			
RADAR:		Radar for MA	IN Guns	-			DPAA	Radar: +	-1 to hit						Spott	ing Aircra	aft:		
Hit Location ;	#					WEAPOI	NS												
MAIN guns:	#:	Cal:	Arcs:			Hit#	: I:6	II:9	III:12	IV:15	V:18	IP:	CV:	Radar:					
1 - 4	5	5.00 A	A A:T1 OO K:T1 O	Z:T1 OO		Per	n: 4	3	2	_	_	4	2	Yes					
	If a v	veapon 'Crit' la	nds in this section lose 1	ASW or CR fac	tor for each 2 CV	or part thereof.	Lose fac	ctors in o	order: AS	W then C	CRF				CRF:	3		MRF: 0	
OTHER guns:	#:	Cal:	Arcs:			Hit#	: I:6	II:9	III:12	IV:15	V:18	IP:	CV:	Radar:	LRF:	6			
5 - 6		AS	SW Z: DC Ω Ω (10cm)												mount	t marked '	'AA' or 'AA	h MAIN or O +' that is lost LRF is reduce	t. When all
TORPEDOES:	#:	Cal:	Arcs:				: I:14	II:17	III:19	IV:20	V:21	IP:	CV:						
7 -10	10	21.00	0:TT5 OO			Мос	l: +0	-1	-2	_	_	6	7						
ARCS: 78 12 Bow 78 12 12 12 12 12 12 12 12	$\frac{7812}{63}$	B: 78/1/2 C: `	⁸ ¹ D: 7 ⁸ ¹ E: ⁴ ¹ / ₂ F:	$\frac{\gamma^{8}}{6}$ G: $\frac{1}{2}$	$H:\frac{\gamma^{8}}{6\varsigma} \qquad I:\frac{\gamma}{6}$	GUNS K: 7 2 6 2 3 R: 2	- S:	$\frac{1}{\sqrt{2}}$ T: $\frac{7}{65}$	U:	$\frac{\sqrt{2}}{\sqrt{3}}$ V: $\frac{7}{6}$	w: ,	2 5 5 4 ³	X: /s	Y:	Z: 7	2 3/5 4 ³			S P:
Structure (S): Fires: Speed:		6		S/3: 2 (All Crew Tes MVR: 6	Flotation (F): sts are penalised Steering #:					F/3:	2 Steering	# rec	duced		0	Control T hip requi		2 ew Test to t	urn
Other Equipm	ent	(delete when	lost):							Changes	to CRF of	or MRF	:						
Searchlig	hts		Smokescreen; test at	+ 0						None									
Special Effects	s:	• Note that	the armoured hull me	ans that this	ship cannot be	engaged by M	RF.			Remarks	:								
Ships in class:	: Very	large number	in class							None									

o name: ley Class	F			DD 1942 to 1942		· _	ith Crew Co		: 377		e Cost:	397)	Dataset:	3534					econ va		Day:		ght: 1
	Belt: <i>rmal;</i> (0 CT: 0 by: Guns, Torpedoes,			ם 0 <i>s), Bombs</i>					s n/a S Guns,		re			S	Size:	- 2 T			A‰ MS hrow Modi	SF: +1 fier: +0
Spotting Distar	nce:	3 RB		Fire Control V	/alue: 1			Gu	unnery Mo	odifier:	+ 1								Crew	Qualit	y:		
	-																		Spott	ing Air	rcraft:		
Hit Location #	ŧ								W	EAPONS	5												
MAIN guns:	#:	Cal:		Arcs:						Hit#:	I:6	II:9	III:12	IV:15	V:18	IP:	CV:	Radar:					
1 - 4	4	5.00	AA	A:T1 OO Z:S1 OO	2					Pen:	4	3	2	—	—	3	2	No					
	If a w	eapon 'Cri	it' lands	in this section lose 1	ASW or	CR fact	or for eac	ch 2 CV	or part th	ereof. Lo	se fact	ors in or	der: AS	W then C	RF				CRF:	2		MRF:	0
OTHER guns:	#:	Cal:		Arcs:						Hit#:	I:6	II:9	III:12	IV:15	V:18	IP:	CV:	Radar:	LRF:	5			
5			ASW	Z: DC Ω Ω (10cm)															moun	t marke	ed 'AA' or '		r OTHER gur lost. When a duced to 0.
TORPEDOES:	#:	Cal:		Arcs:						Hit#:	I:14	II:17	III:19	IV:20	V:21	IP:	CV:						
6 -10	16	21.00		N:TT4 OO P:TT4	00					Mod:	+0	-1	-2	—	—	6	7						
ARCS:									GUNS													TORPED	OES
$\begin{array}{c c} 8 & 1 \\ 7 & 2 \\ 3 \\ 5 & 4 \end{array} \begin{array}{c} \text{Bow} \\ \uparrow \\ \text{Stern} \end{array} $	$\frac{7812}{63}$	B: 78 1/2	C: 🖑	$D: \frac{\gamma^8}{6}^{1} E: \overset{8}{\searrow} \frac{1}{2} F$: ⁷⁸ 6 G		H: 78	l: 7	K: 7 2 6 3	R:	S: 43	T: 75	U: 🤞	$\frac{\sqrt{2}}{\sqrt{3}}$ V: $\frac{7}{6}$	W: _	54 ²	X: /s	Y: 6/5	Z:	$\frac{7}{5}$ $\frac{2}{4}$	M: 🚰	N: 🔐 (): 🔐 P: 👔
	-				_		Т							F /2									
Structure (S):	-	4					Flotatio	. ,		n fira)				F/3:	1			D		Contro	Toomer		
=ires: Speed:	-	39			_ (All Cr 	ew resi	ts are pen Steerin		5 5	n lile)				When C	tooring	# ro	ducor		5		l Teams:	1 Crew Test	to turn
opeeu: Other Equipme	ant 4	delete wł	on loct	\·		5	Steenin	ıy #.	5					Changes					en uie S	mp rec	juii es a C	JEW IESL	
Searchligh		(uciele Wi). Smokescreen; test at	± 0									None									
Special Effects			2	הווטגבאנוכבוו, נכצו מנ	10									Remarks									
	•													i ci nui No	•								

Ship name:																	R	lecon va	alues	Day:	1	Night:	1
	Belt: ormal;	L	Deck:	DD 1942 to 1942 0 CT: 0 <i>by: Guns, Torpedoes,</i>	Turrets #	1: n/		s #2: n/	a Cas	emates	: n/a					S	iize:	- 2	Target	t Type:	A‰	MSF: Modifier:	ar + 1 + 0
Spotting Dista	ance:	3 RB		Fire Control V	alue: 1		(Gunnery Mo	odifier:	+ 1								Crew	v Qual	lity:			
RADAR:		Radar fo	r MAIN	Guns					I	dpaa r	adar: +	1 to hit						Spot	ting A	ircraft:			
Hit Location a	#							w	EAPONS	5													
MAIN guns:	#:	Cal:		Arcs:					Hit#:	I:6	II:9	III:12	IV:15	V:18	IP:	CV:	Radar:						
1 - 4	5	5.00	AA	A:S1 OO K:O1 O	Z:01 OO				Pen:	4	3	2	_	_	3	2	Yes						
	Ifav	weapon 'Cr	it' lands	in this section lose 1	ASW or CR	factor fo	or each 2 C	V or part th	nereof. Lo	ose fact	ors in o	rder: AS	W then (CRF				CRF:	2		MR	RF: 0	
OTHER guns:	#:	Cal:		Arcs:					Hit#:	I:6	II:9	III:12	IV:15	V:18	IP:	CV:	Radar:	LRF:	5				
5			ASW	Z: DC Ω (10cm)														mour	nt marl	ked 'AA' or	r 'AA+' ti	AIN or OTH hat is lost. is reduced	When all
TORPEDOES:	#:	Cal:							Hit#:	I:14	II:17	III:19	IV:20	V:21	IP:	CV:							
6 -10	12	21.00		N:TT4 O 0:TT4 O	P:TT4 O				Mod:	+0	-1	-2	—	—	6	7							
ARCS: 7812 6543 Stern	$\frac{78}{6}$	B: 12	C: 📲	D: **** E: *****************************		$\frac{\frac{1}{2}}{3} \text{H:} \frac{\frac{1}{2}}{\frac{5}{5}}$		GUNS K:7	R: 43	S:	- T: 7	U: ĵ	$\frac{\sqrt{2}}{\sqrt{3}}$ V: $\frac{7}{6}$	W:	2 5 4 ³	X: /	Y:	Z:-	7 2 6 5 4 3	M:	TOF N:	RPEDOES	P: r
Structure (S):		3			S/3:	1 FI	otation (F)	: 3					F/3:	1									
Fires:					(All Crew	Tests ar	e penalised	d if ship is o	on fire)				•				D	Damage	Contr	ol Teams	s: 1		
Speed:		37			MVR:	5 St	eering #:	5					When S	teering	# re	duced	d to 0 th	en the s	ship re	equires a	Crew 1	Fest to tu	'n
Other Equipm	<u>ient</u>	(delete w	hen lost	:):									Changes	to CRF	or MR	F:							
Searchlig	hts		9	Smokescreen; test at	+ 0								None										
Special Effects	s:												Remarks	:									
													 Cassin 	and Dov	vnes v	vere re		ted follo		e dataset (amage at		arbour and	

Ships in class: Mahan, Cummings, Drayton, Lamson, Flusser, Reid, Case, Conyngham, Shaw, Tucker (+1942), Cushing (+1942), Perkins, Smith, Preston (+1942)

Gun mounts are lost starting with the mounts with least protection in the order of priority shown below, followed by the largest calibre, then by highest number of guns in the mount. (OTHER guns are eliminated at the CV cost shown.) Dataset v.3 • O (Open) 1CV • S (Shielded) 2CV • C (Unarmoured Casemate) 3CV • T (Unarmoured Turret) 4CV • {C} (Armoured Casemate)* 3CV • (T) (Armoured Turret)* 4CV (* If armour is penetrated in case of mount marked { } or ()) 28/09/2015 Torpedoes are lost starting with the mount with the largest calibre (if there is a choice) followed by the mount with the greatest number of tubes. The cost in CV is equal to the number of tubes.

Japan

Ship name:																				R	lecon va	alues	Day:	1	Night:	1
Kagero Class ARMOUR: <u>Crit. table: No</u>	Belt: ormal;	0 Dec Can be attac	ck:	0	040 to 1942 CT: C <i>Torpedoe</i>) Tu	rrets 7	#1:		Turrets	: 50: #2: n foff Weap	/a Cas	semate	457) s: n/a 4/ <i>s Guns</i>		246 ze			S	Size:	- 2			A‰ Throw №		+ 0 + 0
Spotting Dista	ance:	3 RB		Fi	ire Contro	l Value:	1			G	unnery M	lodifier:	+ 1								Crew	ı Quali	ty:			
	-											-									Spot	ting Ai	rcraft:			
Hit Location a	#										v	VEAPON	s													
MAIN guns:	#:	Cal:		Arcs:								Hit#:	I:6	II:9	III:12	IV:15	V:18	IP:	CV:	Radar:						
1 - 5	6	5.00	AA	A:T2 C	Z:T2 O	C						Pen:	5	3	2	—	—	2	2	No						
	If a w	eapon 'Crit'	lands	in this se	ection lose	e 1 ASW	or CR	facto	or for eac	ch 2 CV	or part t	hereof. L	ose fac	ctors in c	order: AS	W then (CRF				CRF:	1		MR	F: 0	
OTHER guns:	#:	Cal:		Arcs:								Hit#:	I:6	II:9	III:12	IV:15	V:18	IP:	CV:	Radar:	LRF:	3				
6		,	ASW	Z: DC S	Ω (10cm)																mour	nt marke	ed 'AA' o	r each MA r 'AA+' th the LRF i	at is lost	. When all
TORPEDOES:	#:	Cal:		Arcs:								Hit#:	I:14	II:17	III:19	IV:20	V:21	IP:	CV:							
7 -10	8	24.00		[∞] O:	TR4 O®C) ORO						Mod:	+2	+2	+2	(+2)	(+2)	7	9							
ARCS:											GUNS													TOR	PEDOES	
$\begin{array}{c c} 7 & 1 \\ \hline 7 & 2 \\ \hline 6 \\ 5 & 4 \end{array} \begin{array}{c} \text{Bow} \\ \uparrow \\ \text{Stern} \end{array} $	A: $\frac{781}{6}$ 3	B: 78/1/2 C:	*	D: 78 1	E: 3	F: 78	G:	¹ ∕2 ≺3 ⊢	1: 78 6/5	l: 7	K: 7 2 6 3	R: <2	S:	$\frac{\sqrt{2}}{\sqrt{3}}$ T: $\frac{7}{6\sqrt{5}}$	U: j	$\sqrt{\frac{2}{4^3}}$ V: $\frac{7}{6}$	W:	2 5 4 ³	X: /₅	Ŷ: <u>∳</u>	<u>₹</u> 33 Z:-	7 /2 6/5 4 ³	M: 🚰	N:	0:	P: r
Structure (S):	-	4				 S/	3:	1	Flotatio	on (F):	4					F/3:	1]								
Fires:	-					(Al	Crew	Tests	s are per	nalised i	if ship is	on fire)				L		1		D	Damage	Contro	ol Team	s: 1		
Speed:	-	35				M١	/R:	6	Steerin	ng #:	6					When S	Steering	# re	duced	d to 0 th	en the s	ship re	quires a	Crew T	est to ti	ırn
Other Equipm	<u>nent</u>	(delete whe	n lost)):					-4							Changes	to CRF	or MR	F:							
Searchlig	jhts		S	Smokescr	een; test	at + 0										None										
Special Effects		• NOTE: V still loade		is subj	ect to sp	ecial cr	itical	hit ef	ffects if	a torp	edo mo	unt is lo	st whi	ch is		Remarks										
		San iouue														 Carries 	s Type 93	3 "Lon	g Lan	ce" torped	do					

Ships in class: Kagero, Kuroshio, Oyashio, Hatsukaze, Natsushio (+1942), Yukikaze, Hayashio (+1942), Maikaze, Isokaze, Shiranui, Amatsukaze, Tokitsukaze, Urakaze, Hamakaze, Nowaki, Arashi, Hagikaze, Tanikaze

Japan

Ship name:																			R	econ va	lues Da	ay:	1 Nig	ght: 1	1
	Belt: ormal;	0 Dec <i>Can be attac</i>	:k:	D 1937 to 19 0 CT: <i>y: Guns, Torped</i>	0 T	urrets	#1:		Turrets		a Cas		: n/a		248 ze			S	iize:	- 2 T	arget Tyj Sav		‱ MS ow Modif		- 0 - 0
Spotting Dista	ance:	3 RB		Fire Cont	trol Value	: 1			G	unnery M	odifier:	+ 1								Crew	Quality:				
	-					-					-									Spott	ing Aircra	aft:			
Hit Location #	#									W	EAPONS	5													
MAIN guns:	#:	Cal:		Arcs:							Hit#:	I:6	II:9	III:12	IV:15	V:18	IP:	CV:	Radar:						
1 - 5	5	5.00	AA	A:T2 O K:T1	O Z:T2	0					Pen:	5	3	2	_	—	2	2	No						
	If a w	/eapon 'Crit' I	ands	in this section lo	ose 1 AS	N fact	or for e	each 2 C	V or pai	rt thereof.										CRF:	0		MRF:	0	
OTHER guns:	#:	Cal:		Arcs:							Hit#:	I:6	II:9	III:12	IV:15	V:18	IP:	CV:	Radar:	LRF:	3				
6		ļ	ASW	Z: DC Ω (10cm	1)															mount	ses 1 factor marked ' mounts are	AA' or 'AA	+' that is	lost. Whe	en all
TORPEDOES:	#:	Cal:		Arcs:							Hit#:	I:14	II:17	III:19	IV:20	V:21	IP:	CV:							
7 -10	8	24.00		[∞] 0:TR4 O@	ro or	C					Mod:	+2	+2	+2	(+2)	(+2)	7	9							
ARCS:									·	GUNS						·							TORPED	OES	
$\frac{7}{6} \frac{1}{5} \frac{2}{4} \frac{3}{5} \frac{1}{5} \frac{1}$	$\frac{7^8}{6}$	B: 78 1/2 C:	*↓1	D: ⁷⁸¹ 6 E: ⁸¹	$\frac{\sqrt{2}}{\sqrt{3}}$ F: $\frac{78}{6}$	G:		$+\frac{7^8}{6_5}$	l: 7	$K:\frac{7}{6}$	R:	S: 1/2 4 ³	T: 75	U: 🤞	$\frac{\sqrt{2}}{\sqrt{3}}$ V: $\frac{7}{6}$	W: .	2 5 4 ³	X: /	Y: 6/5	Z: 2	2 5 4 ³ M:	N:): <mark>}</mark>	P:
Structure (S):		3				5/3:	1	T Elotati	ion (F):	3					F/3:	1									
Fires:	-	5				· .		1	.,	if ship is o	n fire)				1/5.	-			П	amade (Control T	aame'	1		
Speed:	-	34			·	1VR:	5	Steeri		5	n nic)				When 9	teering	# red	lucer		5	hip requi			to turn	
Other Equipm	- ent	(delete wher	n lost)				5	Steen	ng #.	5					Changes						nip requi				
Searchlig				mokescreen; te	stat+0										None										
Special Effects	•	• NOTE: V		is subject to s		ritica	l hit e	ffects if	f a torn	edo mou	int is los	t whic	h is		Remarks	:									
	••	still loaded															3 "Long	g Lano	ce" torped	lo					

Ships in class: Shiratsuyu, Shigure, Murasame (+1942), Yudachi (+1942), Samidare, Harusame, Yamakaze (+1942), Kawakaze, Umikaze, Suzukaze

Japan

hip name:																					R	lecon va	alues	Day:	1	Night:	1
ugumo Class ARMOUR: <u>Crit. table: N</u>	Belt: <i>Iormal;</i>		Deck:	0	· · · ·	0 Tu	rrets #	#1:	0	Code A Turrets <i>os, Stand</i>		n/a Ca	asema		n/a		379 ze			S	ize:	- 2 T	-	Type: Saving	A‰ Throw M		+ 0 + 0
Spotting Dista	ance:	3 RB		F	ire Contro	ol Value:	1			G	unnery	Modifier:	+ :	1								Crew	/ Qualit	ty:			
																						Spott	ting Aiı	rcraft:			
Hit Location	#											WEAPOI	NS														
MAIN guns:	#:	Cal:		Arcs:								Hit#	: I	[:6	II:9	III:12	IV:15	V:18	IP:	CV:	Radar:						
1 - 4	6	5.00	AA	A:T2 C) Z:T2 ()	0						Per	n:	5	3	2	_	_	2	2	No						
	Ifav	veapon 'Cri	it' lands	in this se	ection los	e 1 ASW	or CR	factor	r for ea	ch 2 CV	or part	thereof.	Lose	facto	rs in or	der: AS	W then (CRF				CRF:	3		MRF	-: 0	
OTHER guns:	: #:	Cal:		Arcs:								Hit#	: I	[:6	II:9	III:12	IV:15	V:18	IP:	CV:	Radar:	LRF:	4			2	
5			ASW	Z: DC S	Ω (10cm)																	moun	nt marke	ed 'AA' or	each MAI r 'AA+' tha the LRF is	at is lost.	When all
TORPEDOES:	: #:	Cal:		Arcs:								Hit#	: I:	:14	II:17	III:19	IV:20	V:21	IP:	CV:							
6 -10	8	24.00		[∞] O:	tr4 O®C) OBO						Мос	1: -	+2	+2	+2	(+2)	(+2)	7	9							
ARCS:									· · · · · · · · · · · · · · · · · · ·		GUNS	5						·							TORI	PEDOES	
7 6 5 4 5 4 8 Bow Stern	A: $\frac{781}{6}$ 3	B: 78/1/2	C: [∛]	$D:\frac{78}{6}$	E: 41/2 3	F: 78	G:	<mark>1∕2</mark> H:	78	l: 7	K: 6	- R:	S:	1/2/33	T: 7	U: 1	$\sqrt{\frac{2}{4^3}}$ V: $\frac{7}{6}$	₿ ₩:	2 5 4	X: 🖍	Y: 6/	Z:-	7 2 6^{5} 4^{3}	M: 🚰	N:	O:	P:
Structure (S)	:	4				S/	3:	1	Flotati	ion (F):	4						F/3:	1]								
Fires:						(Al	(All Crew Tests are penalised it				f ship is on fire)						L				D	amage	Contro	ol Teams	s: 1		
Speed:		35				M١	MVR: 6 Steering #:				6						When Steering # reduced to 0 then the ship requires a Crew Test to turn										
Other Equipm	<u>nent</u>	(delete wł	nen lost):													Changes	to CRF	or MR	F:							
Searchlig	ghts		at + 0											None													
Special Effects: • NOTE: Vessel is subject to special critical hit effects if a torpedo mount is lost which is still loaded.											Remarks: Carries Type 93 "Long Lance" torpedo 																

Ships in class: Yugumo, Akigumo, Kazekumo, Makikumo, Makinami, Takanami (+1942), Naganami, Onami